

A yellow hexagon with a black border containing the Greek letter epsilon (ε) and the letter 'x' in black.

-actively fitting

Electrical components for potentially explosive atmospheres – safety for people and systems

Product Overview

- Line Bushings
- Control, distribute, report, signalize
- Trace Heating
- Overpressure Systems



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Ex – Polyester Enclosures

Experts for your systems

Quality • Reliability • Delivery reliability



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Proviso

We reserve the right to make technical changes. Changes, errors, and literal errors do not justify any claim for damage compensation. For security components and systems, the relevant standards, as well as the relevant operating and assembly instructions have to be followed

Quintex Product Catalogue Components



Ex Polyester terminal boxes

Assembly overview



General data



Type		Cable glands				Terminals (mm ²)						
		M16	M20	M25	M32	Mini 2,5	1,5	2,5	4	6	10	
QX-P1	80x75x55	Side A+B	2	1			1 x 5					
		Side C+D	1	0								
QX-P2	110x75x55	Side A+B	3	2			1 x 8					
		Side C+D	1	0								
QX-P3	160x75x55	Side A+B	4	4			1 x 12					
		Side C+D	1	0								
QX-P4	190x75x55	Side A+B	6	4			1 x 12					
		Side C+D	1	0								
QX-P5	122x120x90	Side A+B	6	2	2	1		1 x 16	1 x 14	1 x 12	1 x 9	1 x 6
		Side C+D	2	1	1	1						
QX-P6	220x120x90	Side A+B	12	5	4	3		1 x 41	1 x 34	1 x 29	1 x 21	1 x 16
		Side C+D	2	1	1	1						
QX-P7	160x160x90	Side A+B	8	3	3	2		1 x 23	1 x 20	1 x 17	1 x 12	1 x 9
		Side C+D	6	2	2	1						
QX-P8	260x160x90	Side A+B	14	6	5	4		1 x 48	1 x 40	1 x 34	1 x 25	1 x 19
		Side C+D	6	2	2	1						
QX-P9	360x160x90	Side A+B	22	9	8	6		1 x 73	1 x 60	1 x 51	1 x 37	1 x 29
		Side C+D	6	2	2	1						
QX-P10	200x250x120	Side A+B	15	8	8	3		2 x 36	2 x 32	2 x 26	2 x 18	2 x 14
		Side C+D	12	10	8	3						
QX-P11	255x250x120	Side A+B	21	12	10	4		2 x 47	2 x 39	2 x 33	2 x 24	2 x 18
		Side C+D	12	10	8	3						
QX-P11H	255x250x160	Side A+B	21	12	10	4		2 x 47	2 x 39	2 x 33	2 x 24	2 x 18
		Side C+D	12	10	8	3						
QX-P12	400x250x120	Side A+B	36	20	18	7		2 x 83	2 x 68	2 x 57	2 x 42	2 x 33
		Side C+D	12	10	8	3						
QX-P12H	400x250x160	Side A+B	36	20	18	7		2 x 83	2 x 68	2 x 57	2 x 42	2 x 33
		Side C+D	12	10	8	3						
QX-P13	400x405x120	Side A+B	36	20	18	7		3 x 83	3 x 68	3 x 57	3 x 42	3 x 33
		Side C+D	12	10	8	3						
QX-P13H	400x405x200	Side A+B	72	40	36	21		3 x 83	3 x 68	3 x 57	3 x 42	3 x 33
		Side C+D	55	36	32	18						
QX-P15	600x250x120	Side A+B	57	30	26	10		2x112	2x108	2 x 90	2 x 62	2 x 45
		Side C+D	12	10	8	3						
QX-P15H	600x250x160	Side A+B	57	30	26	10		2x112	2x108	2 x 90	2 x 62	2 x 45
		Side C+D	12	10	8	3						

Combinations and other sizes after technical clarification

Data of standard polyamide cable glands					
Type	Wrench size	Range (mm)	Type	Wrench size	Range (mm)
M12	15	4 - 6,5	M32	36	16 - 21
M16	19	5 - 8	M40	46	20 - 28
M20	25	7 - 13	M50	60	31 - 38
M25	29	12 - 17	M63	65	35 - 44

QX-P... general

Ex approved polyester enclosures
General data



Ex e / Ex i polyester terminal boxes



Specification for Ex area			
Marking according to 2014/34/EU		Ex II 2 GD	
Type of protection		II 2G Ex eb IIC und II 2D Ex tb IIIC	
Ambient temperature °C Silicone gasket		Gas temperature class T°C	Dust temperature °C
MIN	MAX		
-60	+50	T6	85
-60	+55	T5	100
-60	+60	T4	120
Max. temperature range		-60..+100°C	
Ingress protection		IP 66 QX-P1: IP 56	
Ex-Zone		1, 2, 21, 22	
Applicable at risk of mechanical exposure (Impact resistance)		high (7 Joule) QX-P1 for dust: 4 Joule	
Gas groups		IIA; IIB; IIC	
Certificates		ATEX, IECEx, NEMA 4X	

Enclosure specification	
Enclosure material	Carbon black doped glass-fibre reinforced polyester according to UL/V0
Surface	Die casting, standard colour black. Other colours optional
Lid fixing	Full removable lid with captive M6 stainless steel screws
Gasket	One piece of silicone
Earthing	By PE terminals. Optional: internal/external earth bolt brass M6 Optional: internal earthing plate
Bushing	Direct tapped threaded holes
Mounting	6,5mm holes within enclosure body

Options	
Internal / external earth stud M6	ES6
Internal earthing plate brass	EP-xx xx = 1-15(H) (Size of enclosure)
Hinges for lid	HI
Colour	RAL__
Mounting plate, zinc plated	MP-Pxx xx = 1-15(H) (Size of enclosure)



QX-P1

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

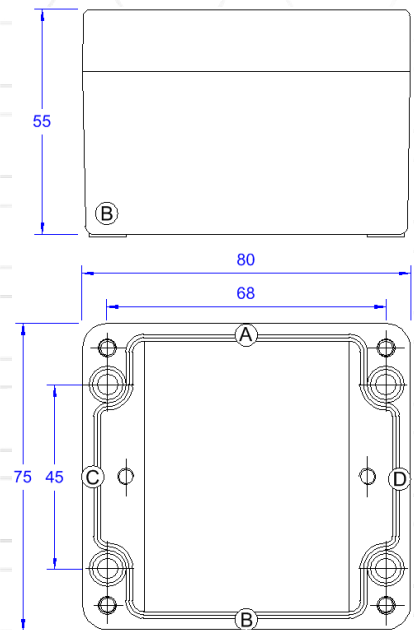
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application

- Ex e / Ex i junction boxes

Technical Data

Material:	Black GRP
Dimension (mm):	80 x 75 x 55
Fixing centres (mm):	68 x 45 / 4x4,5Ø
Power dissipation:	4,0 Watt @ +40°C 1,6 Watt @ +50°C
for dust Ex:	2,0 Watt @ +40°C 0,8 Watt @ +50°C
Ingress protection:	IP 56
Impact resistance:	7 Joule / dust 4 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C T5 @ +55°C T4 @ +60°C

Weight: 0,23 kg

Certificates

ATEX, IECEX, NEMA 4X

Marking

Empty enclosures:

⊕ II 2G Ex eb IIC / ⊕ II 2D Ex tb IIIC

Terminal Boxes:

⊕ II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

⊕ II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M16	M20	M25
Side A / B	2	1	0
Side C / D	1	0	0

Terminals

mm ²	Mini		
	2,5		
horizontal rail	1x5		



QX-P2

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

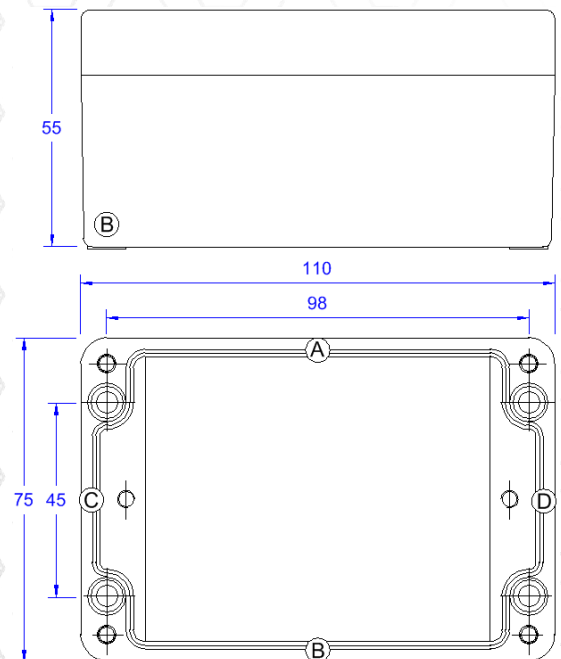
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Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application

- Ex e / Ex i junction boxes

Technical Data

Material:	Black GRP
Dimension (mm):	110 x 75 x 55
Fixing centres (mm):	98 x 45 / 4x4,5Ø
Power dissipation:	5,5 Watt @ +40°C
	2,0 Watt @ +50°C
for dust Ex:	2,75 Watt @ +40°C
	1,0 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C
	T5 @ +55°C
	T4 @ +60°C
Weight:	0,32 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M16	M20	M25
Side A / B	3	2	0
Side C / D	1	0	0

Terminals

mm ²	Mini 2,5		
horizontal rail	1x8		



QX-P3

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

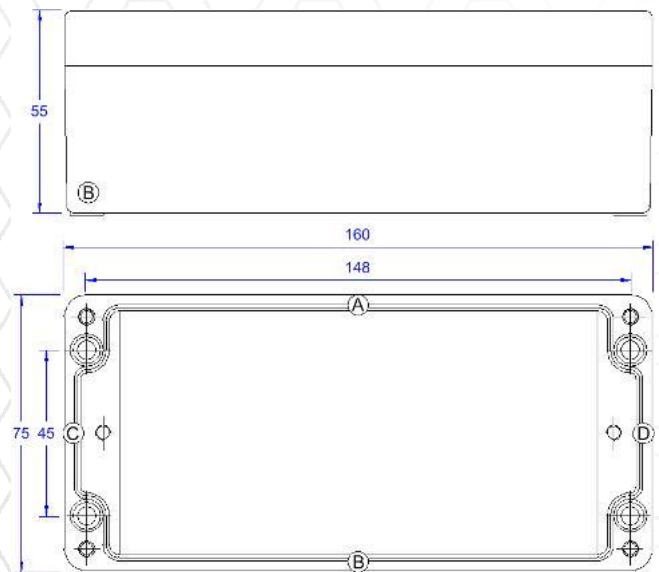
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The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes

Technical Data

Material:	Black GRP
Dimension (mm):	160 x 75 x 55
Fixing centres (mm):	148 x 45 / 4x4,5Ø
Power dissipation:	8,5 Watt @ +40°C 2,8 Watt @ +50°C
for dust Ex:	4,25 Watt @ +40°C 1,4 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C T5 @ +55°C T4 @ +60°C
Weight:	0,37 kg

Certificates

ATEX, IECEX, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M16	M20	M25
Side A / B	4	4	0
Side C / D	1	0	0

Terminals

mm ²	Mini		
	2,5		
horizontal rail	1x12		

QX-P4

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

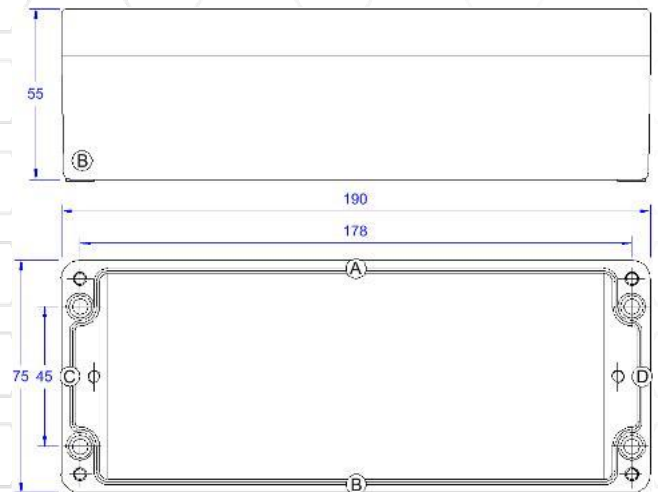
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The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes

Technical Data

Material: Black GRP
 Dimension (mm): 190 x 75 x 55
 Fixing centres (mm): 178 x 45 / 4x4,5Ø
 Power dissipation: 9,0 Watt @ +40°C
 3,0 Watt @ +50°C
 for dust Ex: 4,5 Watt @ +40°C
 1,5 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Weight: 0,42 kg

Certificates

ATEX, IECEX, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M16	M20	M25
Side A / B	6	4	0
Side C / D	1	0	0

Terminals

mm ²	Mini		
	2,5		
horizontal rail	1x12		



QX-P5

Ex approved black GRP enclosures



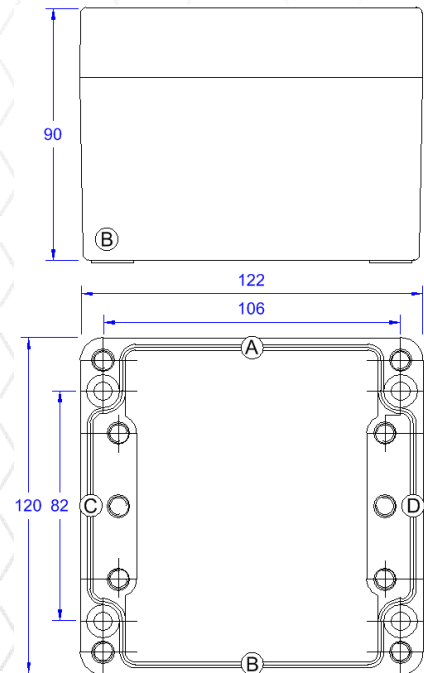
Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments. These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse. The lid with integrated silicon gasket and high corrosion resistant stainless steel captive screws allows easy handling and reliability with a perfect weather seal. Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate. No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 122 x 120 x 90
 Fixing centres (mm): 106 x 82 / 4x6,5Ø
 Power dissipation: 11,0 Watt @ +40°C
 3,5 Watt @ +50°C
 for dust Ex: 5,5 Watt @ +40°C
 1,75 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C
 Weight: 0,7 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	2	2	1
Side C / D	1	1	1

Terminals

mm ²	2,5	4	6	10
horizontal rail	1x14	1x12	1x9	1x6

QX-P6

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

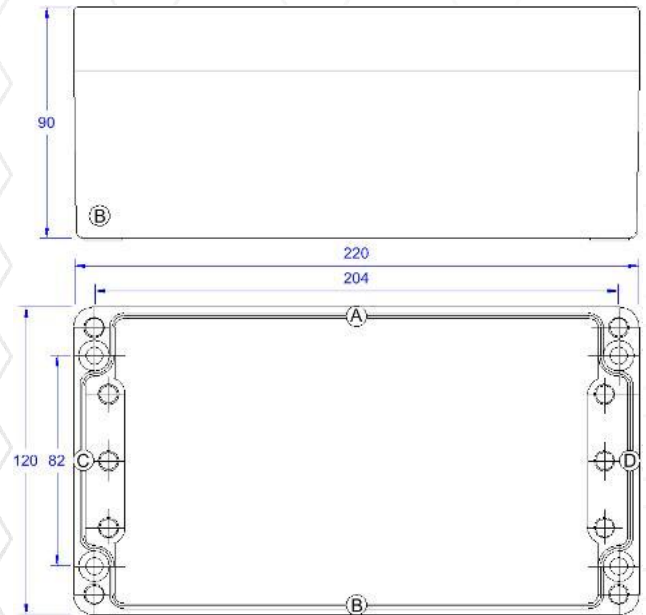
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Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 220 x 120 x 90
 Fixing centres (mm): 204 x 82 / 4x6,5Ø
 Power dissipation: 14,0 Watt @ +40°C
 3,8 Watt @ +50°C
 for dust Ex: 7,0 Watt @ +40°C
 1,9 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Weight: 1,06 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

⊕ Ex II 2G Ex eb IIC / ⊕ Ex II 2D Ex tb IIIC

Terminal Boxes:

⊕ Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

⊕ Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	5	4	3
Side C / D	1	1	1

Terminals

mm ²	2,5	4	6	10
horizontal rail	1x34	1x29	1x21	1x16

QX-P7

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes

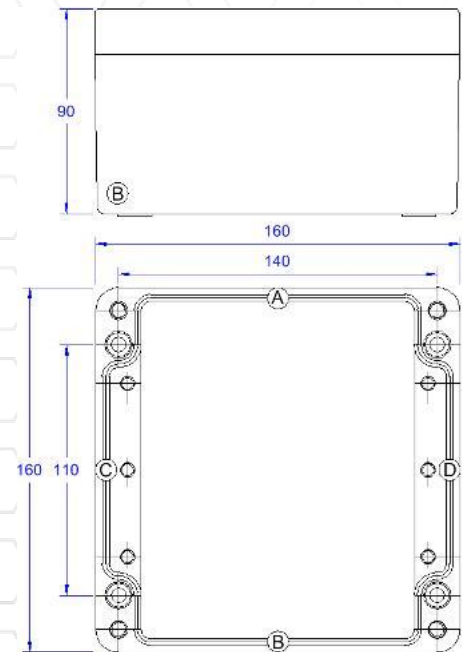


- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments. These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse. The lid with integrated silicon gasket and high corrosion resistant stainless steel captive screws allows easy handling and reliability with a perfect weather seal. Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 160 x 160 x 90
 Fixing centres (mm): 140 x 110 / 4x6,5Ø
 Power dissipation: 15,0 Watt @ +40°C
 4,0 Watt @ +50°C
 for dust Ex: 7,5 Watt @ +40°C
 2,0 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C
 Weight: 1,2 kg

Certificates

ATEX, IECEX, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	3	3	2
Side C / D	2	2	1

Terminals

mm ²	2,5	4	6	10
horizontal rail	1x20	1x17	1x12	1x9



QX-P8

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

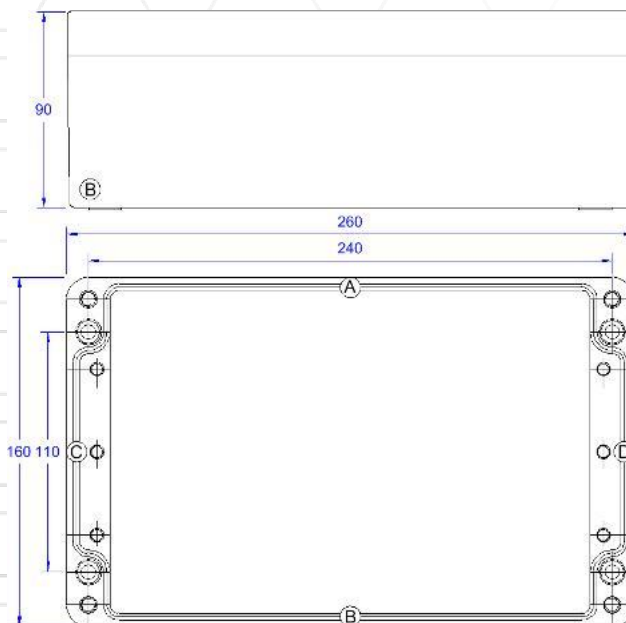
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No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Certificates

ATEX, IECEX, NEMA 4X

Technical Data

Material: Black GRP
 Dimension (mm): 260 x 160 x 90
 Fixing centres (mm): 240 x 110 / 4x6,5Ø
 Power dissipation:
 20,0 Watt @ +40°C
 5,0 Watt @ +50°C
 for dust Ex:
 10,0 Watt @ +40°C
 2,5 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class:
 T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C
 Weight: 1,68 kg

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	6	5	4
Side C / D	2	2	1

Terminals

mm ²	2,5	4	6	10
horizontal rail	1x40	1x34	1x25	1x19



QX-P9

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

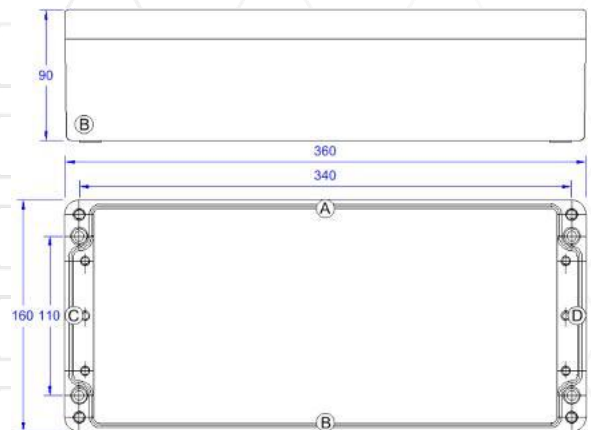
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No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 360 x 160 x 90
 Fixing centres (mm): 340 x 110 / 4x6,5Ø
 Power dissipation: 25,0 Watt @ +40°C
 5,4 Watt @ +50°C
 for dust Ex: 12,5 Watt @ +40°C
 2,7 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Weight: 2,23 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	9	8	6
Side C / D	2	2	1

Terminals

mm ²	2,5	4	6	10
horizontal rail	1x60	1x51	1x37	1x29



QX-P10

Ex approved black GRP enclosures



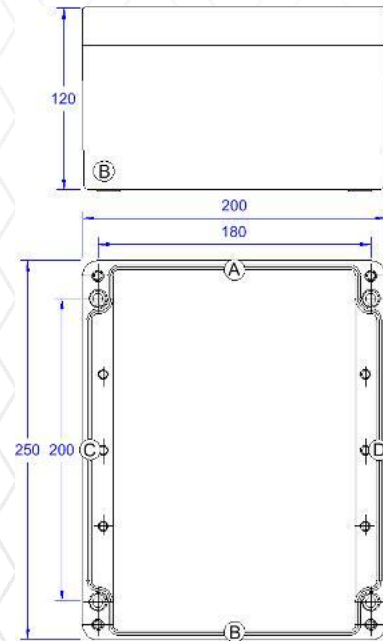
Ex e / Ex i terminal boxes



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Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Certificates

ATEX, IECEx, NEMA 4X

Technical Data

Material: Black GRP
 Dimension (mm): 360 x 160 x 90
 Fixing centres (mm): 340 x 110 / 4x6,5Ø
 Power dissipation: 25,0 Watt @ +40°C
 5,4 Watt @ +50°C
 for dust Ex: 12,5 Watt @ +40°C
 2,7 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	8	8	3
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x32	2x26	2x18	2x14

Weight: 2,23 kg



QX-P11

Ex approved black GRP enclosures



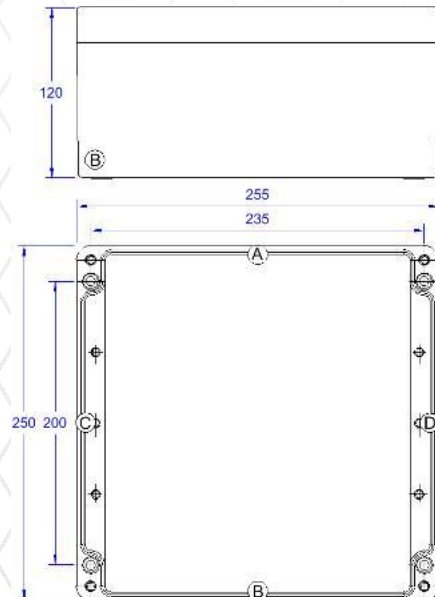
Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments. These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse. The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal. Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate. No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material:	Black GRP
Dimension (mm):	255 x 250 x 120
Fixing centres (mm):	235 x 200 / 4x6,5Ø
Power dissipation:	35,0 Watt @ +40°C 6,7 Watt @ +50°C
for dust Ex:	17,5 Watt @ +40°C 3,35 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C T5 @ +55°C T4 @ +60°C
Weight:	2,7 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	12	10	4
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x39	2x33	2x24	2x18

QX-P11H

Ex approved black GRP enclosures



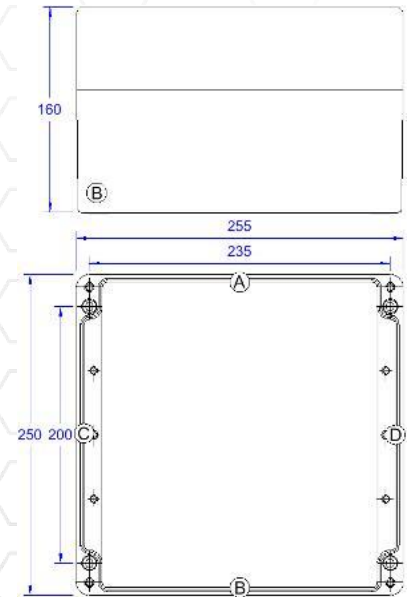
Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments. These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse. The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal. Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate. No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 255 x 250 x 160
 Fixing centres (mm): 235 x 200 / 4x6,5Ø

Power dissipation: 38,0 Watt @ +40°C
 7,1 Watt @ +50°C
 for dust Ex: 19,0 Watt @ +40°C
 3,55 Watt @ +50°C

Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Weight: 3,46 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	12	10	4
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x39	2x33	2x24	2x18



QX-P12

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

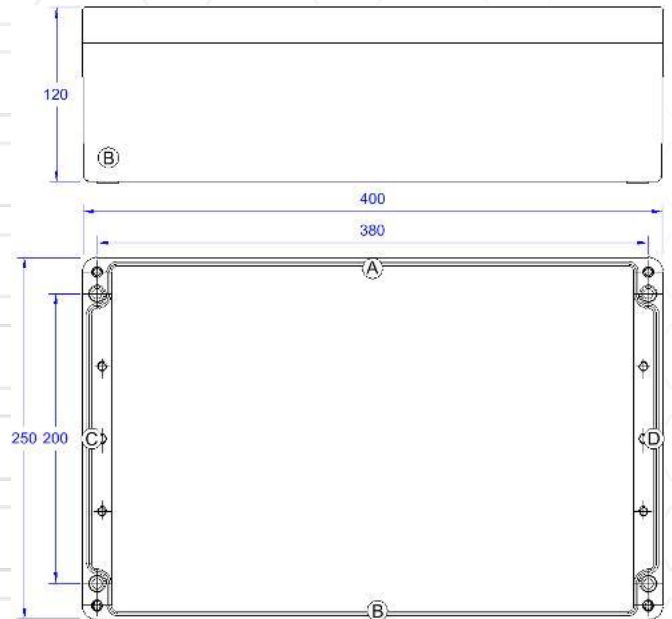
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material:	Black GRP
Dimension (mm):	400 x 250 x 120
Fixing centres (mm):	380 x 200 / 4x6,5Ø
Power dissipation:	46,0 Watt @ +40°C 7,9 Watt @ +50°C
for dust Ex:	23,0 Watt @ +40°C 3,95 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C T5 @ +55°C T4 @ +60°C

Weight: 3,6 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	20	18	7
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x68	2x57	2x42	2x33



QX-P12H

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available

- No static charge
- Robust construction

Description

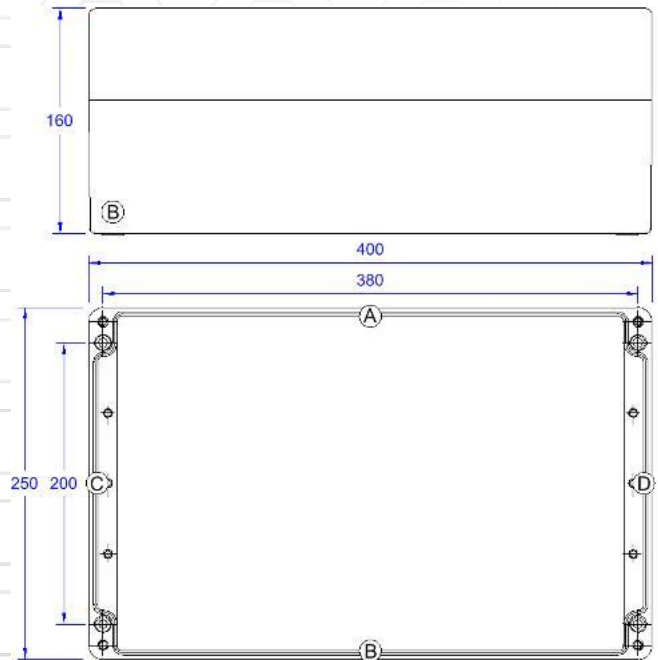
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 400 x 250 x 160
 Fixing centres (mm): 380 x 200 / 4x6,5Ø
 Power dissipation: 51,0 Watt @ +40°C
 8,5 Watt @ +50°C
 for dust Ex: 25,5 Watt @ +40°C
 4,25 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class: T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C

Weight: 4,54 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	20	18	7
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x68	2x57	2x42	2x33



QX-P13

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

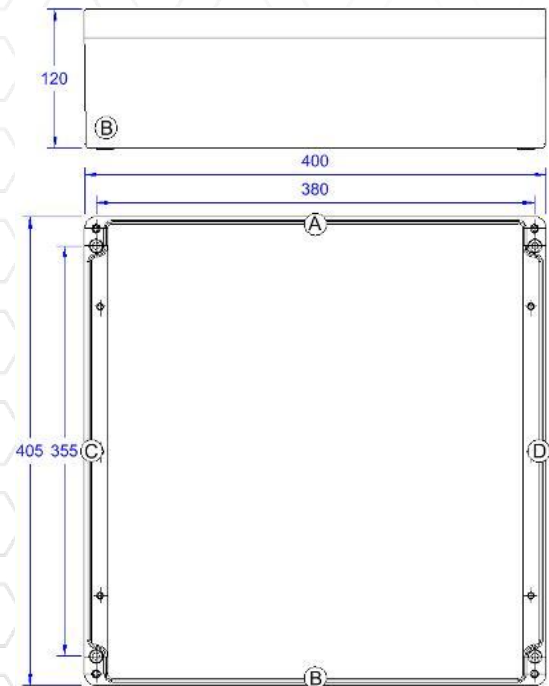
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material:	Black GRP
Dimension (mm):	405 x 400 x 120
Fixing centres (mm):	380 x 355 / 4x6,5Ø
Power dissipation:	65,0 Watt @ +40°C 11,0 Watt @ +50°C
for dust Ex:	32,5 Watt @ +40°C 5,5 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C T5 @ +55°C T4 @ +60°C
Weight:	5,14 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	20	18	7
Side C / D	18	16	6

Terminals

mm ²	2,5	4	6	10
horizontal rail	3x68	3x57	3x42	3x33

QX-P13H

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

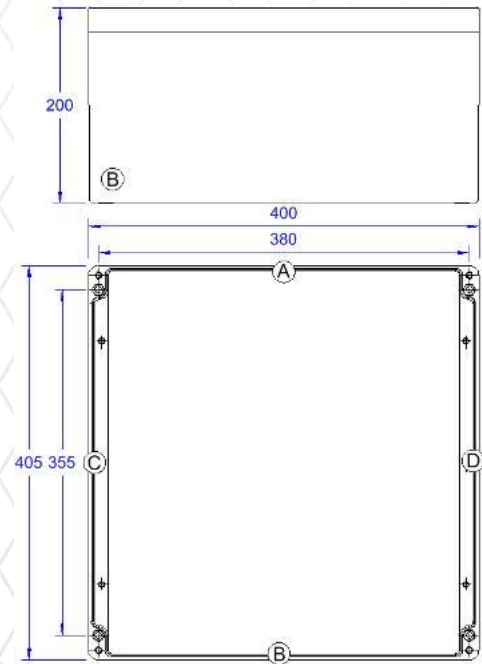
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Certificates

ATEX, IECEX, NEMA 4X

Technical Data

Material: Black GRP
 Dimension (mm): 405 x 400 x 200
 Fixing centres (mm): 380 x 355 / 4x6,5Ø
 Power dissipation:
 70,0 Watt @ +40°C
 10,5 Watt @ +50°C
 for dust Ex:
 35,0 Watt @ +40°C
 5,25 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class:
 T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C
 Weight: 6,3 kg

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	40	36	21
Side C / D	36	32	18

Terminals

mm ²	2,5	4	6	10
horizontal rail	3x68	3x57	3x42	3x33



QX-P15

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

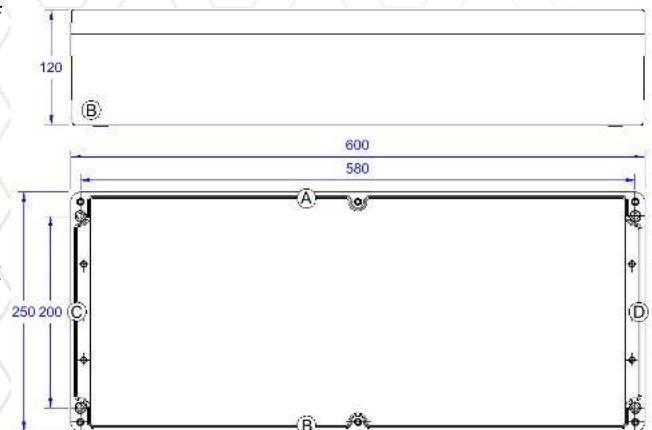
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material:	Black GRP
Dimension (mm):	600 x 250 x 120
Fixing centres (mm):	580 x 200 / 4x6,5Ø
Power dissipation:	63,0 Watt @ +40°C
	10,2 Watt @ +50°C
for dust Ex:	31,5 Watt @ +40°C
	5,1 Watt @ +50°C
Ingress protection:	IP 66
Impact resistance:	7 Joule
Min. ambient temp.:	-60°C
Temperature class:	T6 @ +50°C
	T5 @ +55°C
	T4 @ +60°C

Weight: 5,32 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	30	26	10
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x108	2x90	2x62	2x45

QX-P15H

Ex approved black GRP enclosures



Ex e / Ex i terminal boxes



- High chemical resistance
- International certificates available
- Self-assembly with terminals
- No static charge
- Robust construction
- UV-Resistant

Description

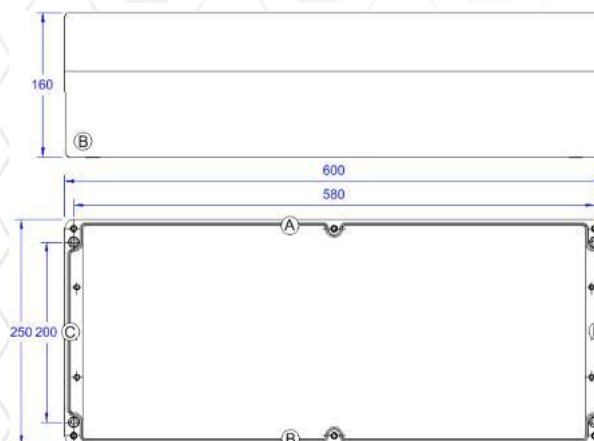
GRP (glass-fibre reinforced polyester) enclosures have proven themselves even in the harshest of environments.

These robust and UV-resistant enclosures can withstand harmful aggressive chemical and mechanical abuse.

The lid with integrated silicon gasket and high corrosion resistive stainless steel captive screws allows easy handling and reliability with a perfect weather seal.

Stainless steel screw inserts are attached to the inside rear surface for ease of securing a terminal rail or mounting plate.

No static charges occur due to the doped conductive carbon black low surface resistance construction.



Possible Application:

- Ex e / Ex i junction boxes
- Local control stations

Technical Data

Material: Black GRP
 Dimension (mm): 600 x 250 x 160
 Fixing centres (mm): 580 x 200 / 4x6,5Ø
 Power dissipation:
 68,0 Watt @ +40°C
 10,4 Watt @ +50°C
 for dust Ex:
 34,0 Watt @ +40°C
 5,2 Watt @ +50°C
 Ingress protection: IP 66
 Impact resistance: 7 Joule
 Min. ambient temp.: -60°C
 Temperature class:
 T6 @ +50°C
 T5 @ +55°C
 T4 @ +60°C
 Weight: 6,46 kg

Certificates

ATEX, IECEx, NEMA 4X

Marking

Empty enclosures:

Ex II 2G Ex eb IIC / Ex II 2D Ex tb IIIC

Terminal Boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Quantity of glands

Gland	M20	M25	M32
Side A / B	30	26	10
Side C / D	10	8	3

Terminals

mm ²	2,5	4	6	10
horizontal rail	2x108	2x90	2x62	2x45



QX-P... Terminal Configuration

Polyester enclosures

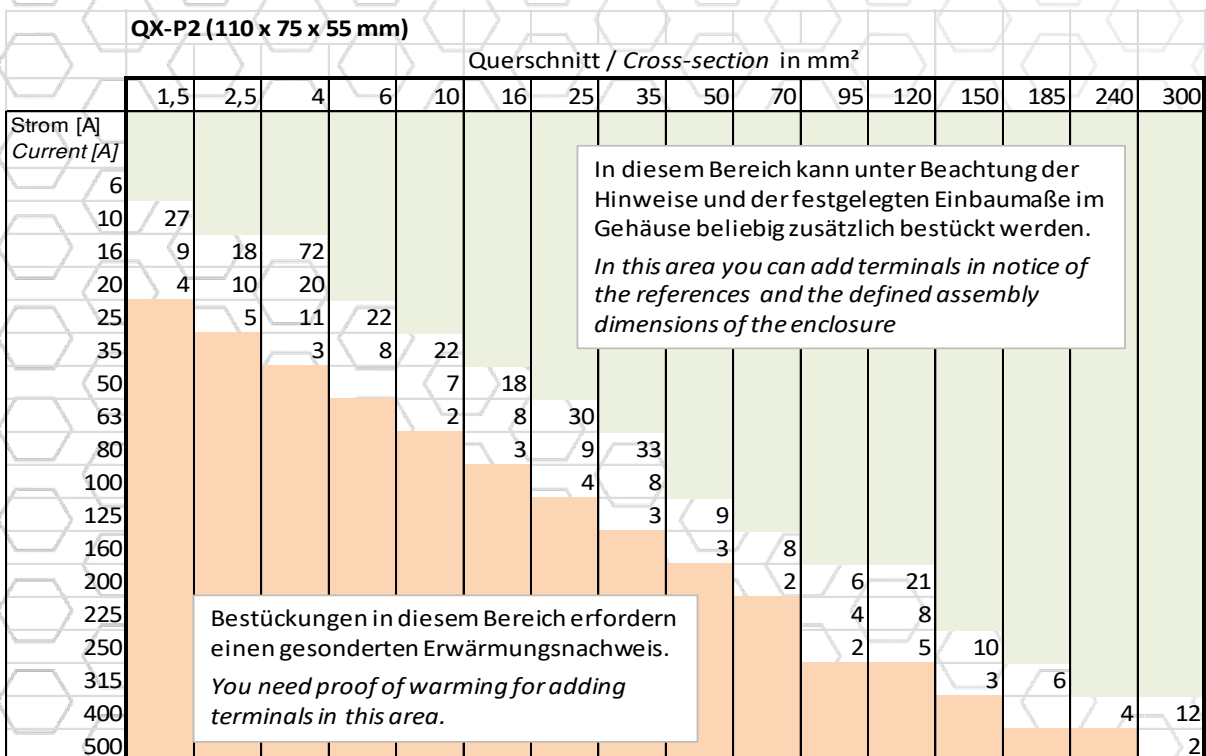
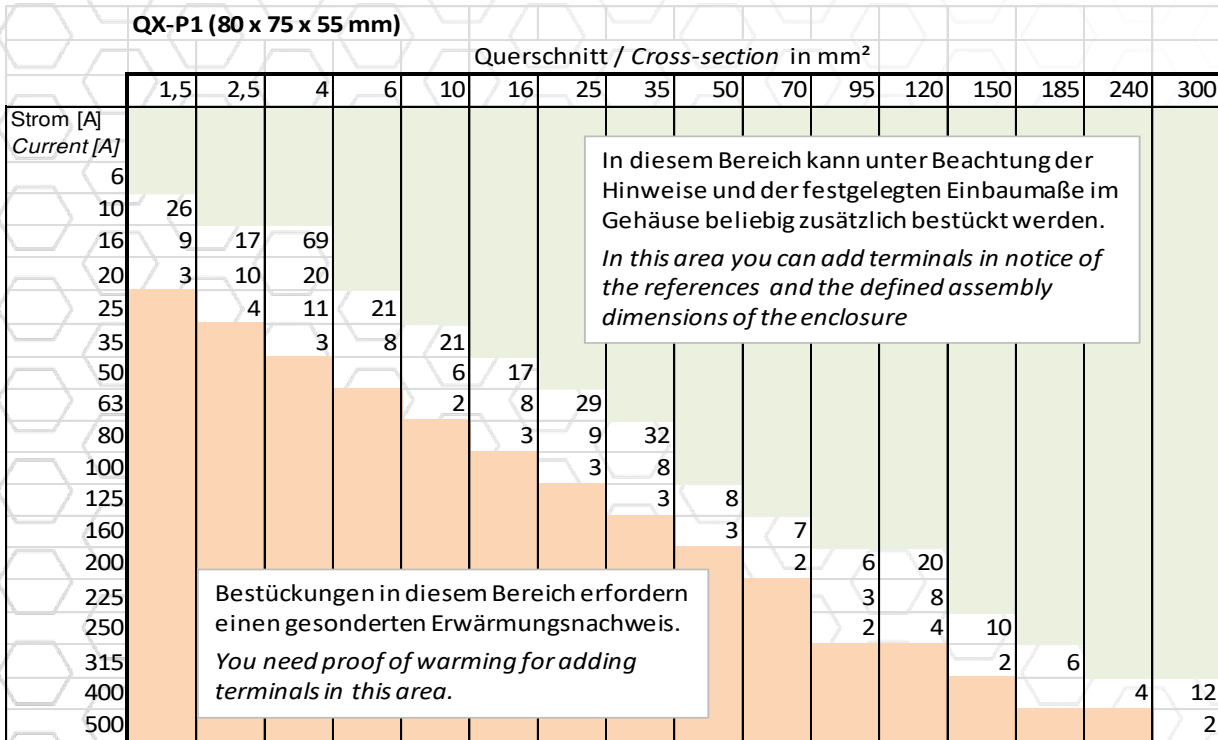


Ex e / Ex i terminal boxes



Mixed configuration can be determined by percentage calculation

E.g.: QX-P5: 8 x 2,5 with 16 A = 50%
 2 x 4 with 35 A = 40%
 Result = 90% -> OK



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P3 (160 x 75 x 55 mm)

		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	28																
16	9	18	73														
20	4	11	21														
25		5	12	23													
35			3	9	22												
50					7	18											
63					2	8	30										
80						3	9	34									
100							4	9									
125								3	9								
160									3	8							
200										2	7	21					
225											4	8					
250											2	5	10				
315												3	6				
400														4	12		
500																2	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P8 (260 x 160 x 90 mm)

		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	52																
16	18	34	135														
20	7	20	39														
25		9	22	42													
35			6	16	41												
50				2	13	34											
63				4	16	56											
80					6	17	63										
100						7	16										
125							6	17									
160								5	15								
200									5	13	40						
225									2	7	15						
250										4	9	20					
315											2	5	12				
400												2	8	23			
500																4	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P5 (122 x 120 x 90 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	43															
16	14	28	110													
20	6	16	32													
25		7	18	35												
35			5	13	34											
50				2	11	28										
63					3	13	46									
80						5	14	52								
100							6	13								
125								5	13							
160									4	12						
200										4	10	32				
225											6	12				
250											3	7	16			
315												4	9			
400													2	6	19	
500																3

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P6 (220 x 120 x 90 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	45															
16	15	30	118													
20	6	17	34													
25		8	19	37												
35			5	14	36											
50				2	11	30										
63					4	14	49									
80						5	15	55								
100							6	14								
125								5	14							
160									5	13						
200										4	11	35				
225											6	13				
250											3	8	17			
315												5	10			
400													2	7	20	
500																4

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P7 (160 x 160 x 90 mm)

		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	48																
16	16	32	125														
20	6	18	36														
25		9	20	39													
35			6	15	38												
50				2	12	31											
63					4	14	52										
80						5	16	58									
100							7	15									
125								6	15								
160									5	13							
200										5	12	37					
225											6	14					
250											3	8	18				
315												5	11				
400													2	7	22		
500																4	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P8 (260 x 160 x 90 mm)

		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	52																
16	18	34	135														
20	7	20	39														
25		9	22	42													
35			6	16	41												
50				2	13	34											
63					4	16	56										
80						6	17	63									
100							7	16									
125								6	17								
160									5	15							
200										5	13	40					
225										2	7	15					
250											4	9	20				
315												2	5	12			
400													2	8	23		
500																4	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



		QX-P9 (360 x 160 x 90 mm)															
		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	53																
16	18	35	138														
20	7	20	40														
25		9	22	43													
35			6	17	42												
50				2	13	35											
63					4	16	58										
80						6	18	64									
100							7	17									
125								6	17								
160									6	15							
200										5	13	40					
225										2	7	16					
250											4	9	20				
315												2	5	12			
400														2	8	24	
500																	4

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

		QX-P10 (200 x 250 x 120 mm)															
		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	65																
16	22	43	169														
20	9	25	49														
25		12	27	53													
35			8	21	52												
50				3	17	43											
63					5	20	71										
80						7	22	79									
100							9	21									
125								8	21								
160									7	18							
200										6	16	50					
225										2	9	19					
250											5	12	25				
315												2	7	14			
400														3	10	29	
500																	5

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P11 (255 x 250 x 120 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	70															
16	24	46	181													
20	10	27	52													
25		13	29	57												
35			8	22	55											
50				3	18	46										
63					6	21	76									
80						8	23	85								
100							10	22								
125								9	22							
160									7	20						
200										7	17	53				
225										2	10	21				
250											5	12	26			
315												2	7	16		
400														3	11	32
500																6

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P11H (255 x 250 x 160 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	81															
16	28	54	210													
20	11	31	61													
25		15	34	66												
35			10	26	65											
50				3	21	53										
63					7	25	88									
80						9	27	99								
100							12	26								
125								10	26							
160									9	23						
200										8	20	62				
225										3	11	24				
250											6	15	31			
315												3	9	18		
400														4	12	37
500																7

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



		QX-P12 (400 x 250 x 120 mm)															
		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	76																
16	26	50	196														
20	10	29	57														
25		14	32	62													
35			9	24	60												
50				3	19	50											
63					6	23	82										
80						9	25	92									
100							11	24									
125								9	24								
160									8	21							
200										7	18	58					
225										3	10	22					
250											5	14	29				
315												3	8	17			
400														3	12	34	
500																6	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

		QX-P12H (400 x 250 x 160 mm)															
		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A]	Current [A]																
6																	
10	87																
16	30	58	225														
20	12	34	65														
25		16	37	71													
35			11	28	69												
50				4	22	57											
63					7	26	94										
80						10	29	105									
100							12	28									
125								11	28								
160									9	25							
200										9	21	66					
225										3	12	26					
250											6	16	33				
315												3	9	19			
400														4	13	39	
500															2	7	

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P13 (405 x 400 x 120 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	91															
16	31	61	236													
20	13	35	68													
25		17	39	75												
35			11	29	72											
50				4	23	60										
63					8	28	99									
80						10	31	111								
100							13	29								
125								11	29							
160									10	26						
200										9	22	70				
225										3	13	27				
250											7	16	34			
315												3	10	20		
400														4	14	41
500															2	8

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P13H (405 x 400 x 200 mm)

Querschnitt / Cross-section in mm²

Strom [A] Current [A]	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
6																
10	103															
16	35	68	266													
20	14	40	77													
25		19	43	84												
35			13	33	82											
50				4	26	67										
63					9	31	111									
80						12	35	125								
100							15	33								
125								13	33							
160									11	29						
200										10	25	78				
225										4	14	31				
250											7	18	39			
315												4	11	23		
400														5	16	46
500															2	9

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



QX-P... Terminal Configuration

Polyester enclosures



Ex e / Ex i terminal boxes



QX-P15 (600 x 250 x 120 mm)

Querschnitt / Cross-section in mm²

	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																
6																
10	78															
16	26	52	201													
20	11	30	58													
25		14	33	64												
35			9	25	62											
50				3	20	51										
63					6	24	84									
80						9	26	95								
100							11	25								
125								10	25							
160									8	22						
200										8	19	59				
225										3	11	23				
250											6	14	29			
315												3	8	17		
400														4	12	35
500																7

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-P15H (600 x 250 x 160 mm)

Querschnitt / Cross-section in mm²

	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																
6																
10	78															
16	26	52	201													
20	11	30	58													
25		14	33	64												
35			9	25	62											
50				3	20	51										
63					6	24	84									
80						9	26	95								
100							11	25								
125								10	25							
160									8	22						
200										8	19	59				
225										3	11	23				
250											6	14	29			
315												3	8	17		
400														4	12	35
500																7

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

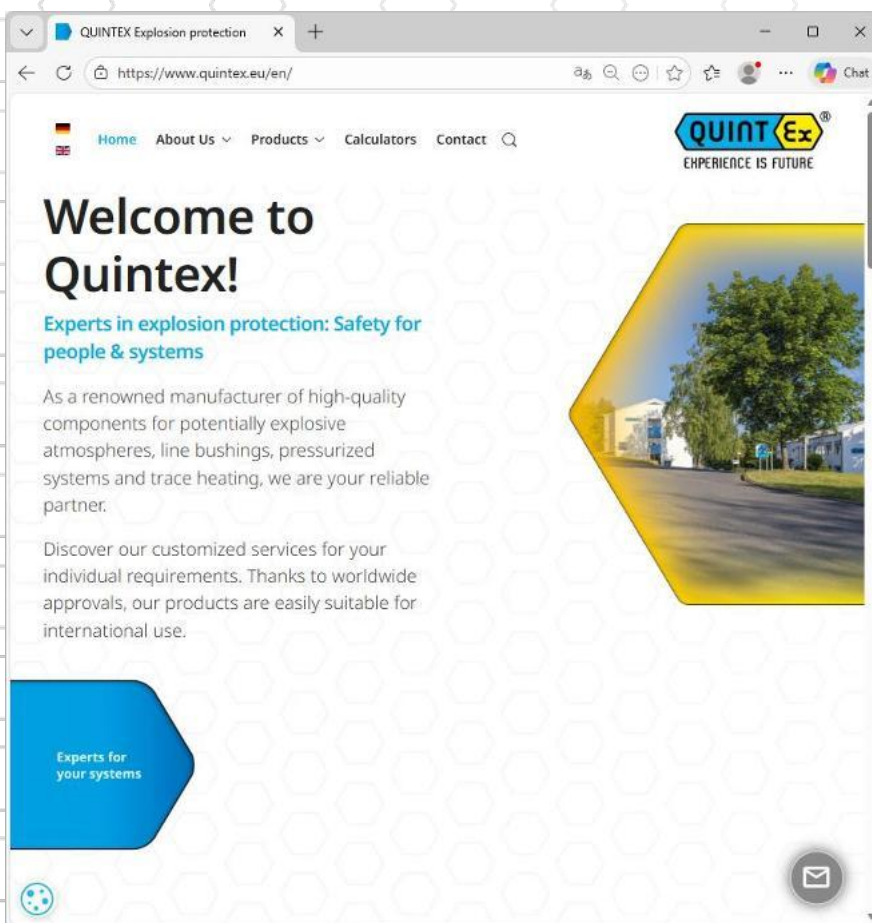
Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.





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The chat is available on our home page.



Contact

You need more in-depth information? We are looking forward to assisting you!

Further information on our products, systems or services?
Do you need an offer or do you have questions on our company?

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We would be glad to helping you!



Ex Stainless Steel Terminal Boxes

Experts for your system

Flexibility • Quality • Customer Orientation



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Proviso

We reserve the right to make technical changes. Changes, errors, and literal errors do not justify any claim for damage compensation. For safety components and systems, the relevant standards as well as the corresponding operating and assembly instructions need to be considered.

With this product catalogue, all previous catalogue versions are invalid.





Specifications for Ex Area			
Marking according to 2014/34/EU		II 2 GD	
Type of protection		II 2G Ex eb IIC Gb and II 2G Ex ia IIC Gb II 2D Ex tb IIIC Db	
Ambient temperature °C Silicone gasket		Gas temperature class T*°C	Dust temperature °C
MIN	MAX		
-60	+50	T6	85
-60	+55	T5	100
-60	+60	T4	120
Max. temperature range		-60..+120 °C	
Ingress protection		IP 66	
Ex zones		1, 2, 21, 22	
Applicable even with risks of mechanical exposure (impact resistance)		high (7 Joule)	
Gas groups		IIA; IIB; IIC	
Certificates		ATEX, IECEx	

Enclosure specifications	
Enclosure material	1.2mm stainless steel 1.4404 (316L)
Surface	Stainless steel brushed
Lid fixing	Removable lid with captive screws - optional hinge set
Gasket	One-unit, made of silicone
Earthing	External earthing / internal earthing bolt
Mounting	Can be directly mounted to walls with gasket or optionally with external mounting strap

Options	
Mounting plate, stainless steel, galvanised	MP-VxxI xx = 2 - 26 (enclosure size)





Type	Screw connection					Terminals (mm ²)					
	M16	M20	M25	M32		1,5	2,5	4	6	10	16
QX-V2 150x150x81	Page A+B	8	6	3	2	29	23	19	16	12	10
	Page C+D	6	5	4	0						
QX-V4 200x200x81	Page A+B	12	10	4	3	38	30	25	21	16	13
	Page C+D	7	6	4	0						
QX-V5 200x200x121	Page A+B	22	16	8	5	38	30	25	21	16	13
	Page C+D	20	18	8	4						
QX-V7 300x150x81	Page A+B	20	17	7	5	57	46	38	32	24	20
	Page C+D	6	4	3	0						
QX-V8 300x200x81	Page A+B	20	17	7	5	57	46	38	32	24	20
	Page C+D	7	6	4	0						
QX-V9 300x200x121	Page A+B	38	28	14	9	57	46	38	32	24	20
	Page C+D	20	18	8	4						
QX-V11 300x300x121	Page A+B	38	28	14	8	2x57	2x46	2x38	2x32	2x24	2x20
	Page C+D	32	27	14	7						
QX-V12 300x300x161	Page A+B	54	45	22	14	2x57	2x46	2x38	2x32	2x24	2x20
	Page C+D	50	45	21	12						
QX-V14 380x380x161	Page A+B	75	58	30	18	2x72	2x58	2x49	2x40	2x30	2x25
	Page C+D	65	58	27	17						
QX-V16 400x150x81	Page A+B	29	24	9	7	76	61	51	42	32	26
	Page C+D	6	4	3	0						
QX-V17 400x200x121	Page A+B	52	40	20	13	76	61	51	42	32	26
	Page C+D	20	18	8	4						
QX-V20 400x300x161	Page A+B	102	60	32	20	2x76	2x61	2x51	2x42	2x32	2x26
	Page C+D	50	45	21	12						
QX-V22 500x300x161	Page A+B	102	80	42	28	2x95	2x76	2x64	2x53	2x40	2x33
	Page C+D	50	45	21	12						
QX-V24 500x400x161	Page A+B	102	80	42	28	3x95	3x76	3x64	3x53	3x40	3x33
	Page C+D	70	63	28	18						
QX-V26 600x200x121	Page A+B	64	64	32	22	114	92	77	64	48	40
	Page C+D	20	18	8	4						

The maximum number of terminals varies in accordance with the terminal manufacturer.

Combinations and other sizes after technical testing.

Technical data of standardized cable screw connections, brass, nickel-plated					
Type	Wrench size	Range (mm)	Type	Wrench size	Range (mm)
M12	16	3 – 6	M32	36	13 – 21
M16	20	4,5 – 9	M40	46	17 – 28
M20	24	7 – 13	M50	55	23 – 35
M25	29	10 – 17	M63	68	31 – 48

QX-V2

150 x 150 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be mounted individually
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) as well as mounting plates are available. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Approvals

ATEX, IECEx

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 150 x 150 x 81mm

Mounting dimensions (mm): 110 x 110 / 4xØ 8.4mm

Power loss: 10.0 Watt at +40°C

With Ex dust: 5.0 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 1.30 kg

Marking

Enclosures:

Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	8	6	3
Page C / D	6	5	4

Terminal mounting

mm ²	2,5	4	6	10
Horizontal mounting rail	23	19	16	12

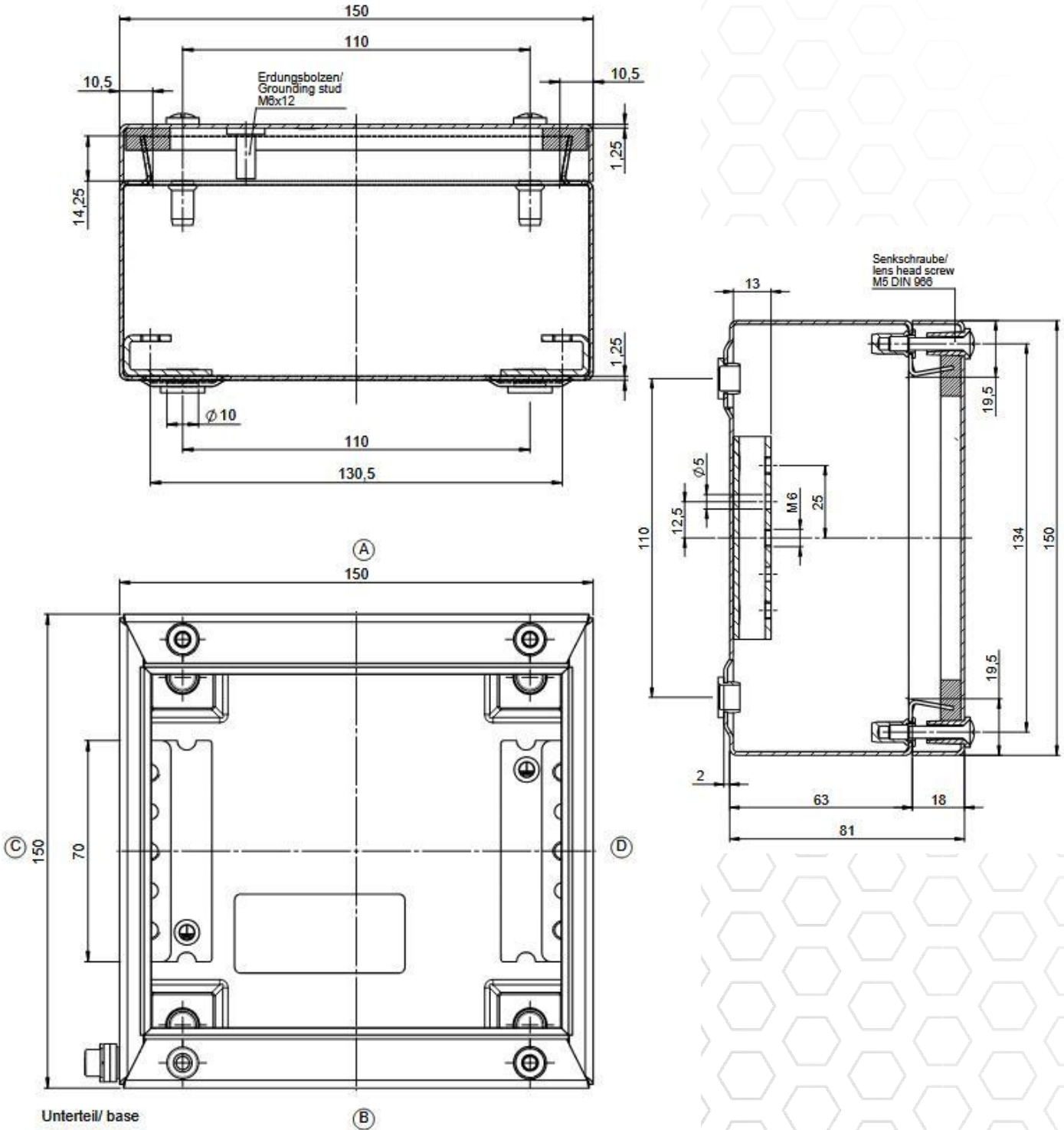


QX-V2

150 x 150 x 81mm

QUINT Ex ®

Ex e / Ex i Stainless Steel Terminal Boxes



QX-V4

200 x 200 x 81 mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) as well as mounting plates are available. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 200 x 200 x 81mm

Mounting dimensions (mm): 160 x 160 / 4xØ 8.4mm

Power loss: 15,0 watt at +40°C

With Ex dust: 7,5 watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 1.66 kg

Approvals

ATEX, IECEx

Marking

Enclosures: II 2G Ex eb IIC Gb / II 2D Ex tb IIIC Db

Terminal Boxes: II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screw connections

Screwing	M16	M20	M25
Page A / B	12	5	4
Page C / D	10	4	3

Terminal mounting

mm ²	2,5	4	6	10
Horizontal mounting rail	25	20	17	3

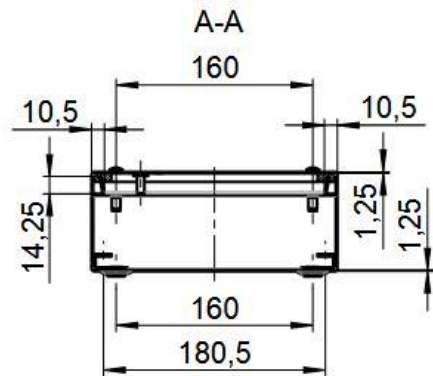


QX-V4

200 x 200 x 81mm

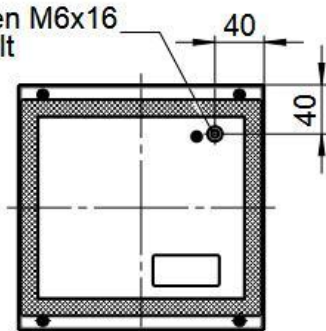


Ex e / Ex i Stainless Steel Terminal Boxes

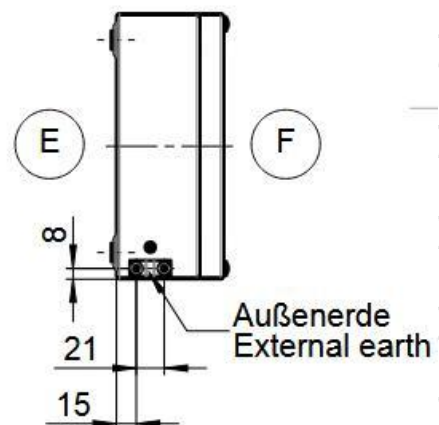
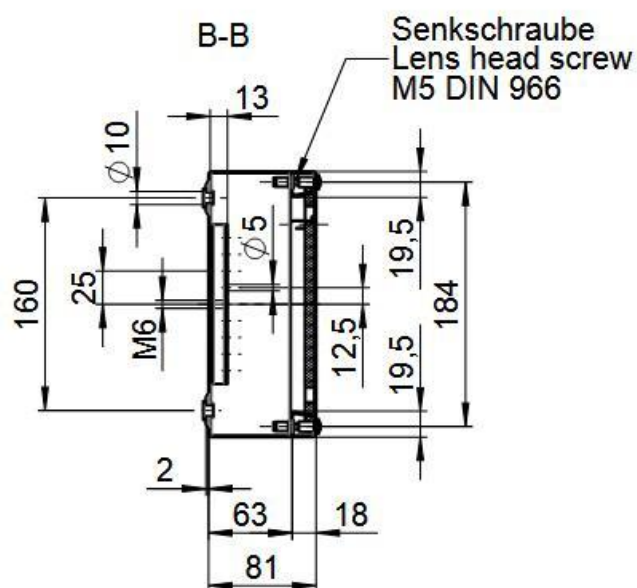
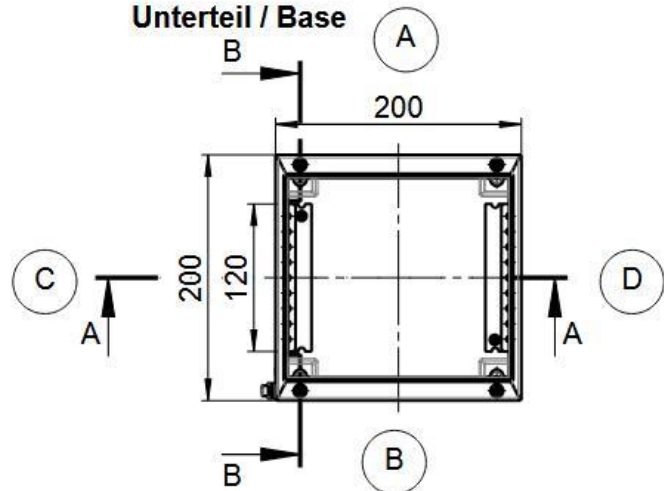


Deckel / Lid

Erdungsbolzen M6x16
Earth stud bolt



Unterteil / Base



QX-V5

200 x 200 x 121mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L
Optionally: RAL coating
Dimensions (mm): 200 x 200 x 121mm
Mounting dimensions (mm): 160 x 160 / 4xØ 8.4mm
Power loss: 19.0 Watt at +40°C
With Ex dust: 9.5 Watt at +40°C
Ingress protection: IP 66
Impact strength: 7 Joule
Min. amb. temperature: -60°C
Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C
Weight: 1.66 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db
Terminal boxes:
Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screw connections

Screwing	M16	M20	M25
Page A / B	18	10	8
Page C / D	15	8	6

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	25	20	17	13

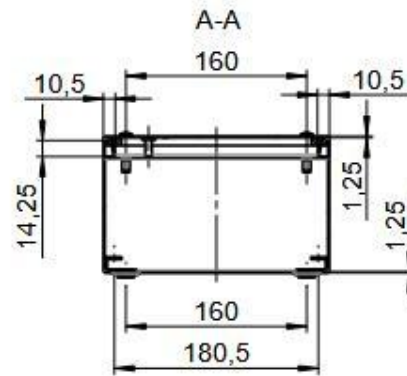


QX-V5

200 x 200 x 121mm

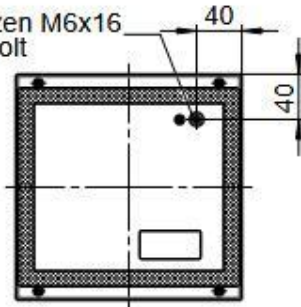


Ex e / Ex i Stainless Steel Terminal Boxes

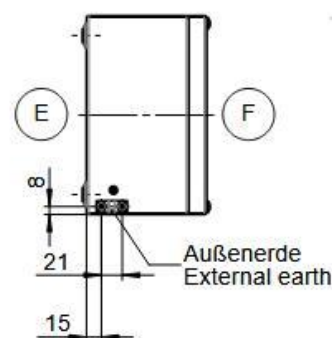
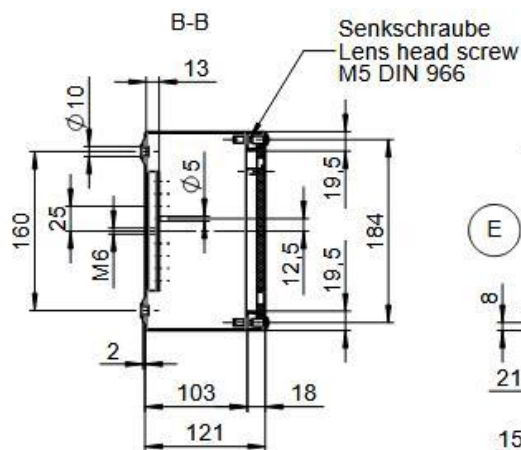
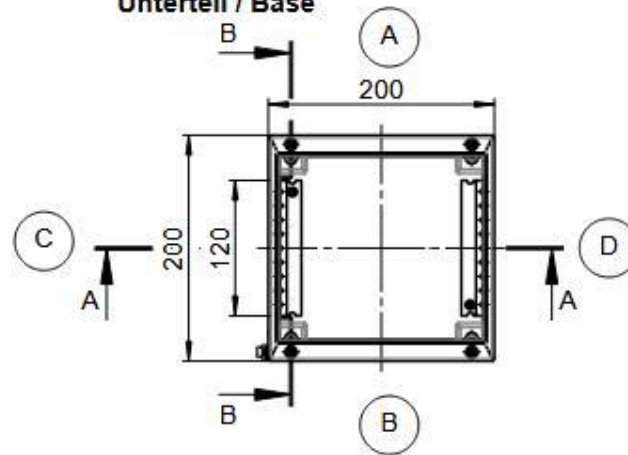


Deckel / Lid

Erdungsbolzen M6x16
Earth stud bolt



Unterteil / Base



QX-V7

300 x 150 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Approvals

ATEX, IECEx

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 300 x 150 x 81mm

Mounting dimensions (mm): 260 x 110 / 4xØ 8.4mm

Power loss: 18.0 Watt at +40°C

With Ex dust: 9.0 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 2.09 kg

Marking

Enclosures:
⊕ II 2G Ex eb IIC Gb / ⊕ II 2D Ex tb IIIC Db

Terminal boxes:
⊕ II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
⊕ II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M20	M25	M32
Page A / B	6	5	4
Page C / D	2	2	1

Terminal mounting

mm ²	2,5	4	6	10
Horizontal mounting rail	40	34	25	19



QX-V7

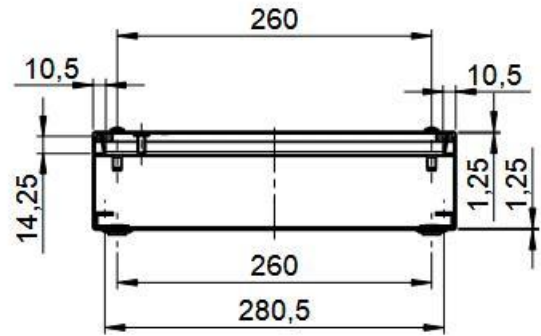
300 x 150 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes

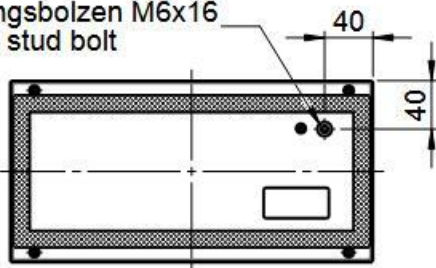


A-A

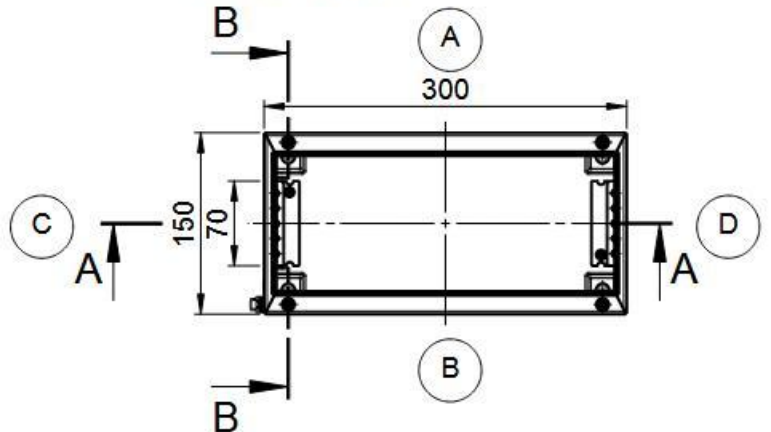


Deckel / lid

Erdungsbolzen M6x16
Earth stud bolt

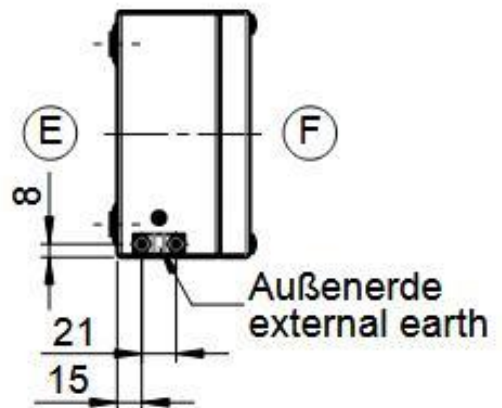
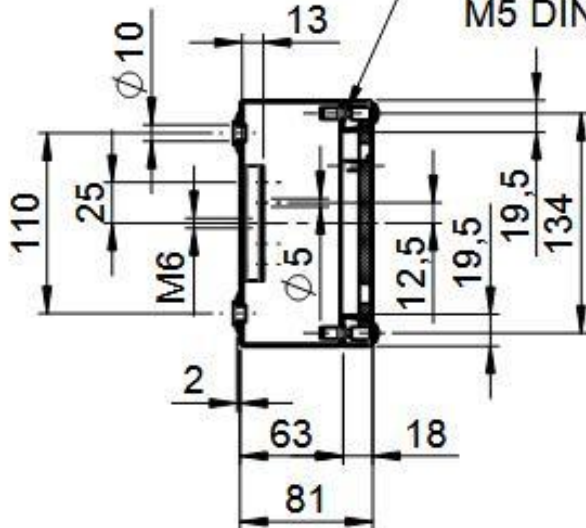


Unterteil / base



B-B

Senkschraube
lens head screw
M5 DIN 966



QX-V8

300 x 200 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible Application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
 1.2mm, 1.4404 / 316L
 Optionally: RAL coating
 Dimensions (mm): 300 x 200 x 81mm
 Mounting dimensions (mm): 260 x 160 / 4xØ 8.4mm
 Power loss: 22.0 Watt at +40°C
 With Ex dust: 11.0 Watt at +40°C
 Ingress protection: IP 66
 Impact strength: 7 Joule
 Min. amb. temperature: -60°C
 Temperature class: T6 at +50°C
 T5 at +55°C
 T4 at +60°C
 Weight: 2.56 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
 Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db
 Terminal boxes:
 Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screw connections

Screwing	M16	M20	M25
Page A / B	18	7	6
Page C / D	10	4	3

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	40	37	30	23

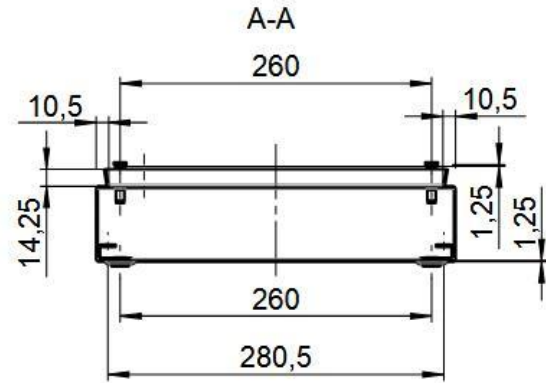


QX-V8

300 x 200 x 81mm

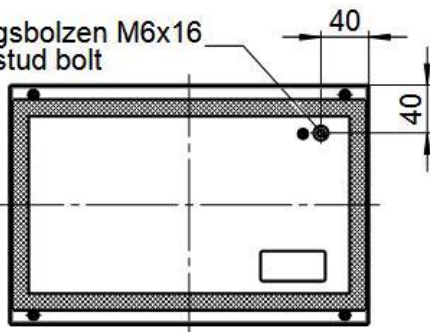


Ex e / Ex i Stainless Steel Terminal Boxes

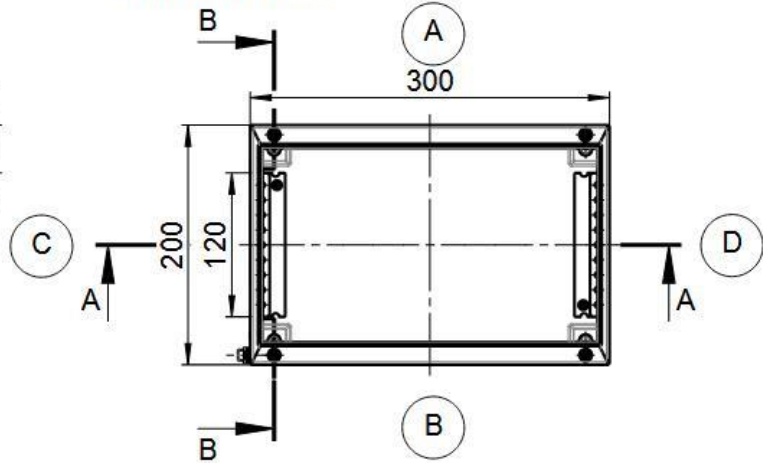


Deckel / Lid

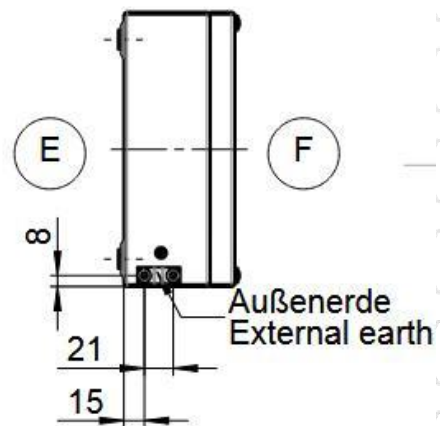
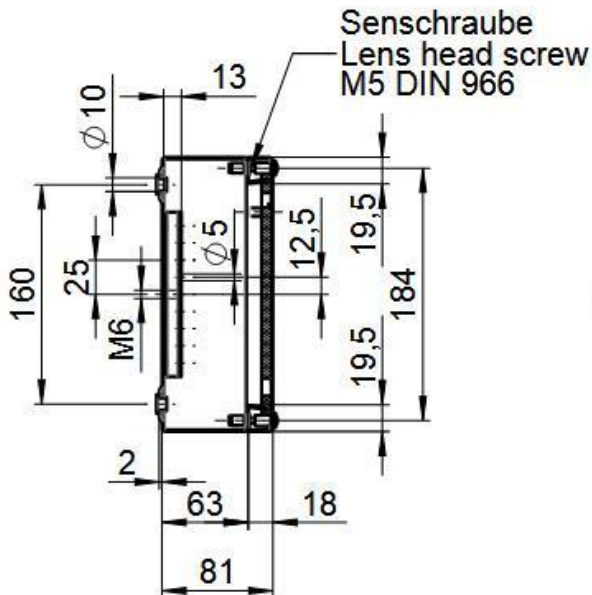
Erdungsbolzen M6x16
Earth stud bolt



Unterteil / Base



B-B



QX-V9

300 x 200 x 121mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L
Optionally: RAL coating
Dimensions (mm): 300 x 200 x 121mm
Mounting dimensions (mm): 260 x 160 / 4xØ 8.4mm
Power loss: 22.0 Watt at +40°C
With Ex dust: 11.0 Watt at +40°C
Ingress protection: IP 66
Impact strength: 7 Joule
Min. amb. temperature: -60°C
Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C
Weight: 2.94 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db
Terminal boxes:
Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screw connections

Screwing	M16	M20	M25
Page A / B	27	14	12
Page C / D	15	8	6

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	44	37	30	23

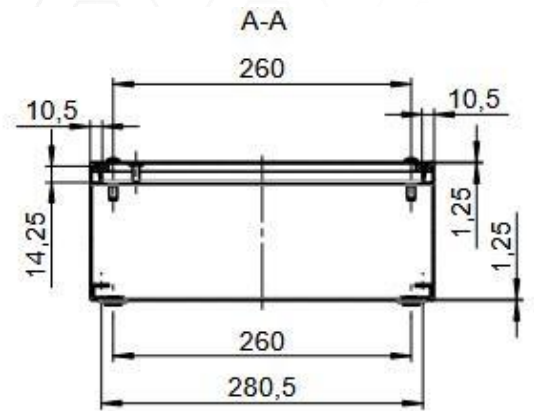


QX-V9

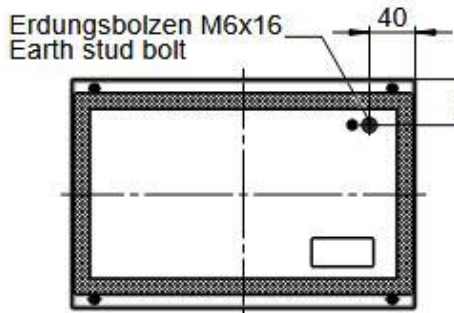
300 x 200 x 121mm



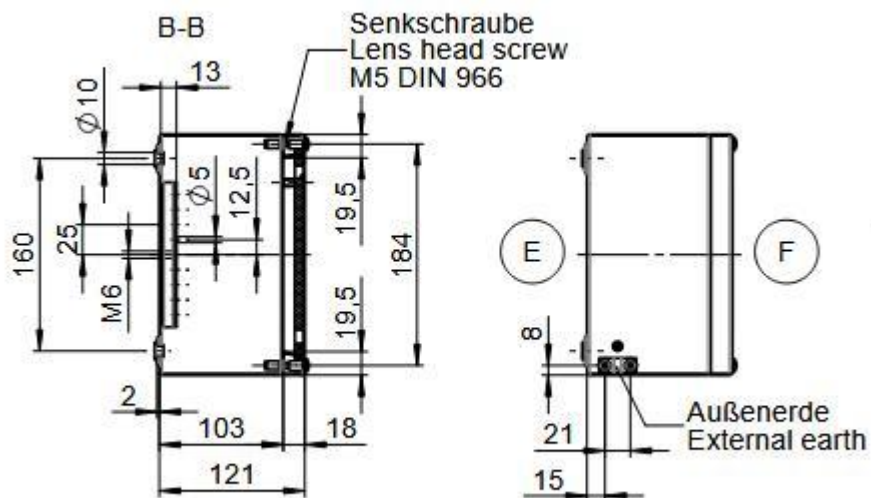
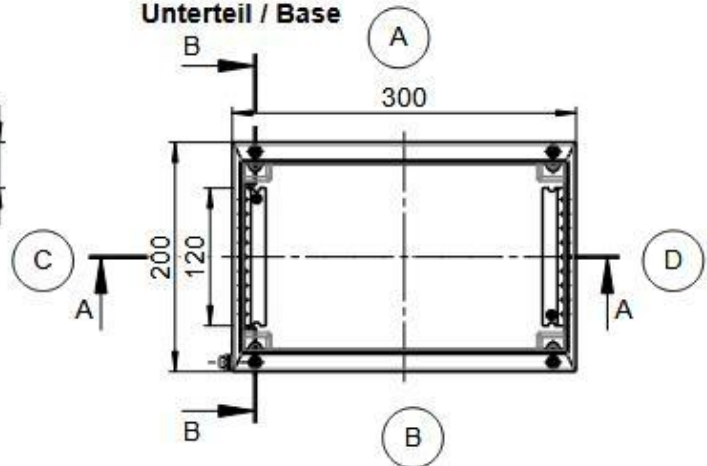
Ex e / Ex i Stainless Steel Terminal Boxes



Deckel / Lid



Unterteil / Base



QX-V11

300 x 300 x 121mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i enclosures
- Enclosures in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L
Optionally: RAL coating
Dimensions (mm): 300 x 300 x 121mm
Mounting dimensions (mm): 260 x 260 / 4xØ 8.4mm
Power loss: 35.0 Watt at +40°C
With Ex dust: 17.5 Watt at +40°C
Ingress protection: IP 66
Impact strength: 7 Joule
Min. amb. temperature: -60°C
Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C
Weight: 3.99 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
 Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db
 Terminal boxes:
 Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	27	14	12
Page C / D	27	14	12

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	2X44	2x37	2x30	2x23

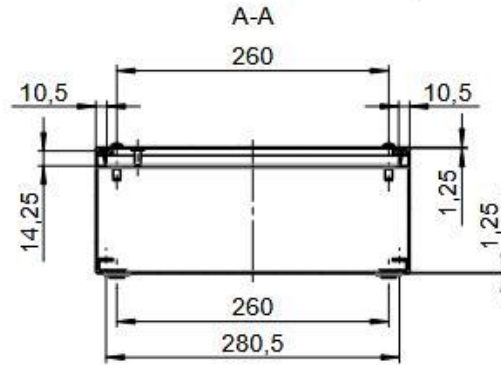


QX-V11

300 x 300 x 121mm

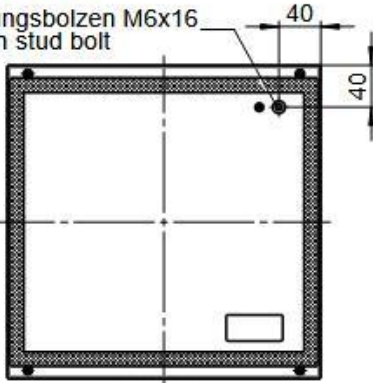


Ex e / Ex i Stainless Steel Terminal Boxes

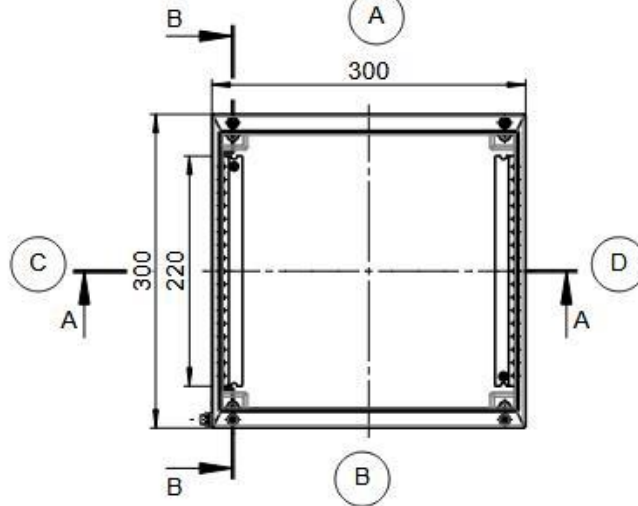


Deckel / Lid

Erdungsbolzen M6x16
Earth stud bolt

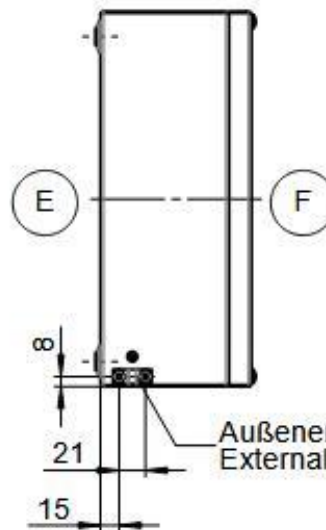
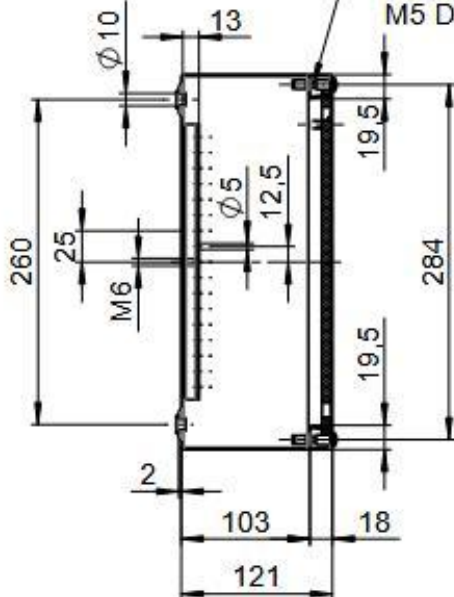


Unterteil / Base



B-B

Senkschraube
Lens head screw
M5 DIN 966



Außenerde
External earth

QX-V12

300 x 300 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas.

They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material:	Stainless steel, brush. 1.2mm, 1.4404 / 316L
Optionally:	RAL coating
Dimensions (mm):	300 x 300 x 161mm
Mounting dimensions (mm):	260 x 260 / 4xØ 8.4mm
Power loss:	40.0 Watt at +40°C
With Ex dust:	20.0 Watt at +40°C
Ingress protection:	IP 66
Impact strength:	7 Joule
Min. amb. temperature:	-60°C
Temperature class:	T6 at +50°C T5 at +55°C T4 at +60°C
Weight:	4.45 kg

Approvals

ATEX, IECEx

Marking

Enclosures:

Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	27	14	12
Page C / D	27	14	12

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	2X44	2x37	2x30	2x23

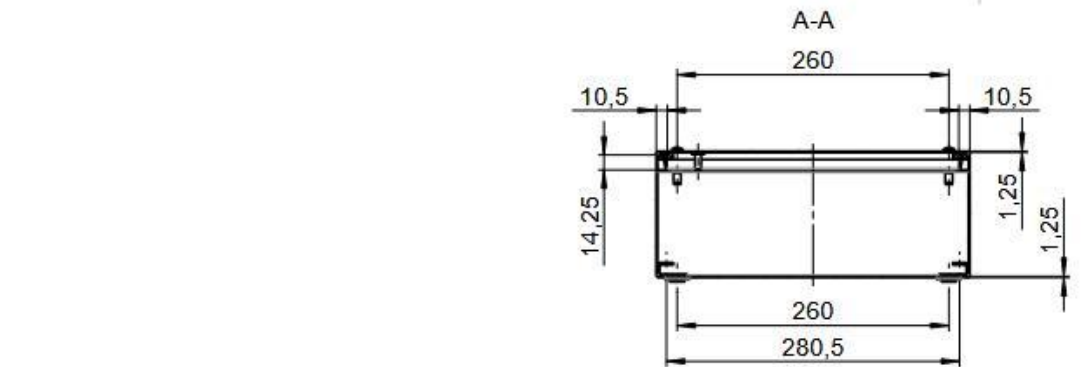


QX-V12

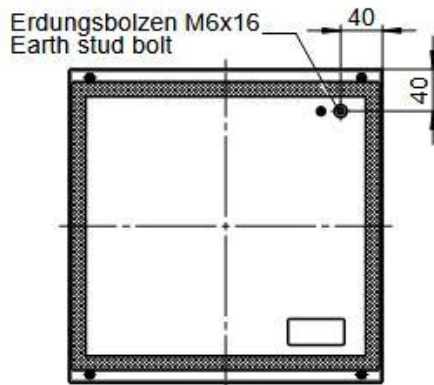
300 x 300 x 161mm



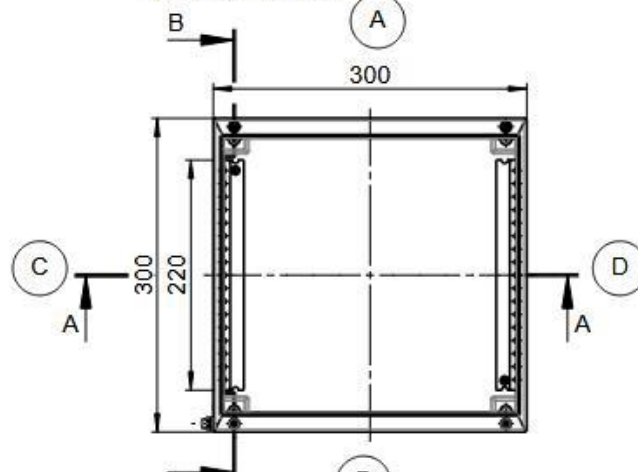
Ex e / Ex i Stainless Steel Terminal Boxes



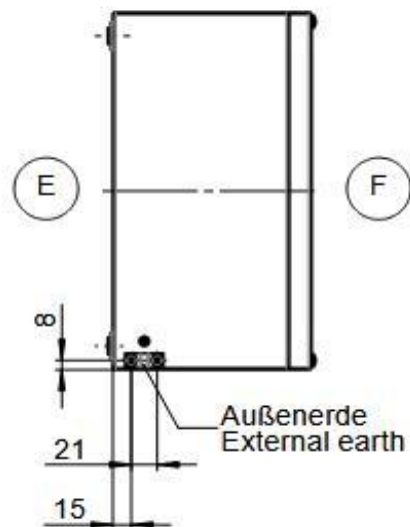
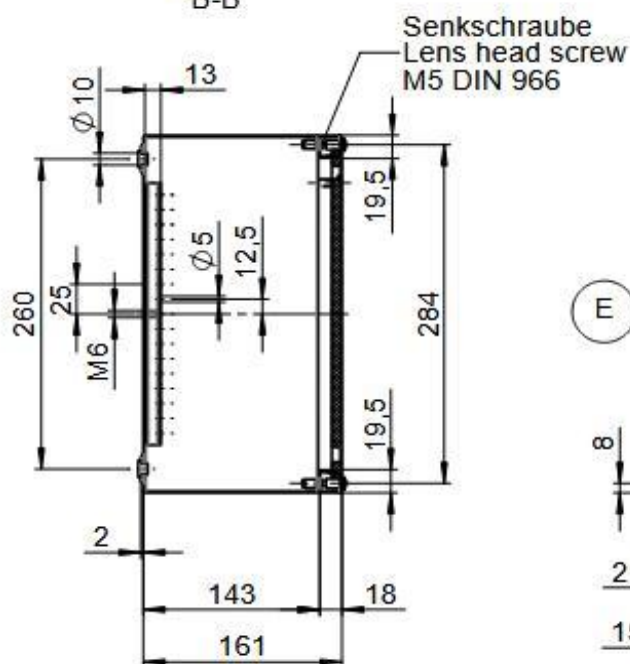
Deckel / Lid



Unterteil / Base



B-B



QX-V14

380 x 380 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be mounted individually
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 380 x 380 x 161mm

Mounting dimensions (mm): 340 x 340 / 4xØ 8.4mm

Power loss: 57.0 Watt at +40°C

With Ex dust: 28.5 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 bei +50°C
T5 bei +55°C
T4 bei +60°C

Weight: 6.24 kg

Approvals

ATEX, IECEx

Marking

Enclosures: II 2G Ex eb IIC Gb / II 2D Ex tb IIIC Db

Terminal boxes: II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	48	30	24
Page C / D	48	30	24

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	3x59	3x50	3x41	3x31

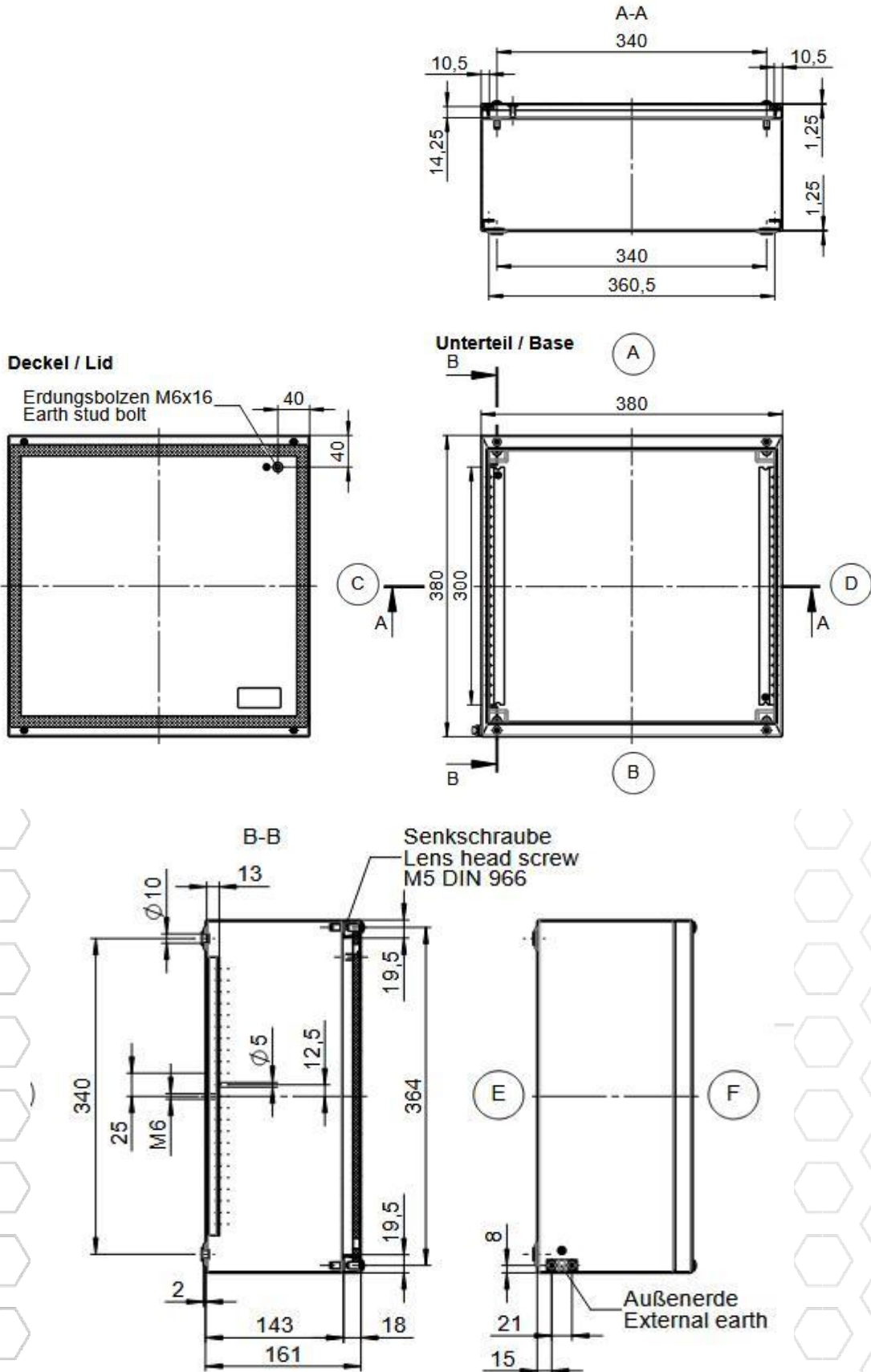


QX-V14

380 x 380 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



QX-V16

400 x 150 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas.

They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Approvals

ATEX, IECEx

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 400 x 150 x 81mm

Mounting dimensions (mm): 360 x 110 / 4xØ 8.4mm

Power loss: 23.0 Watt at +40°C

With Ex dust: 11.5 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 2.62 kg

Marking

Enclosures:

Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:

Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb

Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	26	10	9
Page C / D	6	3	2

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	63	53	44	33



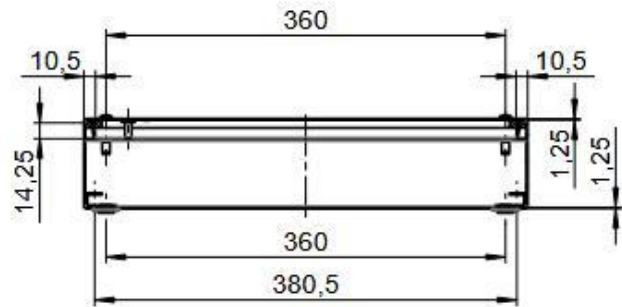
QX-V16
400 x 150 x 81mm



Ex e / Ex i Stainless Steel Terminal Boxes

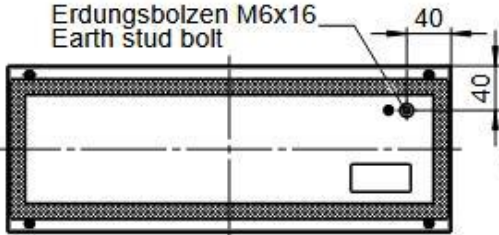


A-A

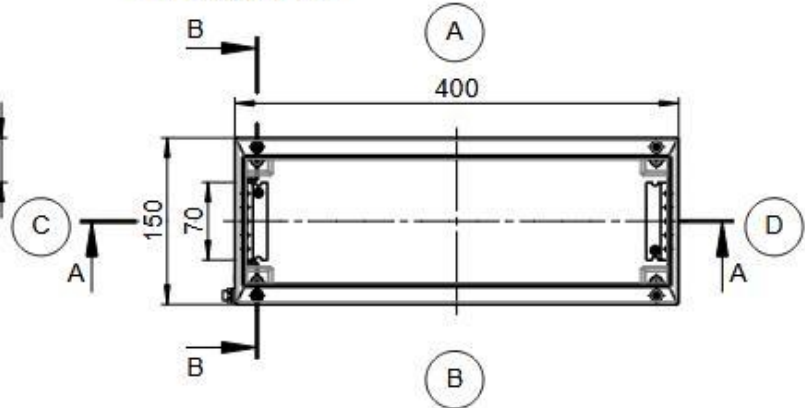


Deckel / Lid

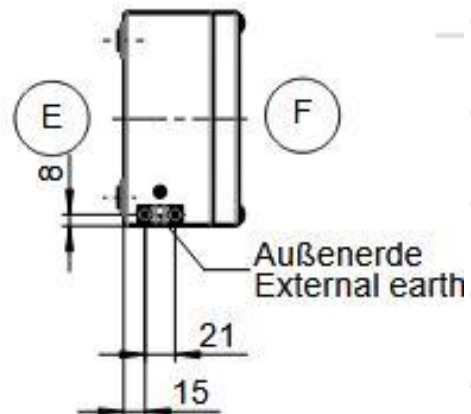
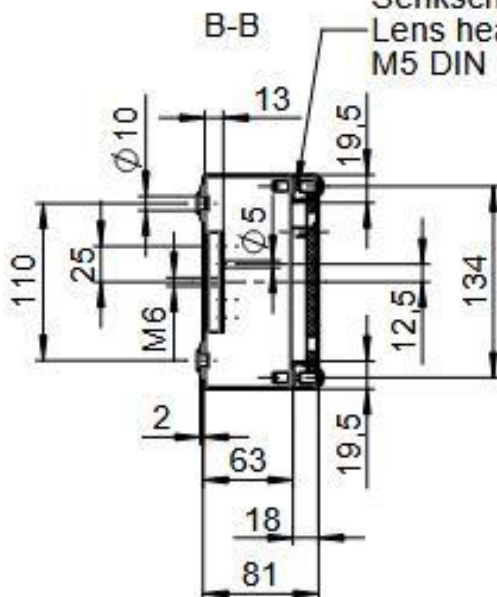
Erdungsbolzen M6x16
Earth stud bolt



Unterteil / Base



Senkschraube
Lens head screw
M5 DIN 966



QX-V17

400 x 200 x 121mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Approvals

ATEX, IECEX

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 400 x 200 x 121mm

Mounting dimensions (mm): 360 x 160 / 4xØ 8.4mm

Power loss: 33.0 Watt at +40°C

With Ex dust: 16.5 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 3.66 kg

Marking

Enclosures:
 Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:
 Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	39	20	18
Page C / D	15	8	6

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	63	53	44	33

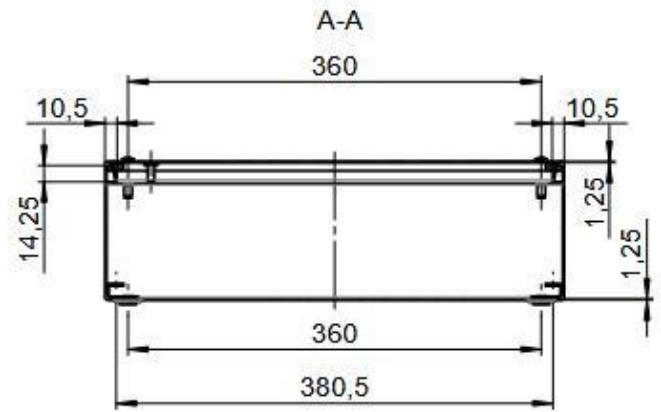


QX-V17

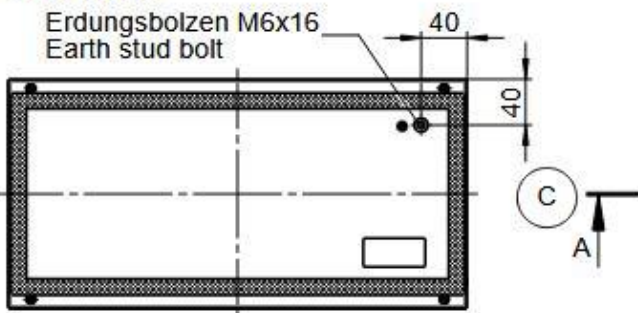
400 x 200 x 121mm



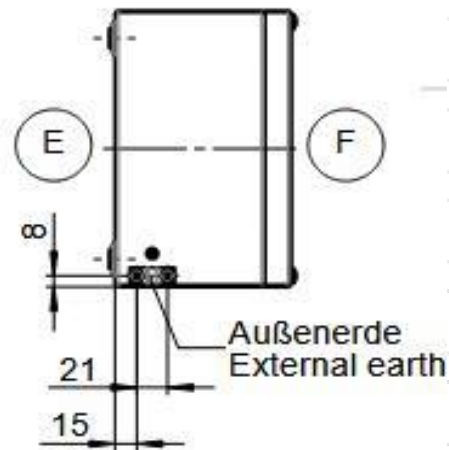
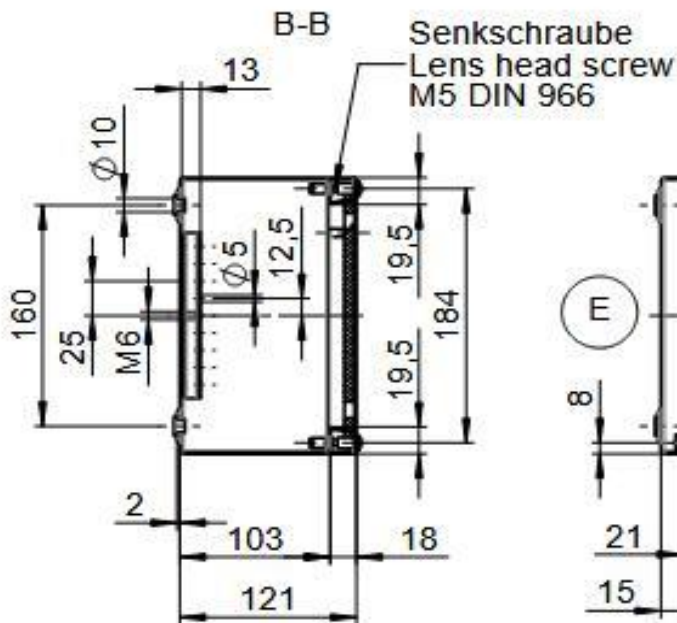
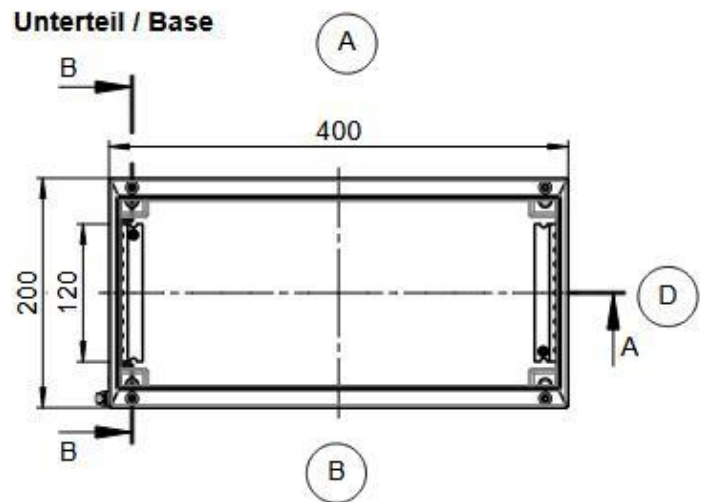
Ex e / Ex i Stainless Steel Terminal Boxes



Deckel / Lid



Unterteil / Base



QX-V20

400 x 300 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 400 x 300 x 161mm

Mounting dimensions (mm): 360 x 260 / 4xØ 8.4mm

Power loss: 50.0 Watt at +40°C

With Ex dust: 25.0 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 5.43 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
 Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:
 Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	52	30	27
Page C / D	36	21	18

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	2x63	2x53	2x44	2x33

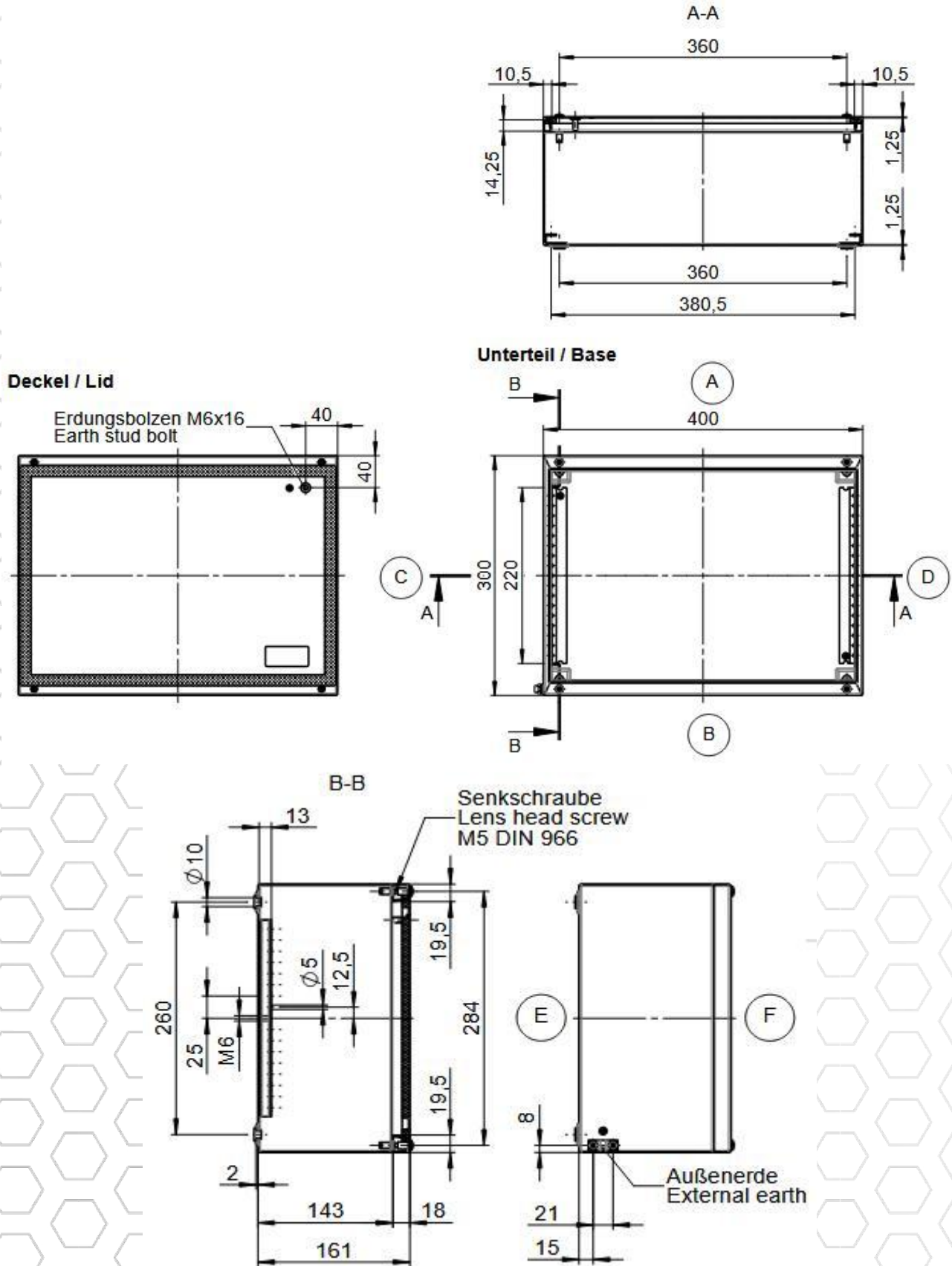


QX-V20

400 x 300 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes

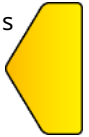


QX-V22

500 x 300 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be mounted individually
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush. 1.2mm, 1.4404 / 316L
 Optionally: RAL coating
 Dimensions (mm): 500 x 300 x 161mm
 Mounting dimensions (mm): 460 x 260 / 4xØ 8.4mm
 Power loss: 61.0 Watt at +40°C
 With Ex dust: 30.5 Watt at +40°C
 Ingress protection: IP 66
 Impact strength: 7 Joule
 Min. amb. temperature: -60°C
 Temperature class: T6 at +50°C
 T5 at +55°C
 T4 at +60°C
 Weight: 6.42 kg

Approvals

ATEX, IECEx

Marking

Enclosures: II 2G Ex eb IIC Gb / II 2D Ex tb IIIC Db
 Terminal boxes: II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	68	39	33
Page C / D	36	21	18

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	2x82	2x69	2x57	2x43

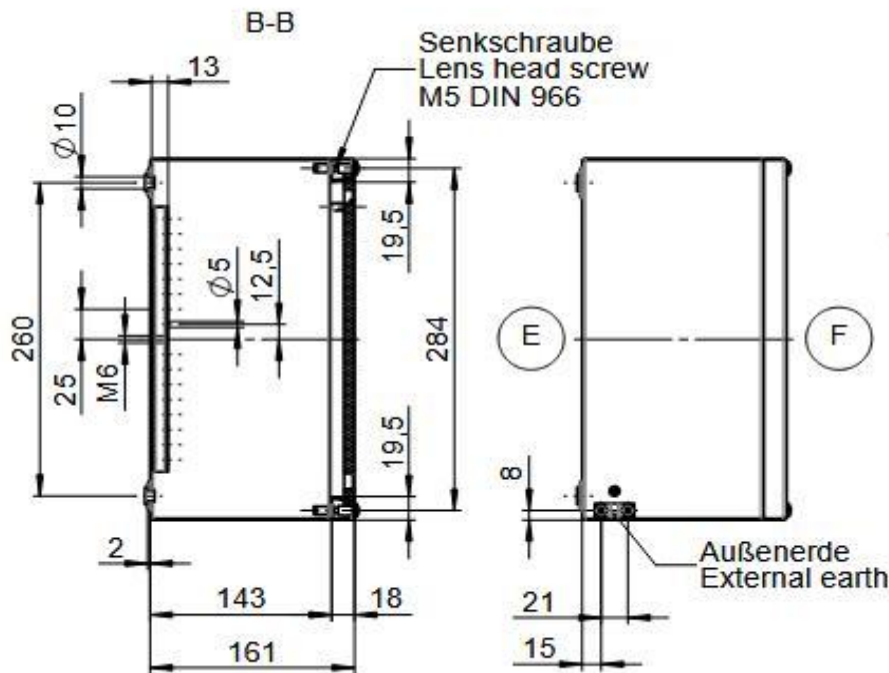
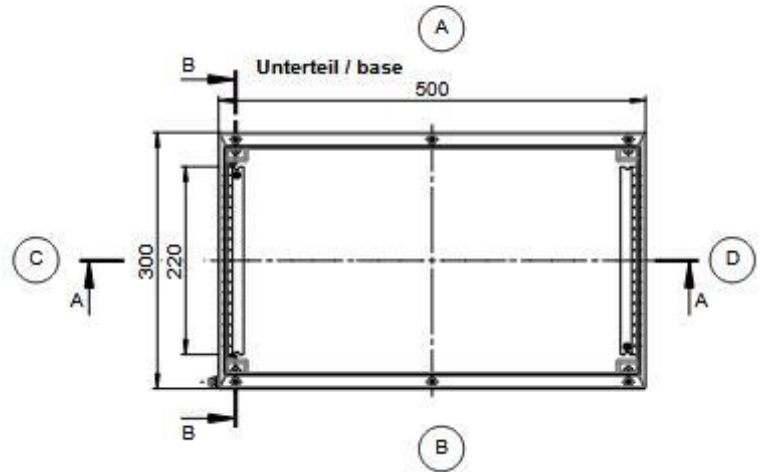
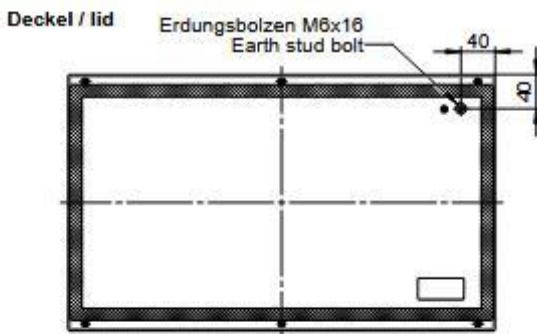
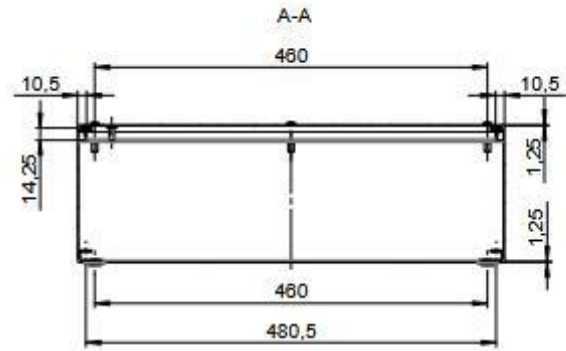


QX-V22

500 x 300 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



QX-V24

500 x 400 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be mounted individually
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws.

In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure.

Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 500 x 400 x 161mm

Mounting dimensions (mm): 460 x 360 / 4xØ 8.4mm

Power loss: 74.0 Watt at +40°C
With Ex dust: 37.0 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 7.90 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
⊕ II 2G Ex eb IIC Gb / ⊕ II 2D Ex tb IIIC Db

Terminal boxes:
⊕ II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
⊕ II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	68	39	33
Page C / D	48	30	24

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	2x82	2x69	2x57	2x43

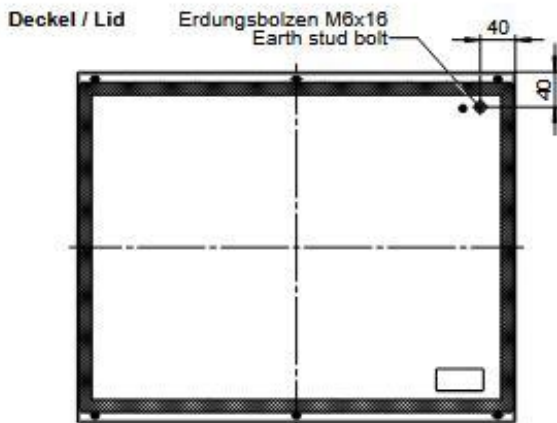
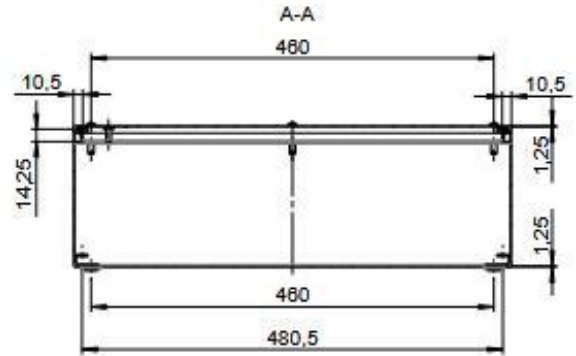


QX-V24

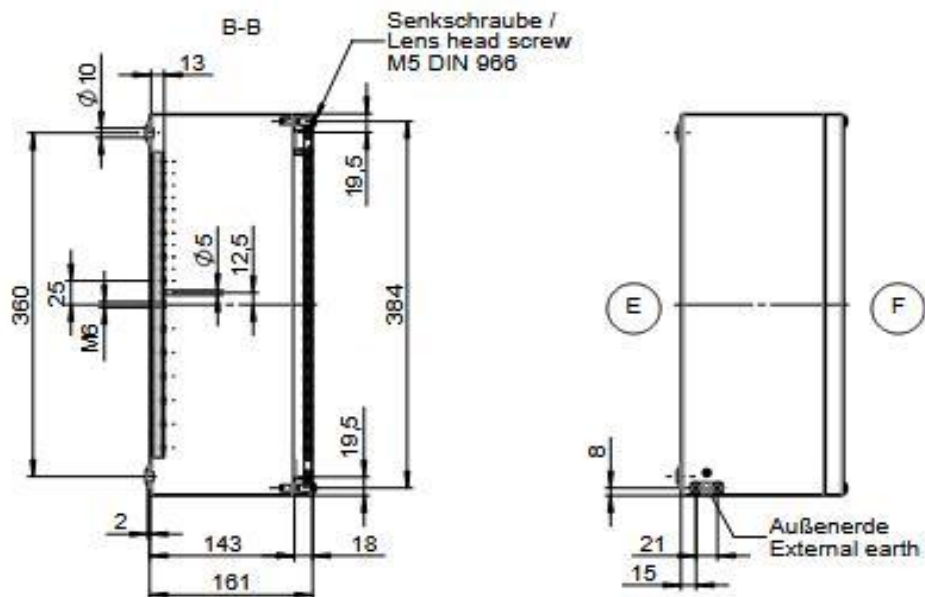
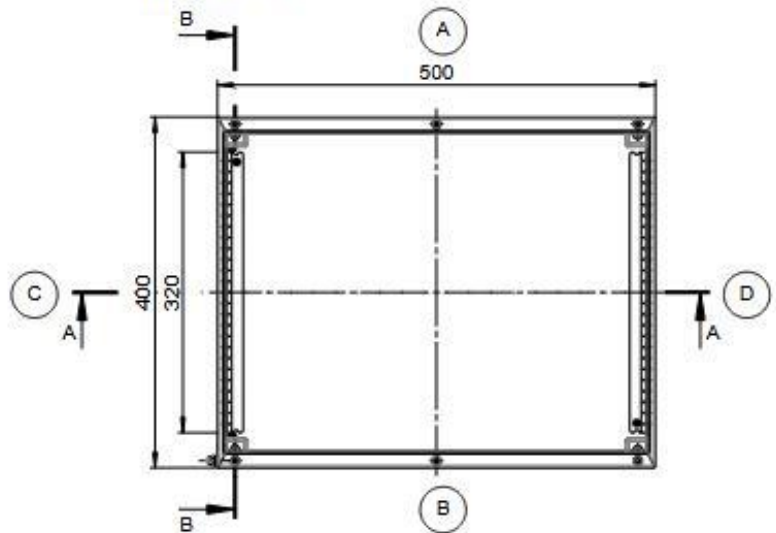
500 x 400 x 161mm



Ex e / Ex i Stainless Steel Terminal Boxes



Unterteil / Base



QX-V26

600 x 200 x 121mm



Ex e / Ex i Stainless Steel Terminal Boxes



- High chemical resistance
- International approvals
- Terminals can be individually mounted
- Can be used in all hygienic areas
- Solid design
- Different surfaces available

Description

Stainless steel enclosures can be used in very demanding industrial and hygienic areas. They are especially resistant against chemical and mechanical impact. The lid is equipped with a solid silicone gasket and can be safely sealed with captive screws. In the lower part of the enclosure (serrated-lock washers), the enclosure can be mounted using four mounting points. Mounting rails are directly fixed using the pre-welded, screwed mounting angles inside the enclosure. Optionally, turnable, external mounting straps (90 ° mountable) are available as well as mounting plates. External earthing as well as earthing bolts are included in the enclosure lid.

Possible application areas

- Ex e / Ex i terminal boxes
- Terminal boxes in hygienic areas

Technical data

Material: Stainless steel, brush.
1.2mm, 1.4404 / 316L

Optionally: RAL coating

Dimensions (mm): 600 x 200 x 121mm

Mounting dimensions (mm): 560 x 160 / 4xØ 8.4mm

Power loss: 48.0 Watt at +40°C

With Ex dust: 24.0 Watt at +40°C

Ingress protection: IP 66

Impact strength: 7 Joule

Min. amb. temperature: -60°C

Temperature class: T6 at +50°C
T5 at +55°C
T4 at +60°C

Weight: 5.97 kg

Approvals

ATEX, IECEx

Marking

Enclosures:
 Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Terminal boxes:
 Ex II 2G Ex eb ia IIC/IIB/IIA T6/T5/T4 Gb
 Ex II 2D Ex tb IIIC T85°C/T100°C/T120°C Db

Number of screws

Screwing	M16	M20	M25
Page A / B	60	32	28
Page C / D	15	8	6

Terminal mounting

mm ²	2.5	4	6	10
Horizontal mounting rail	101	85	70	53



QX-V26

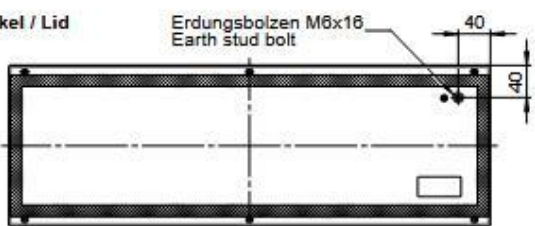
600 x 200 x 121mm



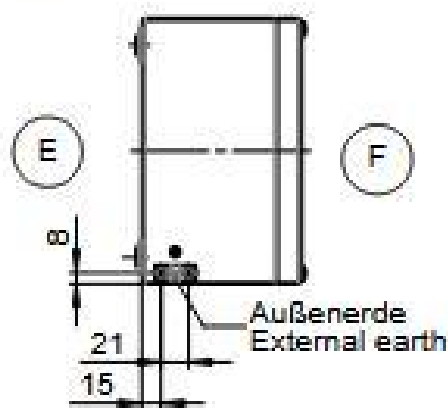
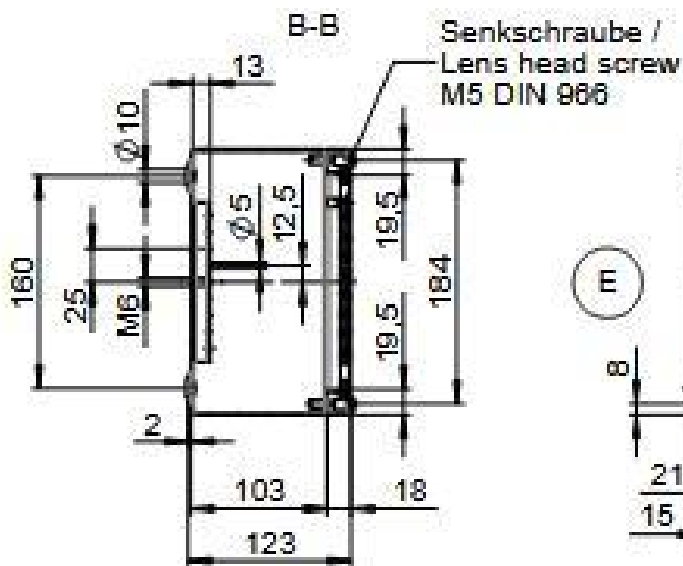
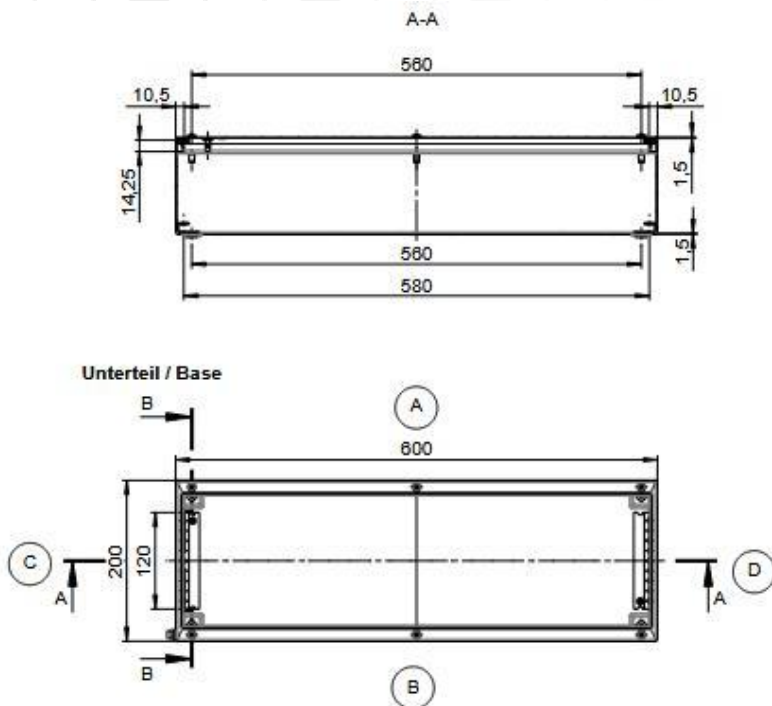
Ex e / Ex i Stainless Steel Terminal Boxes



Deckel / Lid



Unterteil / Base



Terminal Configuration



QX-V2 (150 x 150 x 81 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	44																
16	15	29	114														
20	6	17	33														
25		8	18	36													
35			5	14	35												
50				2	11	29											
63					3	13	48										
80						5	15	53									
100							6	14									
125								5	14								
160									5	12							
200										4	11	33					
225											6	13					
250											3	8	16				
315													4	10			
400														2	6	20	
500																	4

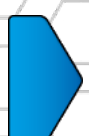
In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V4 (200 x 200 x 81 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	51																
16	17	34	132														
20	7	20	38														
25		9	21	42													
35			6	16	40												
50				2	13	33											
63					4	15	55										
80						6	17	62									
100							7	16									
125								6	16								
160									5	14							
200										5	12	39					
225											2	7	15				
250												3	9	19			
315													2	5	11		
400														2	8	23	
500																	4

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V5 (200 x 200 x 121 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	62																
16	21	41	162														
20	9	24	47														
25		11	26	51													
35			7	20	49												
50				3	16	41											
63					5	19	68										
80						7	21	76									
100							9	20									
125								8	20								
160									7	18							
200										6	15	47					
225											2	9	18				
250												4	11	23			
315													2	6	14		
400															3	9	28
500																	5

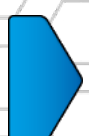
In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V7 (300 x 150 x 81 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	48																
16	16	32	125														
20	7	19	36														
25		9	20	39													
35			6	15	38												
50				2	12	32											
63					4	14	52										
80						5	16	59									
100							7	15									
125								6	15								
160									5	14							
200										5	12	37					
225											7	14					
250												3	8	18			
315														5	11		
400															2	7	22
500																	4

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V8 (300 x 200 x 81 mm)		Querschnitt / Cross-section in mm ²														
	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																
6																
10	56															
16	19	37	144													
20	8	21	42													
25		10	23	45												
35			7	18	44											
50				2	14	36										
63					4	17	60									
80						6	19	67								
100							8	18								
125								7	18							
160									6	16						
200										5	13	42				
225											2	8	16			
250												4	10	21		
315													2	6	12	
400														2	8	25
500																5

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V9 (300 x 200 x 121 mm)		Querschnitt / Cross-section in mm ²														
	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																
6																
10	67															
16	23	44	173													
20	9	26	50													
25		12	28	54												
35			8	21	53											
50				3	17	44										
63					5	20	72									
80						7	22	81								
100							9	21								
125								8	21							
160									7	19						
200										6	16	51				
225											2	9	20			
250												5	12	25		
315													2	7	15	
400														3	10	30
500																6

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V11 (300 x 300 x 121 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	77																
16	26	51	198														
20	11	30	57														
25		14	32	63													
35			9	24	61												
50				3	20	50											
63					6	23	83										
80						9	26	93									
100							11	24									
125								10	25								
160									8	22							
200										8	19	58					
225											3	11	23				
250												5	14	29			
315													3	8	17		
400															3	12	35
500																	7

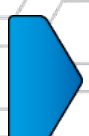
In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V12 (300 x 300 x 161 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	88																
16	30	58	228														
20	12	34	66														
25		16	37	72													
35			11	28	70												
50				4	23	58											
63					7	27	96										
80						10	30	107									
100							13	28									
125								11	28								
160									10	25							
200										9	22	67					
225											3	12	26				
250												6	16	33			
315													3	9	20		
400															4	13	40
500																2	8

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V14 (380 x 380 x 161 mm)		Querschnitt / Cross-section in mm ²																
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	
Strom [A] Current [A]																		
6																		
10	100																	
16	34	66	257															
20	14	38	74															
25		18	42	81														
35			12	32	79													
50				4	26	65												
63					8	30	108											
80						11	34	121										
100							14	32										
125								13	32									
160									11	28								
200										10	24	76						
225											3	14	30					
250												7	18	38				
315													3	11	22			
400															5	15	45	
500																	2	9

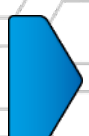
In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V16 (400 x 150 x 81 mm)		Querschnitt / Cross-section in mm ²																
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300	
Strom [A] Current [A]																		
6																		
10	49																	
16	16	32	126															
20	7	19	36															
25		9	20	40														
35			6	15	39													
50				2	12	32												
63					4	15	53											
80						5	16	59										
100							7	15										
125								6	16									
160									5	14								
200										5	12	37						
225											7	14						
250												3	9	18				
315														5	11			
400															2	7	22	
500																		4

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V17 (400 x 200 x 121 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	68																
16	23	45	177														
20	9	26	51														
25		12	29	56													
35			8	22	54												
50				3	17	45											
63					6	21	74										
80						8	23	83									
100							10	22									
125								8	22								
160									7	19							
200										7	17	52					
225											2	9	20				
250												5	12	26			
315													2	7	15		
400															3	10	31
500																	6

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V20 (400 x 300 x 161 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	93																
16	32	62	241														
20	13	36	70														
25		17	39	76													
35			11	30	74												
50				4	24	61											
63					8	28	101										
80						11	31	113									
100							13	30									
125								12	30								
160									10	26							
200										9	23	71					
225											3	13	28				
250												7	17	35			
315													3	10	21		
400															4	14	42
500																2	8

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.



Terminal Configuration



QX-V22 (500 x 300 x 161 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	96																
16	33	64	248														
20	13	37	72														
25		17	41	78													
35			12	30	76												
50				4	25	63											
63					8	29	104										
80						11	32	116									
100							14	30									
125								12	31								
160									10	27							
200										10	23	73					
225											3	13	28				
250												7	17	36			
315													3	10	22		
400															4	15	43
500																2	8

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

QX-V24 (500 x 400 x 161 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	108																
16	37	72	279														
20	15	42	81														
25		20	46	88													
35			13	34	86												
50				5	28	71											
63					9	33	117										
80						12	36	131									
100							15	34									
125								14	35								
160									12	31							
200										11	27	82					
225											4	15	32				
250												8	19	41			
315													4	12	24		
400															5	17	49
500																2	9

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

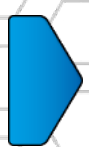
Terminal Configuration



QX-V26 (600 x 200 x 121 mm)		Querschnitt / Cross-section in mm ²															
		1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
Strom [A] Current [A]																	
6																	
10	69																
16	23	45	177														
20	9	26	51														
25		12	29	56													
35			8	22	54												
50				3	17	45											
63					6	21	74										
80						8	23	83									
100							10	22									
125								9	22								
160									7	19							
200										7	17	52					
225											2	9	20				
250												5	12	26			
315													2	7	15		
400															3	10	31
500																	6

In diesem Bereich kann unter Beachtung der Hinweise und der festgelegten Einbaumaße im Gehäuse beliebig zusätzlich bestückt werden.
In this area you can add terminals in notice of the references and the defined assembly dimensions of the enclosure

Bestückungen in diesem Bereich erfordern einen gesonderten Erwärmungsnachweis.
You need proof of warming for adding terminals in this area.

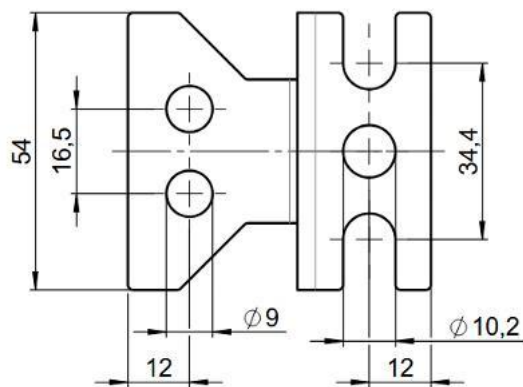
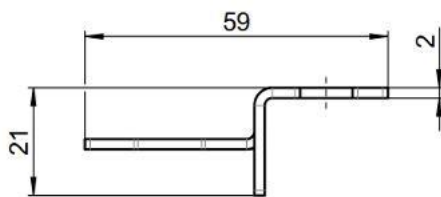




Accessories

Sets Varying With Mounting With External Mounting Straps

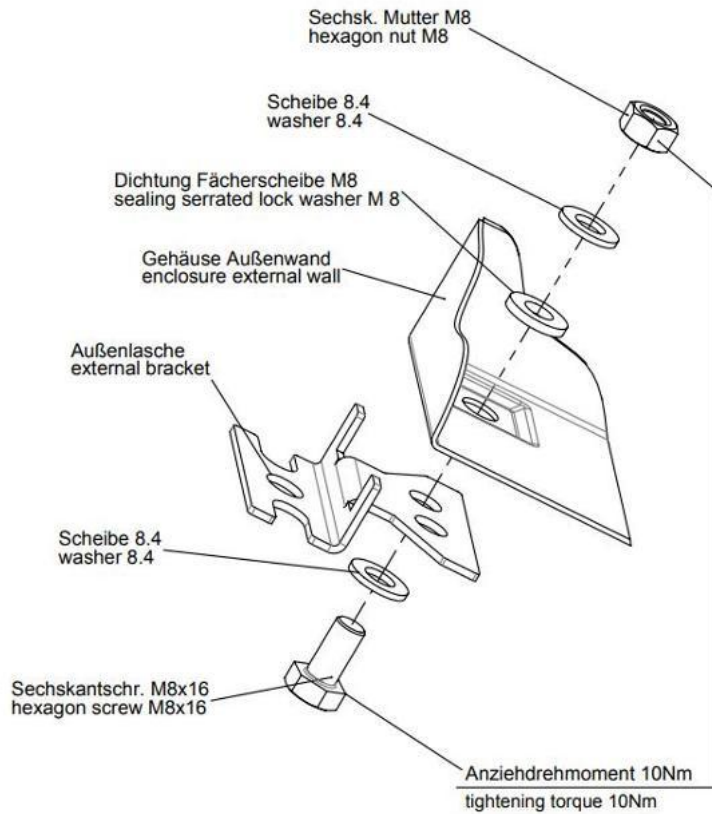
Order number: MONTAGESET Edelstahl





Mounting

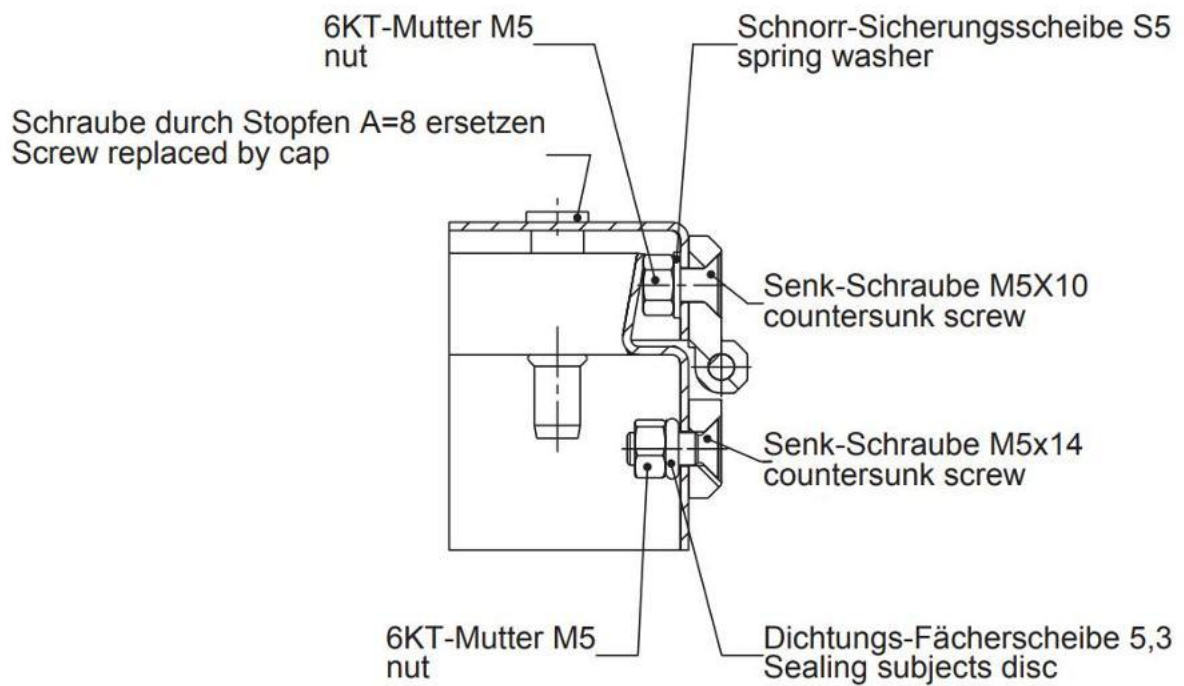
Montage für Außenlasche Mounting for external bracket





With Hinges

Order number: SCHARNIERSET VA





Mounting Plates

Material: sheet steel, zinc-coated – stainless steel upon request

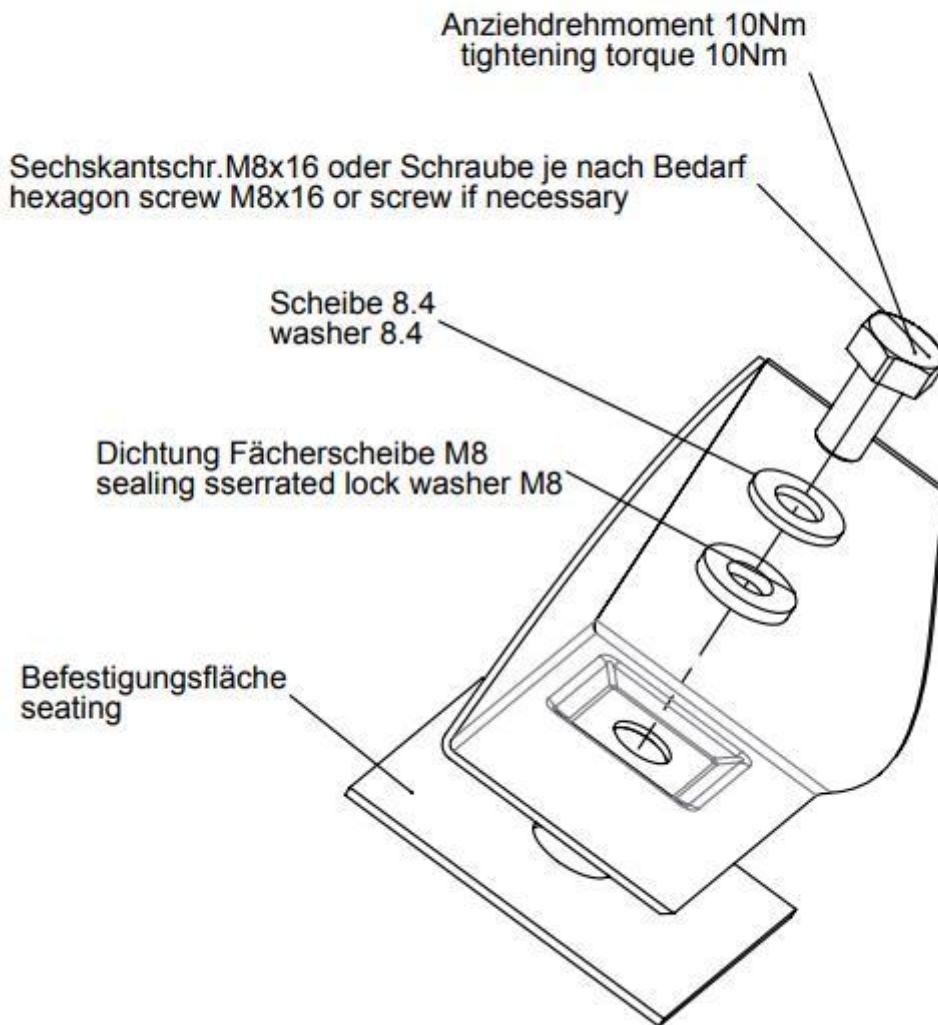
Order number	Size
MP-V2	108x138mm
MP-V4	158x188mm
MP-V5	158x188mm
MP-V7	108x288mm
MP-V8	158x288mm
MP-V9	158x288mm
MP-V11	258x288mm
MP-V12	258x288mm
MP-V14	308x268mm
MP-V16	108x388mm
MP-V17	158x388mm
MP-V20	258x388mm
MP-V22	258x488mm
MP-V24	358x488mm
MP-V26	158x587mm





Mounting (Direct Mounting)

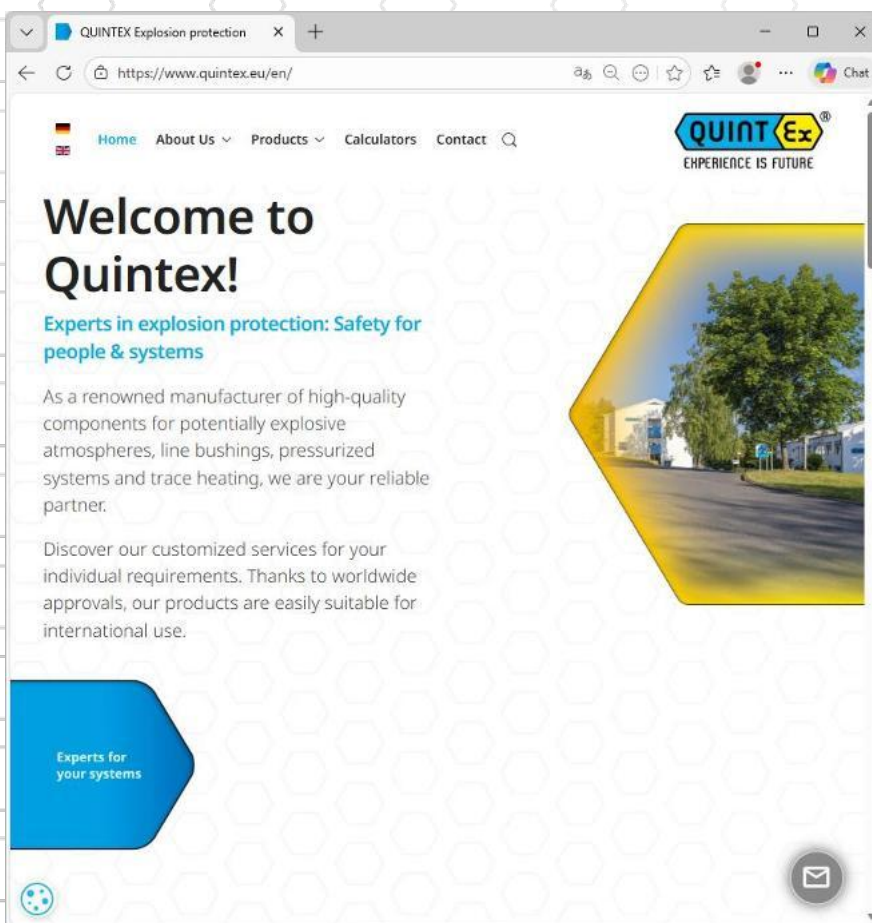
Direkte Montage Direct mounting





We are looking forward to your online visit on <https://www.quintex.eu/de/>.

We would be glad to support you with our online support chat.
The chat is available on our home page.



Contact

You need more in-depth information? We are looking forward to assisting you!

Further information on our products, systems or services?
Do you need an offer or do you have questions on our company?

Do not hesitate to contact us via phone or email.

We would be glad to helping you!



Ex - Components

Experts for your systems

Quality • Reliability • Delivery reliability



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Proviso

We reserve the right to make technical changes. Changes, errors, and literal errors do not justify any claim for damage compensation. For security components and systems, the relevant standards, as well as the relevant operating and assembly instructions have to be followed

Quintex Product Catalogue Components



QX-02... Overview

Overview Local Control Components



Local Control Components



Switching Module:

Marking:

II 2G Ex db eb IIC Gb

II 2D Ex tb IIIC Db

ATEX, IECEx, EAC TC-RU

Zone 1 / 2 / 21 / 22

T_a -55..+60°C

Electrical data:

U 250 V 250 V 110 V 24 V

Use AC12 AC15 DC13 DC13

I 16 A 10A 0.5A 1A

T_a ≤ 40°C ≤ 60°C ≤ 60°C ≤ 60°C

Switching cycles ≥ 1.000.000

Mounting: DIN-rail 35mm,

Mounting plate, Lid

Signal Lamp:

Marking:

II 2G Ex de IIC Gb

II 2D Ex tb IIIC Db

ATEX, IECEx, EAC TC-RU

Zone 1 / 2 / 21 / 22

T_a -55..+60°C, P_{max} ≤ 1W

Electrical data:

U: 20-250V AC/DC,

Optional: 12-28V DC

Optional: 250-400V AC

Mounting: DIN-rail 35mm,

Mounting plate, Lid

Illuminated Push Button:

Marking:

II 2G Ex de IIC Gb

II 2D Ex tb IIIC Db

ATEX, IECEx, EAC TC-RU

Zone 1 / 2 / 21 / 22

T_a -55..+60°C, P_{max} ≤ 1W

U 250 V 24 V

Use AC15 DC13

I 6A 1A

Electrical data:

U: 20-250V AC/DC

Mounting: DIN-rail 35mm,

Mounting plate, Lid





- High switching capacity
- International certificates
- Different inlay symbols and colours
- Robust construction

Description

Pushbutton / Double-Pushbutton for assembling of control panels or local control stations. Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

There are different coloured inlays or symbols available. With the Double-Pushbutton 2 functions can be realized on small space.



Possible Application

- Control Panels
- Local control stations

Certificates

ATEX, IECEx, EAC TC-RU

Technical Data

Zone:	1 / 2 / 21 / 22
Nominal voltage max.:	400VAC / 110VDC
Current 400VAC:	AC12: 16A @ ≤40°C AC15: 10A @ ≤60°C
Current 110VDC:	DC12: 0,5A @ ≤60°C
Current 24VDC:	DC13: 1A @ ≤60°C
Terminals:	2x 2,5mm ² , Silver
Ingress protection:	IP 66
Temperature range:	-55..+60°C
Dimension (mm):	pls. see drawing
Mechanical life:	1.000.000 cycles
Mounting possibilities:	Backside – DIN-Rail Lid
Lid Mounting:	Thickness 1-6mm

Marking

Ⓔ II 2G Ex db eb IIC Gb / Ⓔ II 2D Ex tb IIIC Db



QX-0201-P1+2

Ex Pushbutton / Double-Pushbutton



Local Control Components



Order numbers:

P1 = Single-Pushbutton / P2 = Double-Pushbutton

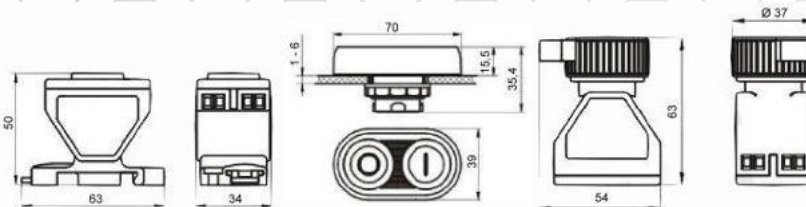
Following inlay symbols and colours are available. Please add the code on your order.

Rail-mounting		QX-0201-P_60
		QX-0201-P_61
		QX-0201-P_62
Lid-mounting		QX-0201-P_70
		QX-0201-P_71
		QX-0201-P_72

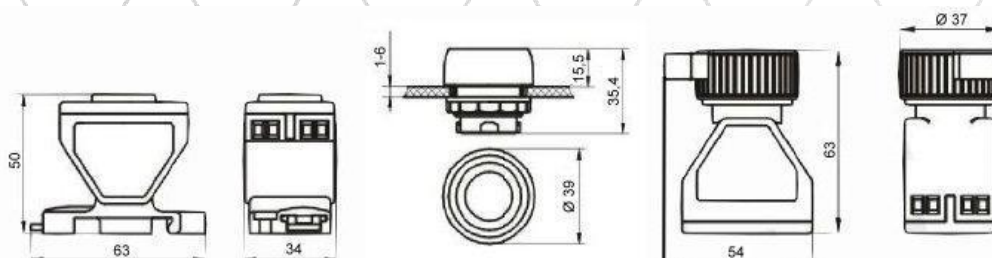
Code	Colour of label	Engraved	colour of text
01	green		
02	green	I	white
03	green	ON	white
04	green	START	white
Q1	green	EIN	white
21	red		
22	red	O	white
23	red	OFF	white
24	red	STOP	white
Q2	red	AUS	white
41	white		
42	white	II	black
43	white	↑	black
44	white	START	black
45	white	STOP	black
46	white	FW	black
47	white	BW	black
48	white	STOP	red
49	white	↑↑	black
61	yellow		
62	yellow	II	white
81	black		
91	blue		

Dimensional drawings

Pushbutton QX-0201-P1...



Double-Pushbutton QX-0201-P2....



QX-0201-P3...

Ex Emergency Stop Button



Local Control Components



- High switching capacity
- International certificates
- Release by pulling
- Robust construction

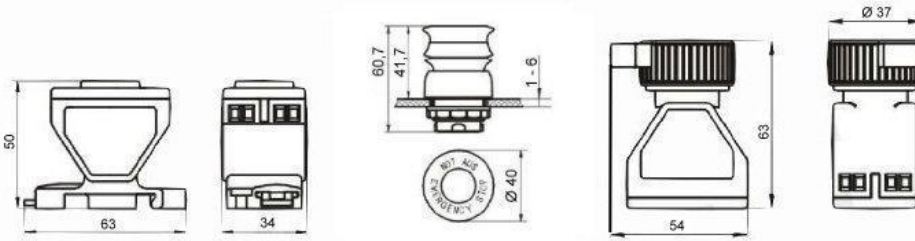
Description

Emergency Stop button for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

Different switching combinations are possible.

With yellow ring for showing the emergency function.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal voltage max.: 250VAC / 110VDC
 Current @ 250VAC: AC12: 16A @ ≤40°C
 AC15: 10A @ ≤60°C
 Current @ 110VDC: DC12: 0,5A @ ≤60°C
 Current @ 24VDC: DC13: 1A @ ≤60°C
 Terminals: 2x 2,5mm², Silver
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Dimension (mm): pls. see drawing
 Mechanical life: 1.000.000 cycles
 Mounting possibilities: Backside – DIN-Rail
 Lid
 Lid Mount: Thickness 1-6mm

Certificates

ATEX, IECEX, EAC TC-RU
 Acc. standard EN 60947-5-5

Marking

- Ex II 2G Ex db eb IIC Gb
- Ex II 2D Ex tb IIIC Db

Order no.

Rail mounting		QX-0201-P3 60
		QX-0201-P3 61
		QX-0201-P3 62
Lid mounting		QX-0201-P3 70
		QX-0201-P3 71
		QX-0201-P3 72



QX-0201-P6.../-P7...

Ex Emergency Stop Button



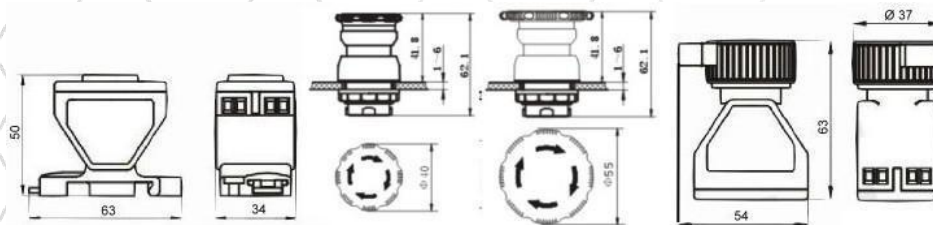
Local Control Components



- High switching capacity
- International certificates
- Release twisting
- Robust construction

Description

Emergency Stop button for assembling of control panels or local control stations.
 Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.
 Different switching combinations are possible.
 With yellow ring for showing the emergency function.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal voltage max.: 250VAC / 110VDC
 Current @ 250VAC: AC12: 16A @ ≤40°C
 AC15: 10A @ ≤60°C
 Current @ 110VDC: DC12: 0,5A @ ≤60°C
 Current @ 24VDC: DC13: 1A @ ≤60°C
 Terminals: 2x 2,5mm², Silver
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Dimension (mm): pls. see drawing
 Mechanical life: 1.000.000 cycles
 Mounting possibilities: Backside - DIN-Rail
 Lid
 Lid Mounting: Thickness 1-6mm

Certificates

ATEX, IECEX, EAC TC-RU

Marking

- Ex II 2G Ex db eb IIC Gb
- Ex II 2D Ex tb IIIC Db

Order no.

P6 = kleiner Betätiger 40mm / P7 = großer 55mm

Rail mounting		QX-0201-P_ 60
		QX-0201-P_ 61
		QX-0201-P_ 62
Lid mounting		QX-0201-P_ 70
		QX-0201-P_ 71
		QX-0201-P_ 72



QX-0201-P4...

Ex Mushroom Pushbutton black



Local Control Components



- High switching capacity
- International certificates
- Different inlay symbols and colours
- Robust construction

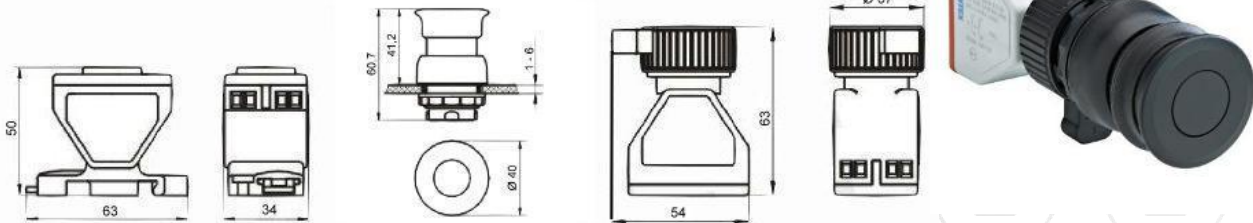
Description

Mushroom Pushbutton for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

There are different coloured inlays or symbols available.

Different switching combinations are possible.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal voltage max.: 400VAC / 110VDC
 Current 400VAC: AC12: 16A @ ≤40°C
 AC15: 10A @ ≤60°C
 Current 110VDC: DC12: 0,5A @ ≤60°C
 Current 24VDC: DC13: 1A @ ≤60°C
 Terminals: 2x 2,5mm², Silver
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Dimension (mm): pls. see drawing
 Mechanical life: 1.000.000 cycles
 Mounting possibilities: Backside - DIN-Rail
 Lid
 Lid Mounting: Thickness 1-6mm

Certificates

ATEX, IECEx, EAC TC-RU

Marking

Ex II 2G Ex db eb IIC Gb / Ex II 2D Ex tb IIIC Db

Order no.

Rail mounting		QX-0201-P4 60
		QX-0201-P4 61
		QX-0201-P4 62
Lid mounting		QX-0201-P4 70
		QX-0201-P4 71
		QX-0201-P4 72



QX-0201-K/S...

Ex Selector switch 2-pole



Local Control Components



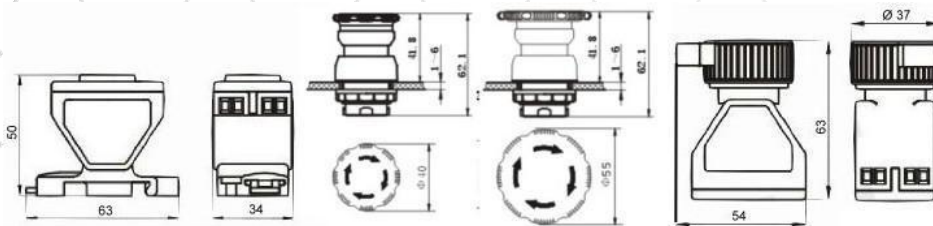
- High switching capacity
- International certificates
- Small and large handles available
- Robust construction

Description

Selector switch for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

Different switching combinations are possible.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
Nominal voltage max.: 400VAC / 110VDC
Current 400VAC: AC12: 16A @ ≤40°C
AC15: 10A @ ≤60°C
Current 110VDC: DC12: 0,5A @ ≤60°C
Current 24VDC: DC13: 1A @ ≤60°C
Terminals: 2x 2,5mm², Silver
Ingress protection: IP 66
Temperature range: -55..+60°C
Dimension (mm): pls. see drawing
Mechanical life: 1.000.000 cycles
Mounting possibilities: Backside – DIN-Rail
Lid
Lid Mounting: Thickness 1-6mm

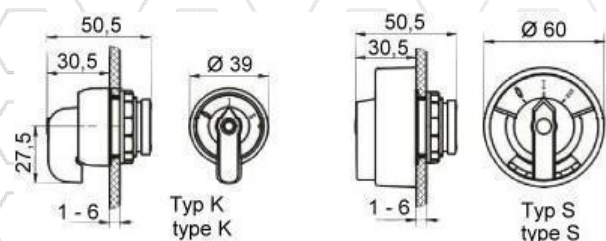
Certificates

ATEX, IECEx, EAC TC-RU

Marking

II 2G Ex db eb IIC Gb / II 2D Ex tb IIIC Db

Dimensional drawing of heads



QX-0201-K/S...

Ex Selector switch 2-pole



Local Control Components



Order numbers

Please see table for order numbers:

Contact Scheme		Ø 39mm	Ø 60mm	Mounting
		QX-0201-	QX-0201-	
0-I-II		K4 60 03	S4 60 03	Rail
		K4 70 03	S4 70 03	Lid
I-0-II		K4 62 04	S4 62 04	Rail
		K4 72 04	S4 72 04	Lid
I-0-II		K5 62 04	S5 62 04	Rail
		K5 72 04	S5 72 04	Lid
0-I-II		K5 60 03	S5 60 03	Rail
		K5 70 04	S5 70 03	Lid
0-I		K6 62 01	S6 62 01	Rail
		K6 72 01	S6 72 01	Lid
I-II		K6 60 02	S6 60 02	Rail
		K6 70 02	S6 70 02	Lid
0 · I		K8 60 05	S8 60 05	Rail
		K8 70 05	S8 70 05	Lid

The labels of the switching handle can be changed according requested.
Therefore use the last digits of the needed label

e.g.: instead of $0 \cdot I$ at S8 60 05
you wish to use $I 0 II$ (but same contact scheme)
order number will be: S8 60 04



QX-0201-P/S..5...

Ex Switching component 4-pole



Local Control Components



- High switching capacity
- International certificates
- Small and large handles available
- Robust construction

Description

4-pole switching component for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

Different switching combinations are possible. This component can be used with different push button heads as well as different heads and functions of selector switches.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone:	1 / 2 / 21 / 22
Nominal voltage max.:	400VAC / 110VDC
Current 400VAC:	AC12: 16A @ ≤40°C AC15: 10A @ ≤60°C
Current 110VDC:	DC12: 0,5A @ ≤60°C
Current 24VDC:	DC13: 1A @ ≤60°C
Terminals:	2x 2,5mm ² , Silver
Ingress protection:	IP 66
Temperature range:	-55..+60°C
Dimension (mm):	pls. see drawing
Mechanical life:	1.000.000 cycles
Mounting possibilities:	Backside – DIN-Rail Lid
Lid Mounting:	Thickness 1-6mm

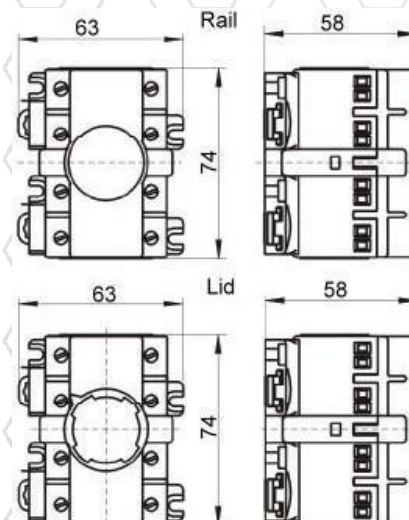
Certificates

ATEX, IECEx, EAC TC-RU

Marking

Ex II 2G Ex db eb IIC Gb- / Ex II 2D Ex tb IIIC Db

Dimensional drawing



QX-0201-P/S..5...

Ex Switching component 4-pole



Local Control Components



Order no.

	Contact Scheme		Order Number QX-0201-
	I - II		S6 □50 02
	0 - I		S6 □52 01
	0 - I		S6 □54 01
	I-0-II		S4 □52 04
	I-0-II		S5 □52 04
	I-0-II		S8 □52 04
	0-I-II		S4 □50 03
	0-I-II		S5 □50 03
0 . I		S8 □50 05	
6 - rail mounting 7 - lid mounting			

	Contact Scheme		Order Number QX-0201-
	I - II		S6 □50 02
	0 - I		S6 □52 01
	0 - I		S6 □54 01
	I-0-II		S4 □52 04
	I-0-II		S5 □52 04
	I-0-II		S8 □52 04
	0-I-II		S4 □50 03
	0-I-II		S5 □50 03
0 . I		S8 □50 05	
6 - rail mounting 7 - lid mounting			

The markings of the handle can be interchanged.

Simply use the last two digits of that image.

E.g.: instead of 0 • I at S8 6 50 05 it should be I 0 II
 adapted order number: S8 6 50 04



QX-0201-Y0...

Ex Emergency Stop / Mushroom Pushbutton with key, red



Local Control Components



- High switching capacity
- Usable as latching or spring return
- International certificates
- Robust construction

Description

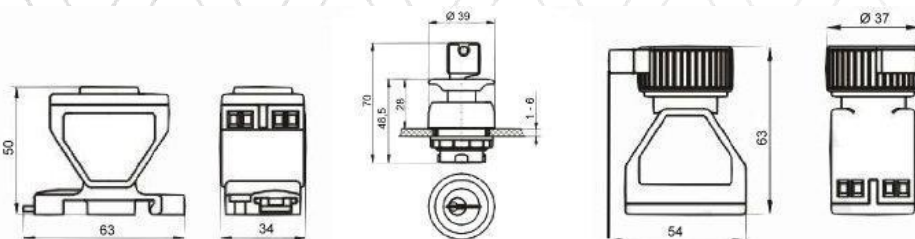
Emergency Stop / Mushroom Pushbutton with key for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 250V.

Different switching combinations are possible.

The key can be removed in both positions.

Used as Emergency function only with key releasable.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone:	1 / 2 / 21 / 22
Nominal voltage max.:	400VAC / 110VDC
Current 400VAC:	AC12: 16A @ ≤40°C AC15: 10A @ ≤60°C
Current 110VDC:	DC12: 0,5A @ ≤60°C
Current 24VDC:	DC13: 1A @ ≤60°C
Terminals:	2x 2,5mm ² , Silver
Ingress protection:	IP 66
Temperature range:	-55..+60°C
Dimension (mm):	pls. see drawing
Mechanical life:	1.000.000 cycles
Mounting possibilities:	Backside - DIN-Rail Lid
Lid Mounting:	Thickness 1-6mm

Certificates

ATEX, IECEx, EAC TC-RU

Marking

Ex II 2G Ex db eb IIC Gb / Ex II 2D Ex tb IIIC Db

Order no.

Rail mounting		QX-0201-Y0 60
		QX-0201-Y0 61
		QX-0201-Y0 62
Lid mounting		QX-0201-Y0 70
		QX-0201-Y0 71
		QX-0201-Y0 72
		QX-0201-Y0 72



QX-0201-Y6.../-Y5...

Ex Key Switch

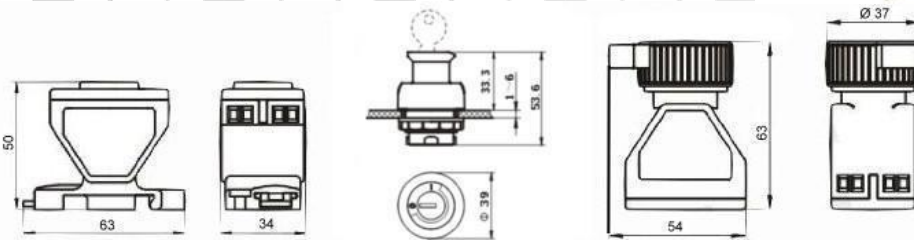
Local Control Components



- High switching capacity
- Usable as latching or spring return
- International certificates
- Robust construction

Description

Key switch for assembling of control panels or local control stations.
Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V. Different switching combinations are possible. The key can be removed in both positions.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal voltage max.: 250VAC / 110VDC
 Current @ 250VAC: AC12: 16A @ ≤40°C
 AC15: 10A @ ≤60°C
 Current @ 110VDC: DC12: 0,5A @ ≤60°C
 Current @ 24VDC: DC13: 1A @ ≤60°C
 Terminals: 2x 2,5mm², Silver
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Dimension (mm): pls. see drawing
 Mechanical life: 1.000.000 cycles
 Mounting possibilities: Backside – DIN-Rail
 Lid
 Lid Mounting: Thickness 1-6mm

Certificates

ATEX, IECEx, EAC TC-RU

Marking

⊕ II 2G Ex db eb IIC Gb / ⊕ II 2D Ex tb IIIC Db

Order no.

Y6 = 0-I / Y5 = I-0-II

Rail mounting		QX-0201-Y_60
		QX-0201-Y_61
		QX-0201-Y_62
Lid mounting		QX-0201-Y_70
		QX-0201-Y_71
		QX-0201-Y_72
		QX-0201-Y_72



QX-0202-...

Ex Indication Lamp



Local Control Components



- High luminance
- Wide supply voltage range
- International certificates
- Robust construction

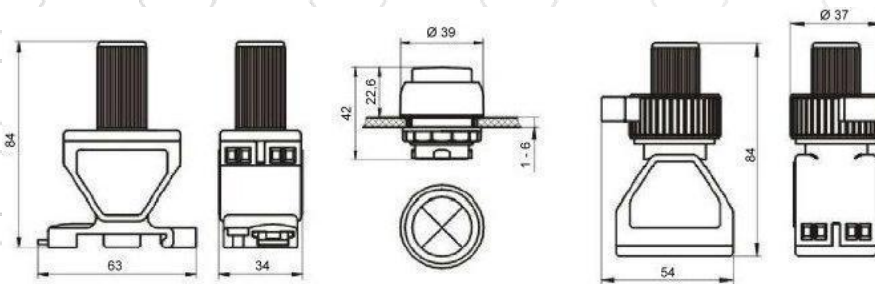
Description

Indication lamp for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 400V.

Because of the high luminance they are usable within daylight.

Low power consumption because of LED technique. Different colours are available.



Possible Application

- Control Panels
- Local control stations

Certificates

ATEX, IECEX, EAC TC-RU

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal Voltage: 20-250V AC/DC
 Optional: 12-28V AC/DC
 Terminals: 250-400V AC
 2x 2,5mm², Silver contact
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Power consumption: ≤1W
 Dimension (mm): pls. see drawing
 Lifetime: 100.000 h
 Mounting possibilities: Backside – DIN-Rail
 Lid
 Lid Mounting: Thickness 1-6mm

Marking

Ex II 2G Ex db eb IIC Gb / Ex II 2D Ex tb IIIC Db

Order no.

Rail mounting	Lid mounting	Colour
QX-0202-LR60x	QX-0202-LR70x	Red
QX-0202-LG60x	QX-0202-LG70x	Green
QX-0202-LY60x	QX-0202-LY70x	Yellow
QX-0202-LB60x	QX-0202-LB70x	Blue
QX-0202-LW60x	QX-0202-LW70x	White

x = 1: 20-250V AC/DC
 x = 2: 250-400V AC
 x = 3: 12-28V AC/DC



QX-0212-...

Ex Illuminated Pushbutton



Local Control Components



- High luminance
- International certificates
- Wide supply voltage range
- Robust construction

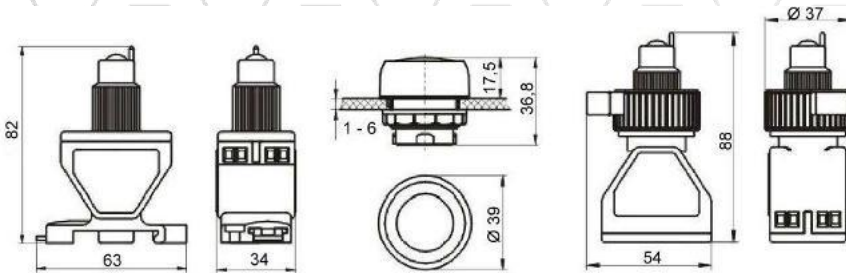
Description

Illuminated Pushbutton for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 250V.

Because of the high luminance they are usable within daylight.

Low power consumption because of LED technique. Different colours are available.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal Voltage: 20-250V AC/DC
 optional: 12-28V AC/DC
 Switching capacity: AC15: 6A @ 250V
 DC13: 1A @ 24V
 Terminals: 2x 2,5mm²,
 Silver contact
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Power consumption: ≤1W
 Dimension (mm): pls. see drawing
 Mechanical life: 300.000 cycles
 Mounting possibilities: Backside – DIN-Rail
 Lid
 Lid Mounting: Thickness 1-6mm

Certificates

ATEX, IECEX, EAC TC-RU

Marking

⊕ II 2G Ex db eb IIC Gb / ⊕ II 2D Ex tb IIIC Db

Order no.

Rail	Lid	Colour	Contact
QX-0212-..	QX-0212-..		
..PR630x	..PR730x	Red	
..PG630x	..PG730x	Green	
..PY630x	..PY730x	Yellow	
..PB630x	..PB730x	Blue	
..PW630x	..PW730x	White	
..PR640x	..PR740x	Red	
..PG640x	..PG740x	Green	
..PY640x	..PY740x	Yellow	
..PB640x	..PB740x	Blue	
..PW640x	..PW740x	White	

x=1: 20-250V AC/DC x=3: 12-28V AC/DC



QX-0212-DW...

Ex Potentiometer



Local Control Components



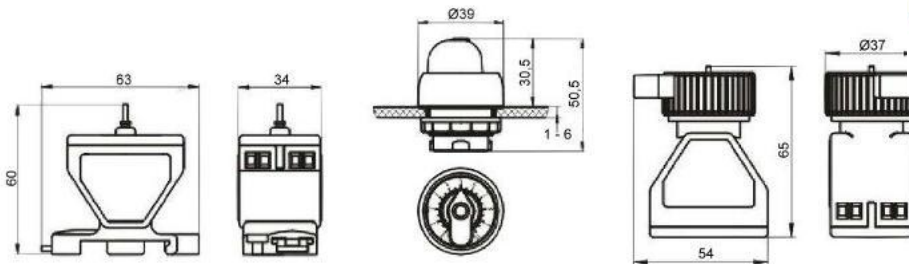
- Wide value range
- International certificates
- Exact adjustable
- Robust construction

Description

Potentiometer for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² silver contact terminals and nominal voltage up to 200V.

The Potentiometer has got 3-poles, adjustable from 0 to 100%.



Possible Application

- Control Panels
- Local control stations

Technical Data

Zone: 1 / 2 / 21 / 22
 Nominal Voltage max.: 200VDC
 Power max.: 0,1W
 Terminals: 2x 2,5mm², Silver
 Ingress protection: IP 66
 Temperature range: -55..+60°C
 Dimension (mm): pls. see drawing
 Range: 0-100%
 Mounting possibilities: Backside – DIN-Rail Lid
 Lid Mounting: Thickness 1-6mm

Certificates

ATEX, IECEX, EAC TC-RU

Marking

Ex II 2G Ex de IIC Gb / Ex II 2D Ex tD A21IP66

Order no.

x = 6: Rail mounting / x = 7: Lid mounting

Value	Order number
100 Ω	QX-0203-DWx01
200 Ω	QX-0203-DWx02
500 Ω	QX-0203-DWx03
1.000 Ω	QX-0203-DWx04
2.000 Ω	QX-0203-DWx05
5.000 Ω	QX-0203-DWx06
10.000 Ω	QX-0203-DWx07
20.000 Ω	QX-0203-DWx08
50.000 Ω	QX-0203-DWx09
100.000 Ω	QX-0203-DWx10
200.000 Ω	QX-0203-DWx11
500.000 Ω	QX-0203-DWx12
1.000.000 Ω	QX-0203-DWx13
2.000.000 Ω	QX-0203-DWx14



QX-0205...

Ex Ampere- / Voltmeter

Local Control Components



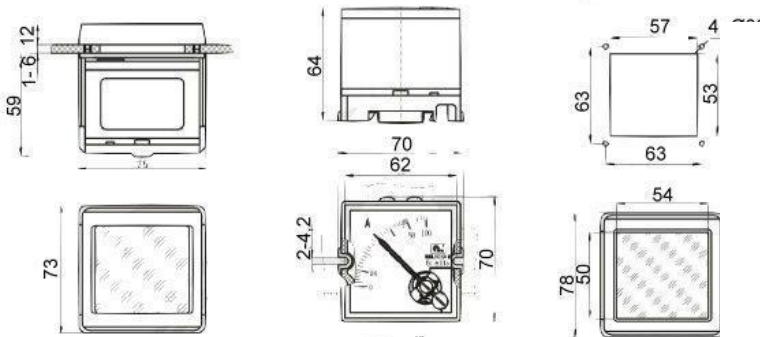
- Wide measurement range
- International certificates
- Moving iron instrument
- Robust construction

Description

Ampere- / Voltmeter for assembling of control panels or local control stations.

Robust and reliable construction with 2,5mm² terminals.

Direct and indirect measurement (by current transformer) available.



Possible Application

- Control Panels
- Local control stations

Certificates

ATEX, IECEx, EAC TC-RU

Technical Data

Zone:	1 / 2 / 21 / 22
Measurement range:	pls. see table
Accuracy class:	1,5
For current transformer:	1 or 5A
Overload scale factor:	2 or 5-fold
Terminals:	2x 2,5mm ² , Silver
Ingress protection:	IP 66
Temperature range:	-55..+60°C
Dimension (mm):	pls. see drawing
Mounting possibilities:	Backside – DIN-Rail Lid
Lid Mounting:	Thickness 1-6mm

Marking

Ex II 2G Ex eb IIC Gb / Ex II 2D Ex tb IIIC Db

Order no.

Pls. see next page







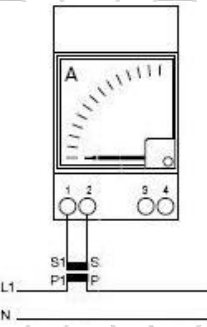
QX-0205...

Ex Ampere- / Voltmeter



Local Control Components



Voltmeter, rail mounting: 	Calotte	Measuring method	Overload factor	Measuring range	Order Number QX-0205-
	EXM	Voltage AC		0-25V 0-40V 0-150V 0-250V 0-500V	M□V 25 M□V 40 M□V 150 M□V 250 M□V 500
Ammeter, rail mounting: 		Current AC/DC (0)4-20mA	2	0-20 / 40mA 4-20 / 40mA	M□MA 11 M□MA 12
Ammeter, lid mounting: 		Current AC direct measurement	2	0-1 / 2A 0-4 / 8A 0-5 / 10A 0-10 / 20A 0-15 / 30A	M□DA 1 M□DA 4 M□DA 5 M□DA 10 M□DA 15
Window - EXM: 		Current AC for transformer	2	0-1 / 2A 0-2.5 / 5A 0-5 / 10A 0-15 / 30A 0-25 / 50A 0-40 / 80A 0-50 / 100A 0-60 / 120A 0-75 / 150A 0-100 / 200A 0-150 / 300A 0-200 / 400A 0-250 / 500A 0-300 / 600A 0-400 / 800A 0-500 / 1000A 0-600 / 1200A	M□WA 01 / □ -2 M□WA 2.5 / □ -2 M□WA 5 / □ -2 M□WA 15 / □ -2 M□WA 25 / □ -2 M□WA 40 / □ -2 M□WA 50 / □ -2 M□WA 60 / □ -2 M□WA 75 / □ -2 M□WA 100 / □ -2 M□WA 150 / □ -2 M□WA 200 / □ -2 M□WA 250 / □ -2 M□WA 300 / □ -2 M□WA 400 / □ -2 M□WA 500 / □ -2 M□WA 600 / □ -2
Connection to transformer: 		Current AC for transformer	5	0-1 / 5A 0-2.5 / 12.5A 0-5 / 25A 0-15 / 75A 0-25 / 125A 0-40 / 200A 0-50 / 250A 0-60 / 300A 0-75 / 375A 0-100 / 500A 0-150 / 750A 0-200 / 1000A 0-250 / 1250A 0-300 / 1500A 0-400 / 2000A 0-500 / 2500A 0-600 / 3000A	M□WA 01 / □ -5 M□WA 2.5 / □ -5 M□WA 5 / □ -5 M□WA 15 / □ -5 M□WA 25 / □ -5 M□WA 40 / □ -5 M□WA 50 / □ -5 M□WA 60 / □ -5 M□WA 75 / □ -5 M□WA 100 / □ -5 M□WA 150 / □ -5 M□WA 200 / □ -5 M□WA 250 / □ -5 M□WA 300 / □ -5 M□WA 400 / □ -5 M□WA 500 / □ -5 M□WA 600 / □ -5

6 - rail mounting
7 - lid mounting

Connection to transformer:

1A = 1
5A = 5





QX-02/4031/1

Label

This label is used for identification of local control components and will be supplied laser engraved on demand.



QX-02/4031/4

Label large

This label is used for identification of large selector switches and will be supplied laser engraved on demand.



QX-02/4003/1

Emergency-Stop label, round

For sticking on the surface under the button



QX-02/4003/2

Emergency-Stop label, crosswise

For sticking on the surface under the button



QX-02/4009-25

Overhanging part

The overhanging part is used for the buttons of hoist and other moveable control functions together with M25 glands



QX-02/4006

Socket Spanner

This tool is used for mounting of operators in the lid.



QX-02/4019

Safety flap, with clear lid

This will avoid accidentally use of the operators



QX-02/4019/3-7

Safety flap for Pushbutton, lockable, with clear lid

This will avoid accidentally use of the operators



QX-02/4019/2

Safety catch / Shroud for Emergency stop button

To prevent from accidentally use of the Emergency stop button.



QX-02/4019/2+9

Safety catch / Shroud for Emergency stop button lockable

To prevent from accidentally use of the Emergency stop button. Furthermore the Emergency stop button can be fixed and interlocked by a bow.



ST...

Ex approved signal tower in flameproof enclosure



Ex-d Signal Tower



- For Gas- and Dust Ex, Zone 1/2/21/22
- Latest LED-Technique
- Assembly with line bushing
- Flexible assembling with lamp modules
- Very robust structure
- High chemical resistance

Description

The Ex approved signal tower is equipped with latest technology, bright and maintenance free LED-technique. Applications are status indication, fault indication, level indication, access authorisation and traffic lights.

There are 2 different sizes of enclosures available. One for up to 4 (430mm) and the other for 5 (470mm) signal lamps. The signal towers are delivered with cable gland or ready installed and connected line bushing.

Advantage of the line bushing is a pre-wired and ready-for-connection unit.

There are up to 2 cable glands or line bushings possible. So you can easily connect more signal towers in line.



Possible application

- Petro chemistry / Refinery / Offshore
- Wastewater industry / Sewage treatment
- Shipbuilding / Tanker
- Tank farm / Filling station
- Ex-manufacturing plant

Technical Data

Material:	Aluminium die casting with tube of borosilicate glass
Dimension:	430(470)x174x210mm
Fixing centres:	345(385)mm / 2x10Ø
Ingress protection:	IP 66
Impact resistance:	7 Joule
Temperature range:	-40...+50°C
Weight:	
1..4 Modules:	5,7 kg
5 Modules:	6,0 kg

Certificates

ATEX, IECEX, EAC TC-RU, Zone 1 / 2 / 21 / 22

Marking

- Ex II 2G Ex db IIC T6/T5 Gb
- Ex II 2D Ex tb IIIC T120°C Db

Technical Data of Modules

Steady light 24V AC/DC:	I=0,054A
Steady light 230V AC:	I=0,028A
Steady light 110V AC:	I=0,031A
Flash light 24V AC/DC:	I=0,136A
Flash light 230V AC:	I=0,01A
Flash light 110V AC:	I=0,01A

Light source: 12 pcs LEDs per Module
Lifespan: up to 100.000h
Equal uninterrupted use > 10 Years

Terminals in cage clamp technology:
up to 2,5mm² / 14AWG



ST-1-IO-Link

Programmable IO-Link signal tower LB6-IL



Ex-d Signal Tower



- Suitable for gas and dust Ex areas, Zones 1/2/21/22
- State-of-the-art LED technology
- Can be equipped with linebushing
- Extremely robust design
- High chemical resistance

Description

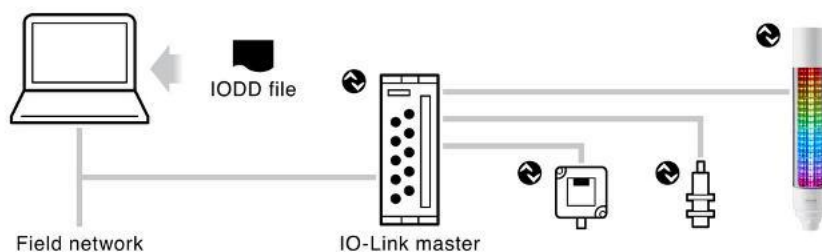
Enhance system visibility and operational efficiency with the IO-Link Ex signal tower – a programmable, multi-colour LED signal light featuring seamless IO-Link integration and real-time status monitoring. The light section can easily be divided into 1 to 5 tiers, with freely configurable colours and flashing patterns for each level. Level and temperature conditions can be visualised using predefined lighting patterns that activate depending on the measured values. The IO-Link signal towers are delivered fully assembled and equipped with either cable glands or ready-to-connect linebushing. Connection cables are pre-wired to terminals. A cable entry offers the advantage of a prewired, plug-and-play unit. Up to two cable glands or cable entries are possible, allowing multiple signal towers to be connected in series.



Description

The programmable multi-colour LED IO-Link signal tower LB6 is particularly well suited for visualising device statuses as well as indicating fill levels and temperatures. It consists of 20 individual segments, each of which can be assigned a different colour and/or flashing

Possible Applications



- Petrochemical industry / Refineries / Offshore
- Wastewater treatment
- Shipbuilding / Tankers
- Tank facilities / Filling stations
- Ex-rated production facilities



ST-1-IO-Link

Programmable IO-Link signal tower LB6-IL



Ex-d Signal Tower



Technical data

Material: Aluminium die-cast housing with borosilicate glass tube

Dimension: 430x174x210mm

Mounting dimensions: 345mm / 2x10Ø

Protected rating: IP 66

Impact resistance: 7 Joules

Temperature range:

- IO-Link: -20...+50°C

Weight:

- IO-Link: 5,6 kg

Approvals

ATEX, Zone 1 / 2 / 21 / 22

Markings

II 2G Ex db IIC T6/T5/T4 Gb

II 2D Ex tb IIIC T120°C Db

Technical datas IO-Link

IO-Link: 24 V DC, I = 0.2 A

Light Source

IO-Link: 20 individual LED segments

- 21 colours
- 10 light patterns (30–120 Hz/min)
- Dimming range: 0–100% (in 10% steps)

Accessories

The signal towers are supplied as standard with two M20 blanking plugs.

Upon request, we will install suitable cable glands. For this, we require the desired cable diameter when placing the order.

Additionally, we can equip the signal tower with pre-installed linebushing upon request. For this, please specify the required cable length and type when ordering (standard is Ölflex 5G0.75 or 7G0.75).

Connection types

Line bushing:



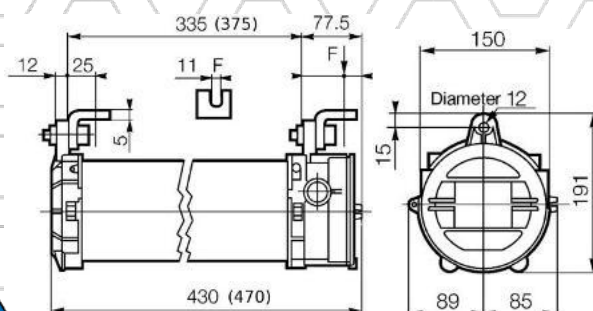
Cable gland:



Terminal connection:



Drawing



ST-1-POE

Programmable LED Signal Tower LA6-POE



Ex-d Signal Tower



- Suitable for gas and dust Ex areas, Zones 1/2/21/22
- State-of-the-art LED technology
- Can be equipped with linebushing
- Extremely robust design
- High chemical resistance

Description

The programmable LED signal tower LA6-POE with a diameter of $\Phi 60$ mm and PoE functionality offers multi-colour signalling and optimised Ethernet connectivity for industrial applications.

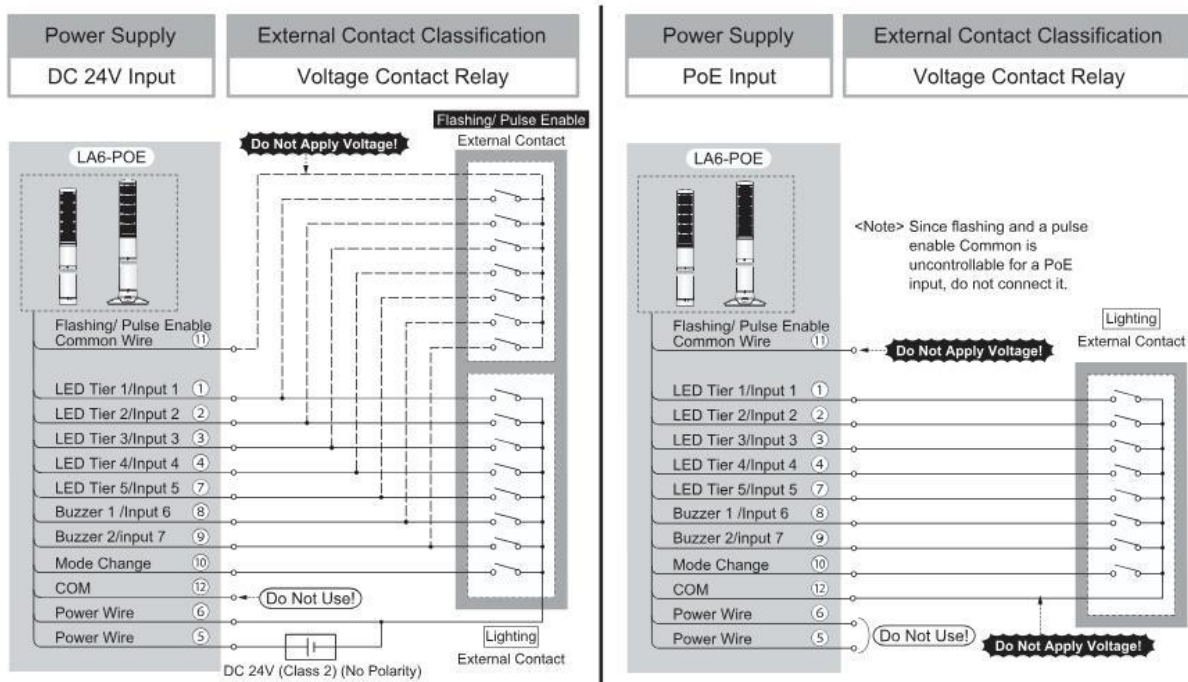
The light section can be easily divided into 1 to 5 tiers, with freely configurable colours and flashing patterns for each level.

The Ethernet connection with Power over Ethernet (PoE) support enables installation using a single cable only. The tower includes 21 programmable LED colours. The PoE signal towers are delivered fully assembled and are available with either cable glands or prewired linebushing. All connection lines are terminated on internal terminals. A linebushing provides the advantage of a fully prewired, ready-to-connect unit.

Up to two cable glands or linebushings can be installed, allowing multiple signal towers to be connected in series.



Wiring Example



ST-1-POE

Programmable LED Signal Tower LA6-POE



Ex-d Signal Tower



Technical data:

Material: Aluminium die-cast housing with borosilicate glass tube

Dimension: 470x174x210mm

Mounting dimension: 375mm / 2x10Ø

Protection rating: IP 66

Impact resistance: 7 Joules

Temperature range:

- POE: -10...+50°C

Weight:

- POE: 5,9 kg

Approvals

ATEX, Zone 1 / 2 / 21 / 22

Markings

II 2G Ex db IIC T6/T5/T4 Gb

II 2D Ex tb IIIC T120°C Db

Technical data

- Operating voltage: DC 24V I=0,42A
POE: DC 48V I=0,01A
- Rated power consumption
DC24V=7,2W / POE=8,6W
- Max. power consumption
DC24V=12,9W / POE=12,5W

Light source:

- PoE: 5 x 4 individual segments
-21 colours

Accessories

The signal towers are supplied as standard with two M20 blanking plugs.

Upon request, we will install suitable cable glands. For this, we require the desired cable diameter when placing the order.

Additionally, we can equip the signal tower with pre-installed linebushing upon request. For this, please specify the required cable length and type when ordering (Ölflex 5G0.75 or 7G0.75).

Connection types

Line bushing:



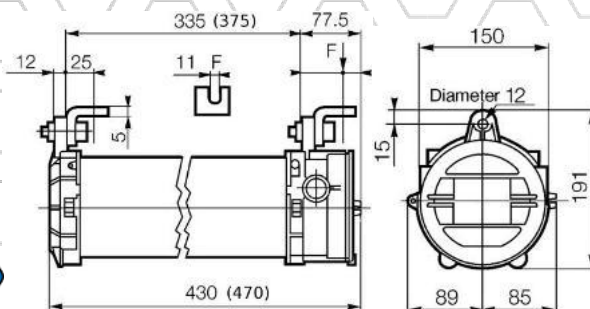
Cable gland:



Terminal connection:



Drawing



ST...

Ex approved signal tower in flameproof enclosure

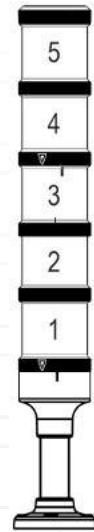


Ex-d Signal Tower



Order key

ST	-	U	-	M1	-	M2	-	M3	-	M4	-	M5
Quintex Signal Tower Voltage: 1 = 24V AC/DC +/-10% 2 = 230/240V AC +/-10% 3 = 110/120V AC +/-10% Module 1...5 colour and function R = red / G = green / Y = yellow / O = orange (amber) / B = blue / W = white (clear) X = red flashlight / Z = orange flashlight												



Sample for standard signal tower:

ST-1-G-O-R: (Voltage = 24VDC / Module1 = green / Module2 = orange / Module3 = red)

Accessories

The signal towers are supplied as standard with 2 blind plugs M20.

We assemble the appropriate cable glands on request. For this we need with the order the desired cable diameters.

Furthermore we equip the signal tower with optional line bushings. For this we need with the order the desired cable length and type (standard is Ölflex 5G0,75 or 7G0,75).

Connection types

Line bushing:



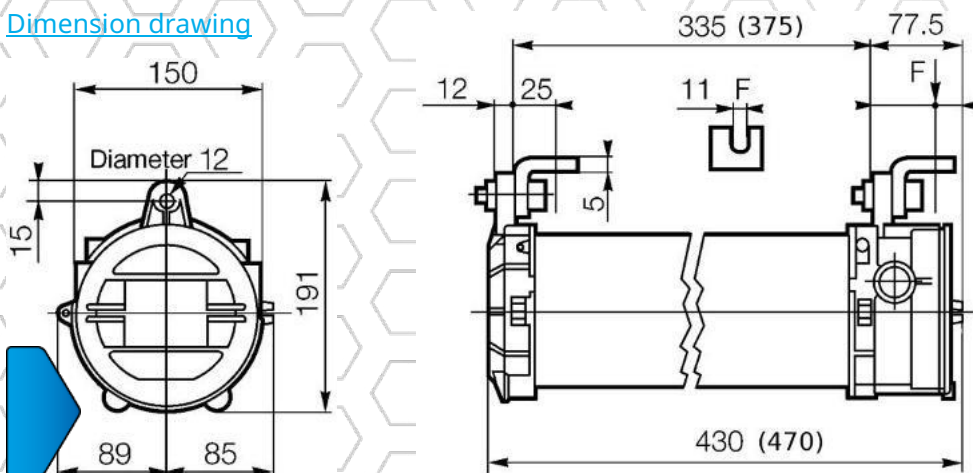
Cable gland:



Connection terminal:



Dimension drawing



EL-EXIT... / EL-WAY...

Ex approved emergency exit sign lamp and escape lighting
In flameproof enclosure



Ex-d Emergency Lighting



- For Gas- and Dust Ex, Zone 1/2/21/22
- Latest LED-Technique
- With storage battery or central supplied
- Ready-for-connection with linebushing
- Very robust structure
- High chemical resistance

Description

The Ex approved emergency exit and escape lights are equipped with modern, high luminosity and maintenance-free LED-technique.

They are supplied with storage battery, which is controlled, tested and gently charged by intelligent electronics.

Furthermore there is a version without battery available which is used with central emergency power supply.

Applications are escape doors, emergency exits, escape ways, and all areas where illumination is necessary after power down. The emergency lamps are supplied with ready-for-connection linebushing and so installation is quite easy.

There are up to 2 line bushings (cable glands) possible. So you can easily connect more signal towers in line.



Possible application

- Petro chemistry / Refinery / Offshore
- Wastewater industry / Sewage treatment
- Shipbuilding / Tanker
- Tank farm / Filling station
- Ex-manufacturing plant

Technical Data

Material:	Aluminium die cast with tube of borosilicate glass
Dimension:	430x174x210mm
Fixing centres:	345mm / 2x10Ø
Ingress protection:	IP66
Impact resistance:	7 Joule / IK08
Temperature range:	
without battery:	-20...+40°C
with battery:	0...+40°C
Weight:	5,8 kg

Marking

- Ex II 2G Ex db IIB T6/T5 Gb
- Ex II 2D Ex tb IIIB T85°C/T100°C Db

Certificates

ATEX, EAC TC-RU, Zone 1 / 2 / 21 / 22

Acc. standards for illumination

EN 60598-1, EN 60598-2-22
EN 61347-2-7, EN 1839, EN-ISO 7010

Technical Data of Modules

Emergency exit lamps:	
Amount LEDs:	2
Illumination duration w. battery:	>1h
Voltage:	230V, 50Hz
Current / Power w battery:	17mA / 2W, 4VA
Current / Power wo battery:	7mA / 0,7W, 1,5VA
Recognition distance:	25m
Escape lighting:	
Amount LEDs:	4
Illumination duration w. battery:	>1h
Voltage:	230V, 50Hz
Current / Power w battery:	50mA / 7W, 13VA
Current / Power wo battery:	65mA / 7,5W, 15VA
Luminous flux:	440 lm

EL-EXIT... / EL-WAY...

Ex approved emergency exit sign lamp and escape lighting in flameproof enclosure

Ex-d Emergency Lighting



Order key

EL - EXIT - D - 1 - 10

Quintex
Emergency
Light

EXIT = Emergency exit
sign light
WAY = Escape lighting

Emergency exit sign light,
Pictogram:

- U = Arrow up
- L = Arrow left
- R = Arrow right
- D = Arrow down

Escape lighting :

- 0 = Standard (not switchable)
- S = switchable

1 = with battery

2 = for central emergency supply 230V
AC/DC

0 = with cable gland M20, diam. 3,2-
8,7mm

(other diameters or types on request)

10 = Length of the cable with line bushing

Pictogram acc. EN-ISO 7010

y = U:
Arrow up

Part-no. Pictogram:
PICTO UP

y = L:
Arrow left

Part-no. Pictogram:
PICTO LEFT

y = R:
Arrow right

Part-no. Pictogram:
PICTO RIGHT

y = D:
Arrow down

Part-no. Pictogram:
PICTO DOWN



Special pictograms on request
Lamps with DALI control on request
(Digital Addressable Light Interface)

Standard

The emergency lights are supplied as standard with one line bushing with 10m cable and 1 blind plug M20. For fixing of the signal tower there are 2 mounting brackets in stainless steel 316L pre-installed.

Connection types

Linebushing:



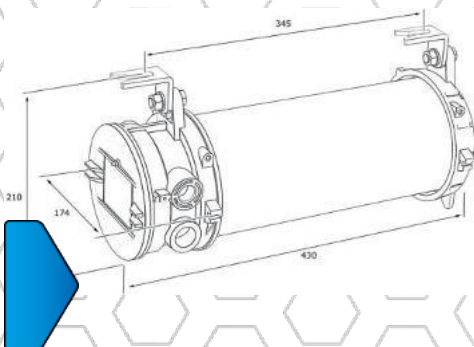
Option: Cable gland



Internal connection:



Dimension drawing



WirEx-Tower

Ex approved Wireless Accesspoint Tower Version
in flameproof special-glass-enclosure



Ex-d Accesspoint



- For Gas- and Dust Ex, Zone 1/2/21/22
- Latest Technique
- Assembly with LAN line bushing
- Customized configuration possible
- Very robust structure
- High chemical resistance

Description

The Quintex Ex approved accesspoints are available in different enclosure sizes and configurations for wall- or ceiling mounting tower version.

As standard there are installed the latest and powerful accesspoints.

Advantage is the installation of standard components, without usage of expensive Ex-Antennas and Ex-i bushings.

The accesspoints are ready-to-use and equipped with a CAT-7 line-bushing with 10m cable (optional customisable).

It is always possible to realize customer demands and to install access points from other manufacturers as well as other radio systems, 2G, 3G or 4G.

Typical applications are WIFI applications in industrial halls with Ex-zones, offshore, production and filling plants



Possible application

- Petro chemistry / Refinery / Offshore
- Wastewater industry / Sewage treatment
- Shipbuilding / Tanker
- Tank farm / Filling station
- Ex-manufacturing plant

Technical Data

Material:	Aluminium die cast with tube or dome of special glass
Dimension:	Pls. see details
Ingress protection:	IP 66
Impact resistance:	7 Joule
Temperature range:	-10(-30)...+50°C
Weight:	Pls. see details

Certificates

ATEX, Zone 1 / 2 / 21 / 22

Marking

II 2G Ex db IIC T6/T5 Gb

II 2D Ex tb IIIC T80°C Db

Options:

- Customized configuration
 - With integrated PoE Adaptor
 - Accesspoints of other manufacturers possible
 - Radio and company communication
 - Customized cables and length for linebushing
 - Safety guard
 - Brackets for walls, sealing or poles
 - For Tower-Version: different heights of enclosures up to 1000mm.
- Do not hesitate and ask for your configuration.



WirEx-Tower

Ex approved Wireless Accesspoint Tower Version
in flameproof special-glass-enclosure



Ex-d Accesspoint



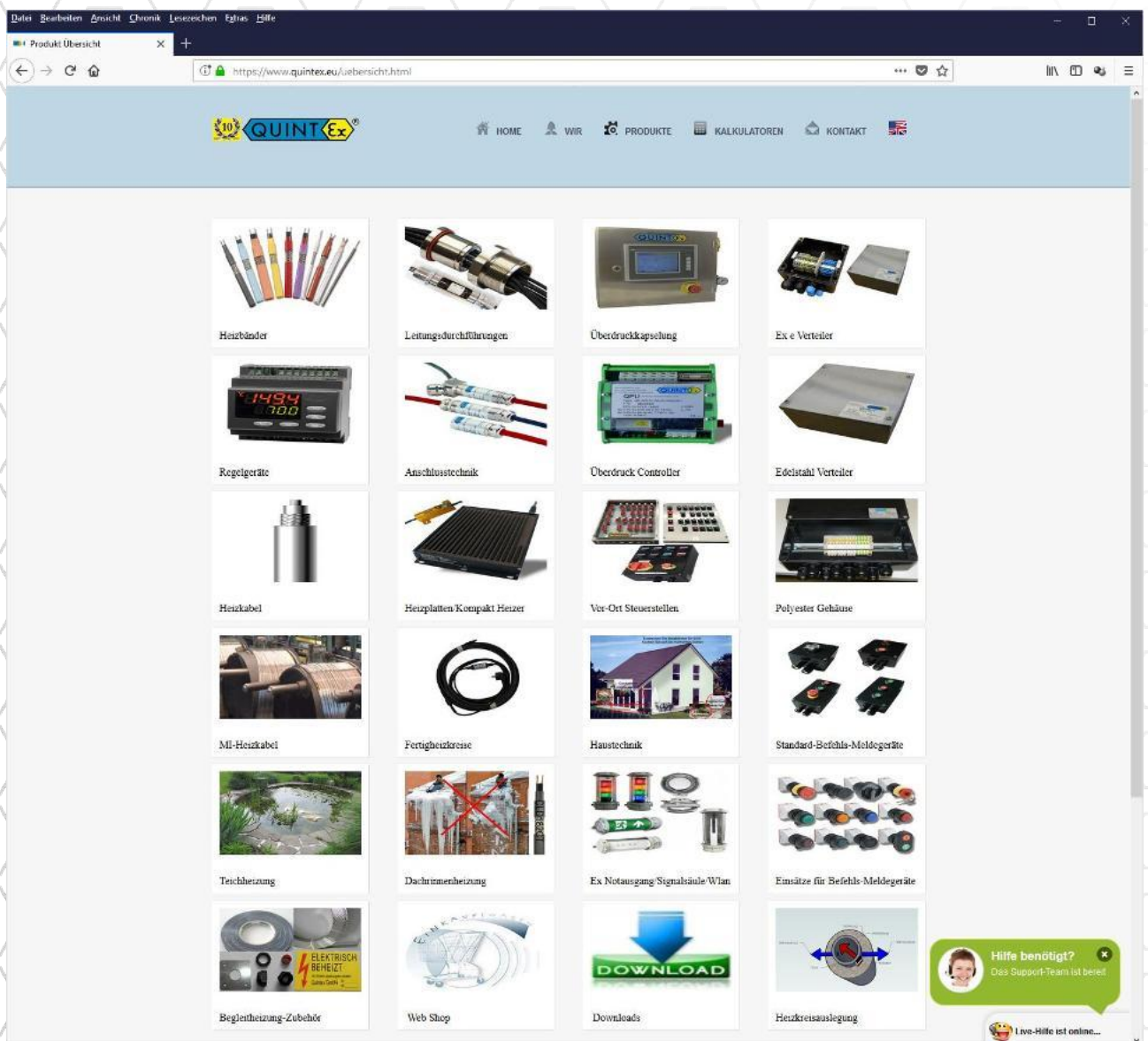
Technical data in detail:

	WirEx-Tower
	
Simultaneous Dual Band 2,4 / 5 GHz	✓
2,4 GHz Radio Rate:	300 Mbps
2,4 GHz MIMO:	2x2
5 GHz Radio Rate:	867 Mbps
5 GHz MIMO:	2x2
Mesh technology:	✓
Power Save:	✓
Max. power consumption:	8,5W
Ethernet Ports:	1x 10/100/1000
PoE Mode:	802.3af/A PoE 24V Passive PoE
Max TX Power 2,4 / 5 GHz:	20 dBm
Antennas:	2 dual-band omni
2,4 GHz	3 dBi
5 GHz	4 dBi
Wi-Fi Standards:	802.11 a/b/g/n/ac
Wireless Security:	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES)
BSSID:	Up to 8 per Radio
VLAN	802.1Q
Clients:	250+
Temperature range:	-30...+50°C
Dimension (WxHxD):	191x150x470mm
Weight:	6,0Kg



Please visit our Webpage to see the latest information about Quintex

If you need quick help, please use our online chat.
Free of charge and easy to use





QUINGUARD[®] Overpressure Controller and System

Experts for your systems

Quality • Reliability • Customer-oriented



Quintex GmbH

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Phone: +49 9343 6130 0

E-Mail: info@quintex.info

www.quintex.eu

Version 4.0

Pressure controller QUINGUARD[□]



Patented and ATEX approved Overpressure controller for Overpressure systems

Overpressure

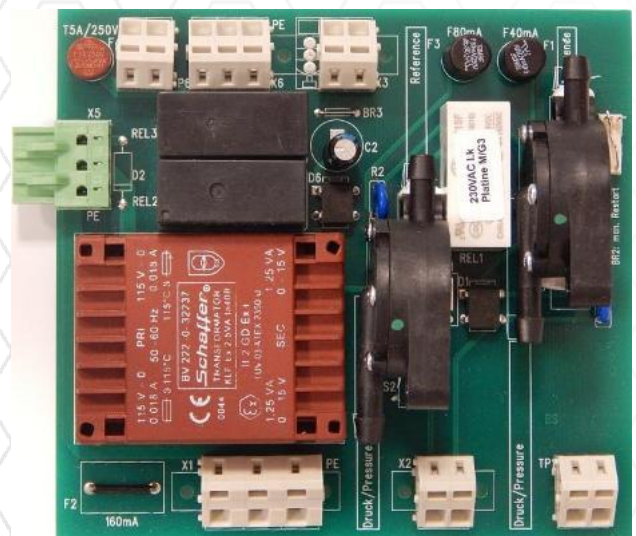


- No flushing necessary
- Installation inside the overpressure enclosure
- DIN rail mounting
- Easy operation without programming
- Low price operation
- Cost saving

Description

The newly developed pressure switch unit QUINGUARD QSU allows the use of non-ex components directly in zone 1 / 21 or 2/22 in connection with a pressurized enclosure. It is used for switching services. With an approved gas detector the control cabinet measure free. The QUINGUARD QSU will powered and pressurized the control cabinet. After reaching the pressure the build ins switched on. Then the QUINGUARD QSU controls the inner pressure inside of the control cabinet. If the pressure drops down under the internal pressure level all connected electric consumers in zone 1 switched off.

Only an alarm will be created by an Zone 2 application.



Possible Application

- Enclosure with HMI's
- Enclosure in all different sizes
- Analyzer
- Fill up system
- Dosing system
- Painting System
- Temperature control units

Certificates:

ATEX, IECEx

Marking

Pressure Controller

Ex II 2G / II2D

Ex II 2G sb IIC T4 Gb

Ex II 2D sb IIIC T120 C Db

Technical Data:

Dimension (mm): 125 x 104 x 58,5mm
Fixing: montiert im Profil
aufrastbar auf TS 35
Ambient temp.: -25°C to +70°C
Switching capacity: max. 5 A (AC or DC)

Pressure Controller (in enclosure)

Ex II 2G sb IIC T4 Gb

Ex II 2D sb III T120 C Db

Power:

DC 24 Volt

AC 230 Volt 50/60Hz



QUINGUARD[□] Valve module

Compensates leakage automatically in overpressure enclosures



Overpressure



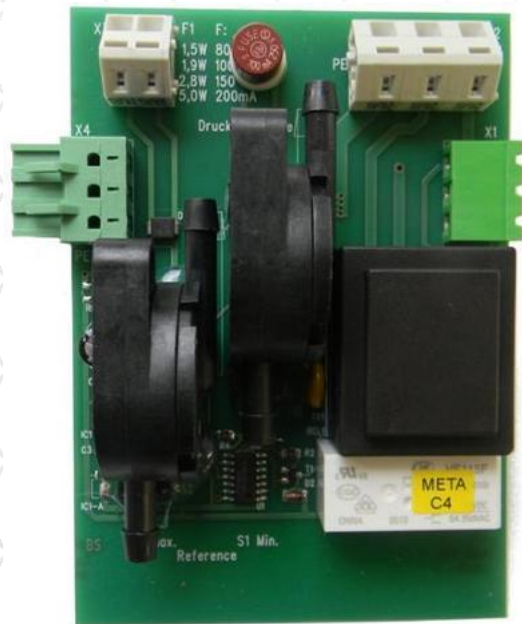
- Compatible to the Pressure controller
- Installation inside the Overpressure enclosure
- DIN rail mounting
- Easy operation without programming
- Compensates leakage automatically
- Digital valves automatically controlle

Description

The valve module is connected to the QUINGUARD QSU and can only be used together with it.

The valve module has two pressure switches which operate at different pressures. The pressure switches are based on the same measurement principle as well as the QUINGUARD QSU, with the differential pressure measurement. This means they must be connected to the same pressure as the reference QUINGUARD QSU.

An adjustable pressure is reached in the case of a pressure switch to a digital valve. Then the internal pressure rises. The second button is to switch off the digital valve, also via an adjustable value. A leak is through this start and stop from the digital valve balancing operates independently of modified leaks.



Possible Application

- Enclosure with HMI s
- Enclosure in all different sizes
- Analyzer
- Fill-up system
- Dosing system
- Painting system
- Temperature control units

Valve opens: 7 mbar
Valve closed: 9 mbar

Certificates

Without any certification – only allowed together with the pressure controller

Marking

Without marking

Power supply:

DC 24 Volt

AC 230 Volt 50/60 Hz

Technical Data:

Dimension (mm): 125 x 77 x 58,5mm

Fixing: mounted in profile rail mounting TS 35

Ambient temperature: -25°C up to +70°C



QUINGUARD[®] Interface module



Interface to separate active cables like RJ45, USB or directly via terminal

Overpressure



- Compatible to the Pressure controller
- Installation inside the Overpressure enclosure
- DIN rail mounting
- Easy operation without programming
- Shut off active datalines within the enclosure in the event off pressure lost

Description

Data lines leading into a Ex p cabinet, must be switched off in the event of lost pressure; this is the task of this interface module. The interface module has 4 normally open contacts which are used for switching on or off of 4-wire data line. On the input side of this interface module is equipped with a 5-contact cage clamp provided to maintain the necessary clearances. At this point the input cable must be separated.

For the output side currently there are three connection types available:

- one USB 2.0, an
- RJ45 Ethernet 10/100Mbps
- 5-pole pluggable terminal block

The control of the interface module is done via the pressure control unit QUINGUARD and may only be used in conjunction with this.



Possible Application

- Enclosure with HMI s
- Industrial PC s
- Analyzersystems
- Active datalines
- Interface signals

Technical Data:

Dimension (mm): 107 x 73 x 20mm
Fixing: mounted in profile rail mounting TS 35
Ambient temperature: -25°C to +70°C
Incoming side: Ex e cage terminals
Outgoing side: RJ45, USB, Terminal

Certificates

Without any certification – only allowed together with the pressure controller

Marking

Without marking

Power supply

DC 24 Volts
AC 115 Volts 50/60 Hz
AC 230 Volts 50/60 Hz
Switching capacity:
Max. 2,5 A / max. 50 V



Pressure regulator PRE

Regulate the input pressure to a constant working pressure

Overpressure



- Diaphragm pressure regulator
- Input pressure of max. 18 bar
- Temperature range -30 C to +80 C
- Suitable for compressed air and non-flammable gases
- Can be carried by the customer and structure

Description:

Pressure regulators have the task to limit the set operating pressure of an application upwards and as well as possible to compensate for pressure fluctuations.

There are lesser, between two versions of pressure adjustable via a hand wheel or fixed versions.

The adjustable pressure regulators have a pressure gauge on the set value can be read. A locking nut prevents that the pressure value can be changed unintentionally. The regulator mounting position is arbitrary. The flow direction is marked with an arrow.



Possible Application

- Enclosure with HMI s
- Enclosure in all different sizes
- Analyzer
- Fill-up system
- Dosing system
- Painting system
- Temperature control units

Marking

CE Declaration

Technical Data:

Dimension (mm):	see second page
Pressure range:	0,5-18 bar
Ambient temperature:	0°C to +80°C (-30 C as option)
Flow rate:	310...5000l/min
Material:	Zinc die-cast



Pressure regulator PRE

Regulate the input pressure to a constant working pressure

Overpressure



Characteristics of the single pressure reducer

Ordernr.	Connection-thread	Flow range	Pressure-range	Pressure-gauge	Dimension in mm		
					H	H1	T
PRE 1	G 1/4"	1000 l/min	0,1 - 3 bar	0 - 6 bar	132	32	54
PRE 2	G 3/8"	1000 l/min	0,2 - 6 bar	0 - 6 bar	132	32	54
PRE 3	G 3/8"	2100 l/min	0,2 - 6 bar	0 - 6 bar	151	33	70
PRE 4	G 1/2"	2100 l/min	0,2 - 6 bar	0 - 6 bar	151	33	70
PRE 5	G 1/2"	5000 l/min	0,5 - 10 bar	0 - 6 bar	163	33	82

INLINE – Pressure regulator

The inline regulator is characterized that they at a maximum input pressure exhibit of 18 bar, a factory fixed pressure range, which is not manipulated. The inline pressure regulator are available with different pressure ranges to the Available.

Ordernr.	Connection-thread	Flow range	Pressure-range	Pressure-gauge	Dimension in mm	
					L	
PRE 14-1	G 1/4"	800 l/min	1 bar	0 - 6 bar	52	34
PRE 14-2	G 1/4"	800 l/min	2 bar	0 - 6 bar	52	34
PRE 14-3	G 1/4"	800 l/min	3 bar	0 - 6 bar	52	34
PRE 14-4	G 1/4"	800 l/min	4 bar	0 - 6 bar	52	34

[Technical data](#)

See above table dimensions (mm)

Pressure range: set default 1-4 bar

Installation position: any

Flow rate: 800 l / min

Housing material: zinc die-cast

Sealing material: NBR



Contactors SC

Patented and ATEX certified contactors for direct use in Pressurized cabinets

Overpressure



- No additional enclosure necessary
- Approved for use in Zone 1/21 and 2/22
- Switching capacity up to 540KW/1000A
- Easy operation without programming
- Screw or cage clamp terminals
- Turning on and setting up can be done by the customer

Description

The contactor of series SC used for switching service in a hazardous area. The contactors are already partly with auxiliary contact 3 pole or 4 pole. There are also optional auxiliary contacts available which can be used as switching control in a control room.

With 8 sizes, the SC covers the performance range up to 1000A. The power contactors feature box terminals with two Terminal Chambers to the SC 45/90. Thus, different conductor cross-sections can be safely wired. From SC 54/102, the wiring of terminals is performed.

Until SC 9/19 an auxiliary contact is present by default, there is also an extensive range of auxiliary switches available.



Possible Application

- Enclosure with high performance switching
- Use as Main switch

Marking

Ex II 2G / II2D Ex

Technical data:

Dimension (mm): see Page 2

Mounting position: vertical

Ambient temperature: -25°C up to +60°C

Coil voltage:

DC 24 Volt

AC 230 Volt 50/60 Hz

Rating voltage:

AC-1/ AC-3 230 - 400 V

Certificates

ATEX



Contactors SC

Patented and ATEX certified contactors for direct use in Pressurized cabinets

Overpressure



Characteristics of the individual contactors SC

QUINTEX Types	Rated power in KW	Rated current in Amps	Dimension W x B x D in mm
SC4,5/11	4,5	11	2 (45x85x97,4)
SC6,5/15	6,5	15	2 (45x85x97,4)
SC9/19	9	19	2 (45x85x97,4)
SC11/24	11	24	3 (55x115x132,1)
SC13/30	13	30	3 (55x115x132,1)
SC18/39	18	39	3 (55x115x132,1)
SC22/48	22	48	4 (90x170x160)
SC27/57	27	57	4 (90x170x160)
SC33/69	33	69	4 (90x170x160)
SC45/90	45	90	4 (90x170x160)
SC54/102	54	102	4 (90x170x160)
SC54/110	54	110	5 (140x180x208)
SC66/135	66	135	5 (140x180x208)
SC80/150	80	150	5 (140x180x208)
SC96/180	96	180	6 (160x200x216)
SC120/240	120	240	6 (160x200x216)
SC150/300	150	300	6 (160x200x216)
SC190/350	190	350	7 (250x286x232)
SC213/390	213	390	7 (250x286x232)
SC240/450	240	450	8 (250x296x232)
SC270/500	270	500	8 (250x296x232)
SC336/600	336	600	8 (250x296x232)
SC540/1000	540	1000	9 (515x392x252)



Saftey outlet FGO

Overpressure safety outlet in connection with the enclosure Series SPZ

Overpressure



- Opens automatically under Overpressure
- Directly mounted in the enclosure outside
- Particle lock prevents sparks
- Diferent sizes

Description

The safety outlet FGO has the task in an unexpectedly high internal pressure in the enclosure to reduce this pressure. A valve plate is mechanically mounted on a spring opens when increased pressure and the internal pressure is reduced. Then the valve plate closes again automatically. We recommend the enclosure with a safety outlet to equip. Depending on the size of the Cabinet is different variants available
The outlet FGO is equipped with particle locks.



Possible Application

- Overpressure enclosure in different sizes

Technical Data FGO:

Dimension (mm):	57 x 55 x 110mm
Fixing:	screwed with particle locks
Ambient temperature:	-25°C up to +70°C
Open point:	at 15 mbar
Material:	POM black

Technical Data FGO mini:

Dimension (mm):	42 x 40mm
Fixing:	screwed with particle locks
Ambient temperature:	-25°C up to +70°C
Open point:	at 15 mbar
Material:	POM black



Digital Valve DV

Standard Series Valve in execution NC or NO



Overpressure



- Two-Point control with QUINGUARD valve module
- Regulates the leakage compensation
- Different diameter up to DN 6
- Standard as Normally open version (NO)

Description:

The digital valve DV is controlled via the QUINGUARD valve module and regulates automatically the leak in the pressurized enclosure. The two point control voltage the valve on the upper switching point to close it and the lower switching point is reached, the current is switched off and air flows up to increase the pressure.

The standard version as normally open valve NO allows a swirling inside of the case immediately after creating the compressed air. This may exist gases are set in motion and can then be detected.



Possible areas use

- Overpressure enclosures with different sizes
- Different diameter
- Standard connection thread R1/4

Technical data::

Dimension (mm):	Coil: 45 x 40 x 41mm Valve body: 46 x 32 x 22mm
Fixing:	screwed on mounting plate
Ambient temperature:	-10°C bis +55°C
Operating voltage:	AC 230V / DC 24V
Coil material:	POM
Valve body material:	Brass



QUINGUARD^Q QMP

Patented and ATEX certified QUINGUARD Controller with Valve module ready wired and mounted on mounting plate



Overpressure

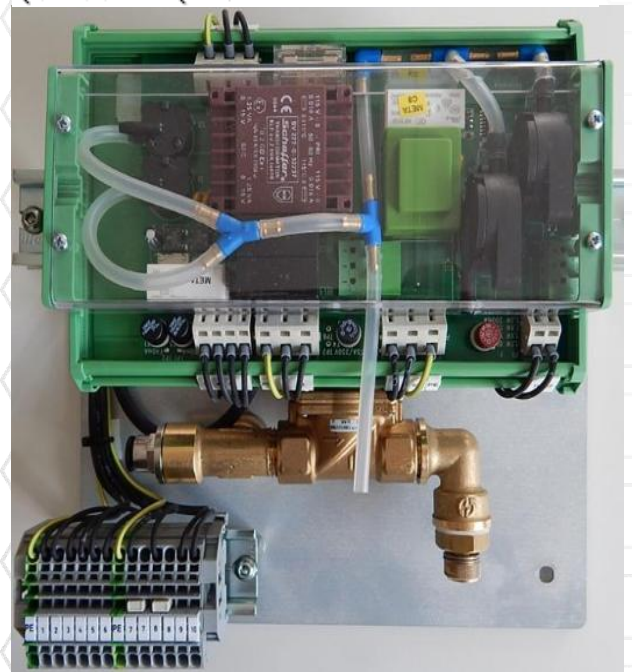


- Space saving on mounting plate
- Ready for connection on terminals
- Reference pressure connection via tube
- Digital valve NO
- Automatic leakage compensation
- No adjustment necessary

Description

QUINGUARD QMP is designed for cabinets and enclosures be installed in explosive environments. All components are installed on a mounting plate space-saving and wired ready for connection to terminal block. After applying the respective voltage and the necessary pressure (both values please refer to the type label) QUINGUARD QMP switches on the cabinet installations after reaching the required internal pressure. The switching capacity of the QUINGUARD QMP is maximum 5A. Higher switching capacities needed an approved contactor for high switching capacities which can be installed directly in the control cabinet. That will be with the contactor series SC. The Valve modul ensures an automatic leak compensation. The used valve in the NO (normally open) version guarantees a permanent and reliable to internal pressure due to its high-quality design. The internal pressure is fixed and the adjusting screws are sealed and must not be changed.

As Safety valve is a mechanical outlet FGO used. It opens if the internal pressure is higher than the outside pressure to a specific pressure value. This is implemented via a pressure compensation element that is directly connected to the QUINGUARD QMP.



Technical data:

Dimension (mm): 260*280*130
Mounting position: without limitation
Pressure above: max.18bar
Internal pressure: 5-25 mbar

Power supply:

DC 24 Volt
AC 230 Volt 50/60 Hz

Certificates

ATEX, IECEx

Marking

Ex II 2G sb IIC T4 Gb
Ex II 2D sb IIIC T120 C Db

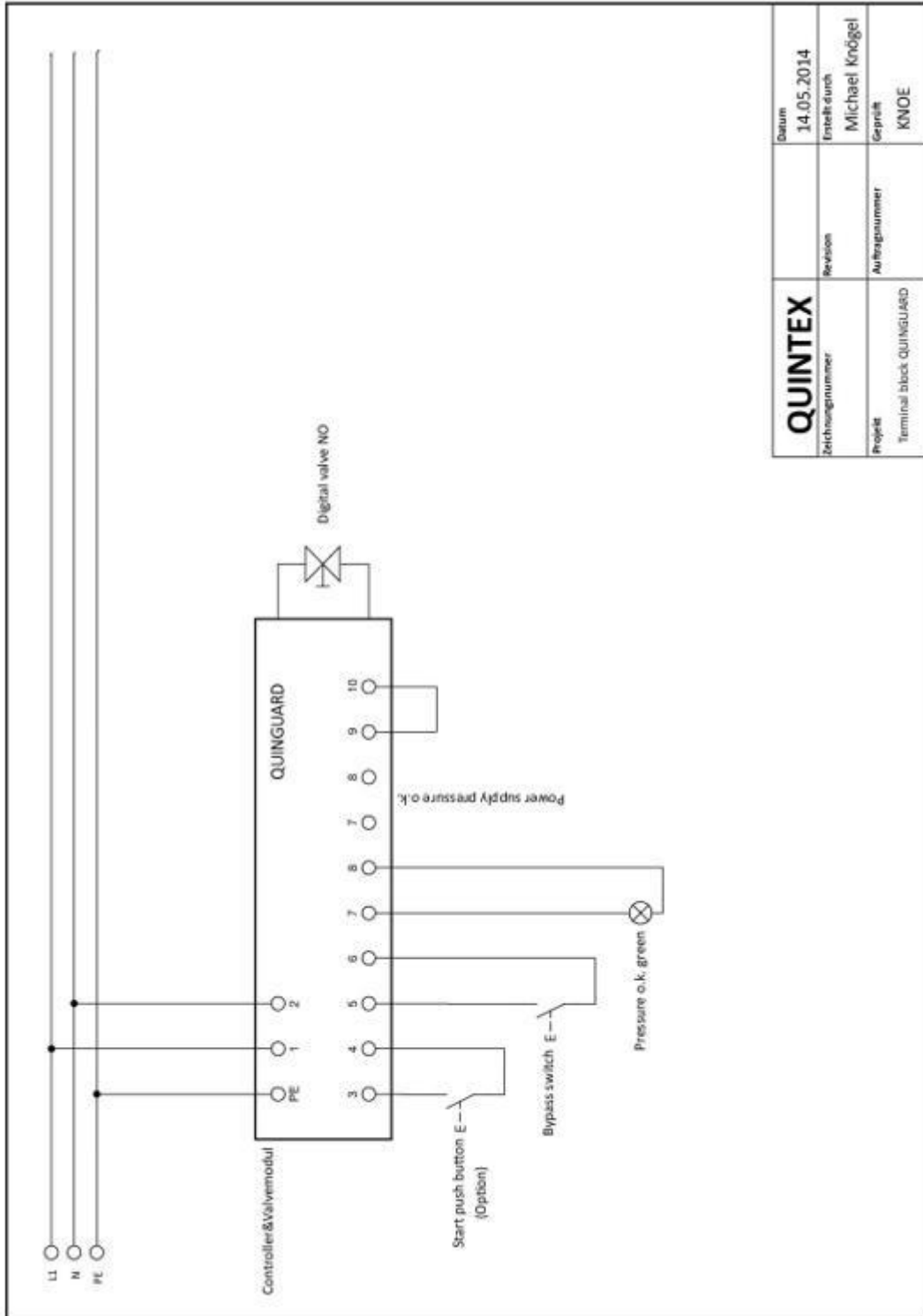


QUINGUARD[□] QMP

QUINGUARD Controller with Valve module



Overpressure



Print



send via E-mail

QUINGUARD Overpressure System QSS

Customer

Company _____

Street _____

Postcode/City _____

Country _____

Contact _____

E-mail _____

Phone _____

Mobile _____

QUINTEX

Representative _____

Quote _____

Order _____

Project _____

Enquiry date _____

Delivery date _____

No. of enclosures _____

Date _____

Usage area

Zone 1 (2G) Indoor

Zone 21 (2D) Outdoor

Zone 2 (3G) Clean room

Zone 22 (3D) Offshore

Temperatures

Ambient temperature _____ to _____ C°

Temperature class

T 3 T 5

T 4 T 6

Standard enclosure series SPZ

Special enclosure size and construction

Size (mm): Width _____ x Height _____ x Depth _____ Plinth,height: _____

Sheet steel, painted Lifting eyes, pieces:

Painted in conformance to RAL: Castors

Stainless steel V2A (1.4301, AISI 304) Salt laden atmosphere resistant paint

Stainless steel V4A (1.4401, AISI 316L) Sun canopy

Plastic e.g. GRP Removable centre post (doors)

1-door, hinged on right hand side Mountingplate in advance

2-door, hinged on left/right hand side lock insert double bit(3mm), standard

Inspection window/Viewing window

- Inspection window, size(mm) _____
- Viewing window, size (mm) _____

Operating voltage

Power consumption

- AC 230 V (L/N/PE) _____ A
- AC 115 V (L/N/PE) _____
- DC 24 V (L+/N) 50 Hz
- AC 400 V (3L/N/PE) 60 Hz

Frequency

Cooling / Heating

- Water/air cooling inside (non-Ex)
- Compressed air cooling (Vortex)
- Anti frost heating
- Min. internal temperatue _____ C°
- Max. internal temperature _____ C°
- Min. external temperature _____ C°
- Max. external temperature _____ C°

Pressure controller QUINGUARD

- QUINGUARD
- Valve module
- Interface module

Saftey outlet (optional)

- FGO (at 600*800*300mm)
- FGO mini

Additional components in the door (Switches, Lamps, HMI and so on)

Safe operating

- Direct operating via QUINGUARD max. 5 A
- Indirect operating via contactor SC capacity (watts/Amps) _____

- Operating from the non-hazardous area

Leakage medium

- cleaned compressed air (free of oil and water)
- inert gas

Internal monitoring via gas detector

- Gas detector supplied by QUINTEX
- Gas detector supplied by customer
- Occuring gases _____
- Fixed gas detector
- Portable gas detector
- Gas detector with pump for PC systems

Power dissipation

- Internal power dissipation _____ W
- Highest single unit dissipation _____ W

Cable glands

- Cable glands Number
- Cable glands Number
- Cable glands Number
- Cable glands Number

QUINGUARD[□] DMP

QUINGUARD Stationary gas detector ready mounted and wired on mounting plate



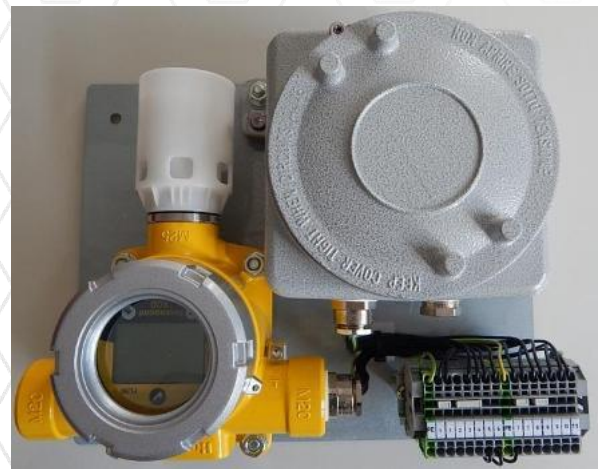
Overpressure



- Space saving on mounting plate
- Ready for connection on terminals
- 3 potential free contacts
- Calibrated and preset
- Use only with the QMP
- No adjustment necessary

Description

QUINGUARD DMP is designed for cabinets and enclosures be installed in explosive environments. All components are installed on a mounting plate space-saving and wired ready for connection to terminal block. QUINGUARD DMP reliably monitors the ex-free zone within the cabinet. The flame-proof power supply provides the necessary power supply and a delayed release voltage. After the mains voltage is applied, the used gas detector is switched on and checked the ex-free zone within the cabinet. After measurement the QUINGUARD QMP is switched on. It monitors and regulates the necessary pressure then. If a gas is illuminating the release voltage fails. The valve on the QUINGUARD QMP is open in a deenergised state (NO) and thus providing the turbulence and an increase in internal pressure to approx. 12-14 mbar. Then open the installed safety outlet and provides for a discharge of the gas mixture. If no gas is illuminating the gas detector releases the tension and QUINGUARD QMP is switched on. This means that the operation with flammable gas mixtures is also sure permanently monitored and is easily possible (containment system).



Technical data:

Dimension (mm): 260*300*130
Mounting position: without limitation
Pressure above: max.18bar
Internal pressure: 5-25 mbar

Certificates

ATEX, IECEx

Marking

Ex II 2G sb IIC T4 Gb
Ex II 2D sb IIIC T120 C Db

Power supply:

DC 24 Volt
AC 230 Volt 50/60 Hz

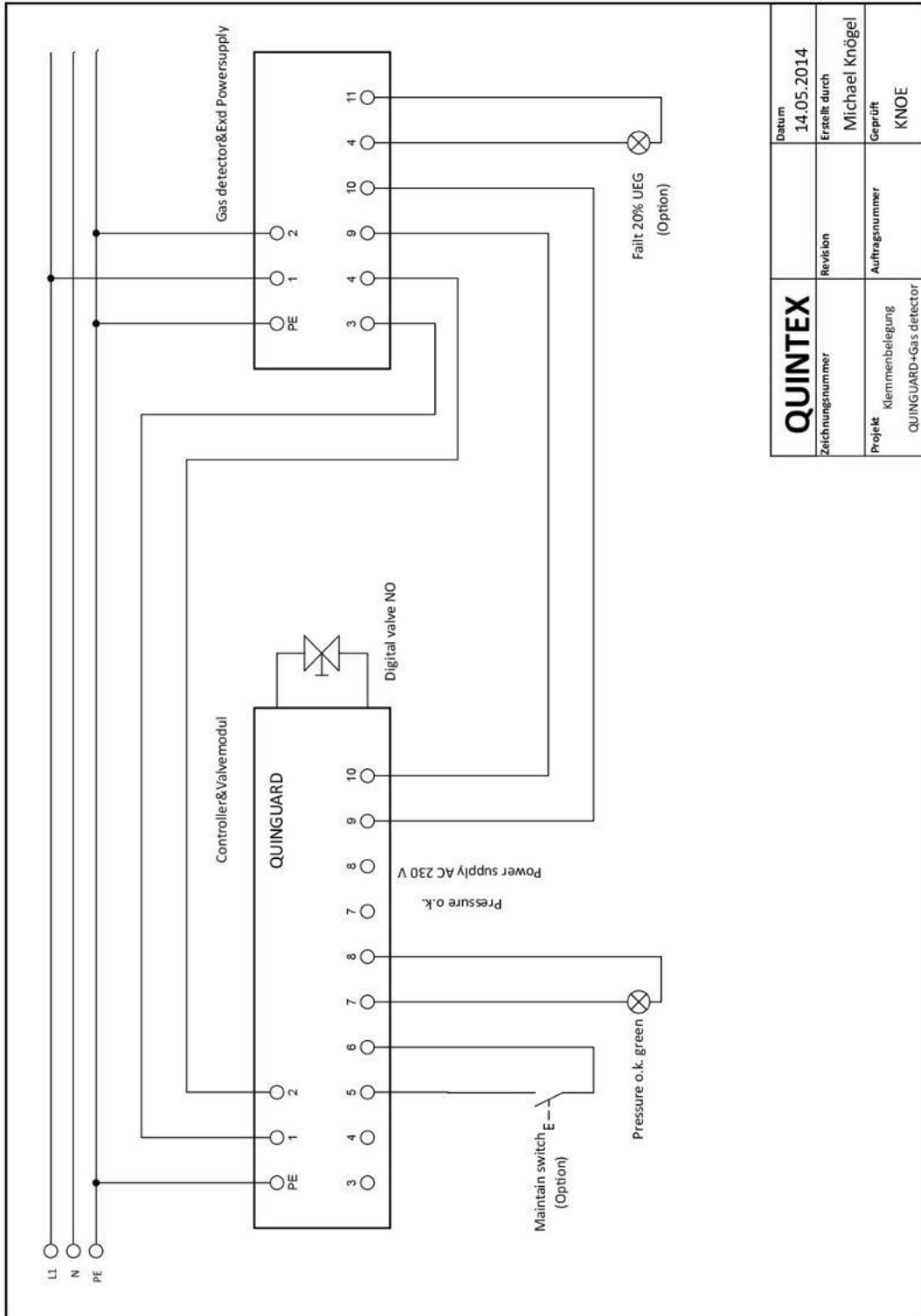


QUINGUARD[□] DMP

QUINGUARD Stationary gas detector
Ready wired and
Mounted on mounting plate



Overpressure



QUINTEX	Datum	14.05.2014
	Erstellt durch	Michael Knögel
Zeichnungsnummer	Revision	
Projekt	Auftragsnummer	
Klemmenbelegung		Geprüft
QUINGUARD+Gas detector		KNOE





Proviso

We reserve the right to make technical changes. Changes, errors and literal errors do not justify any claim for damage compensation. For security components and systems, the relevant standards, as well as the relevant operating and assembly instructions have to be followed.

This product catalog renders all previous catalogs invalid.



Line Bushings

Experts for your systems

flexible • reliability • customer-oriented



Quintex GmbH

i_Park Tauberfranken 13

97922 Lauda-Königshofen Germany

Phone: +49 9343 6130 0

E-Mail: info@quintex.info

www.quintex.eu



Proviso

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Ex approved pluggable line bushings

General Data



- Wild temperature range
- Free of maintenance
- Immediate applicable with X license

- Many international approvals
- Variety of wires and cable possible
- Easy installation

Description

The pluggable line bushings are used to electrically connect equipment from flameproof enclosures (Ex d) and/or an increased safety enclosure (Ex e), certified for zone 1/21 and 2/22.

Depending on the design, line bushings can be used for intrinsically safe, measurement, control and power circuits. Also the connection for safe circuits can be implementing with blue wires.

The pluggable line bushings have a quickly and simply installation and secured with an circlip and safety device axial displacement. This version is particularly suitable for installation that should avoid a rotation.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.



Applications

- Ex d, Ex e and Ex t enclosures
- Sensors, measurement, devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Offshore platforms, Drilling Rigs, rolling mills, gas tanks, Climatic chambers, compactors, etc.

Technical Data

Voltage:	up to 6000V
(depending on model type)	
Conductor sizes:	0,08mm to 185mm
Temperature range:	- 55°C...+115°C
High Temperature variant:	- 60°C...+150°C
Max. conductor quantity:	99 strands
Bushing diameter:	8mm to 80mm
Plug length:	> 20 mm
Bushing material:	Nickel plated Brass
(other materials on request)	
Standard cable material:	RADOX 125
(other materials on request)	

Marking

- Ⓢ II 2G Ex db (eb)* IIC T4/T5/T6 Gb
- Ⓢ II 2D Ex tb IIIC T135 /T100 C/T85 C Db
- Ⓢ I M2 Ex d I Mb

Certificates

ATEX, IECEX,
CSA US
UL US (Div), UL AEx (Zone) FM
KCS

Reference pressure enclosure: up to 33bar

* on request with IP66 possible. *Special applications on request, please contact us to discuss your requirements*

LBS

Ex approved threaded line bushings

General Data



- Wild temperature range
- Free of maintenance
- Immediate applicable with X license

- Many international approvals
- Variety of wires and cable possible
- Easy installation

Description

The threaded line bushings are used to electrically connect equipment from flameproof enclosures (Ex d) and/or an increased safety enclosure (Ex e), certified for zone 1/21 and 2/22.

Depending on the design, line bushings can be used for intrinsically safe, measurement, control and power circuits. Also the connection for safe circuits can be implementing with blue wires.

The threaded line bushings can be installed from inside or outside of enclosure.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.



Applications

- Ex d, Ex e and Ex t enclosures
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Offshore-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Technical Data

Voltage:	up to 6000V
(depending on model type)	
Conductor sizes:	0,08mm to 185mm
Temperature range:	-55°C...+115°C
High Temperatur variant:	-60°C...+150°C
Max. conductor quantity:	99 strands
Thread size:	M8*0,75 to M72*1,5 NPT ½" up to NPT 2 ½ "
Thread length:	> 10mm

Marking

- ⊕ II 2G Ex db (eb)* IIC T4/T5/T6 Gb
- ⊕ II 2D Ex tb IIIC T135 /T100 C/T85 C Db
- ⊕ I M2 Ex d I Mb

Certificates

ATEX and IECEx
 CSA US
 UL US (DIV), UL AEx (Zone) FM
 CCC
 KCS

Material of bushing: Nickel plated Brass
 (other material on request)
 Standard wire material: Radox 125

(other material on request)

* on request with IP66 possible. *Special applications on request, please contact us to discuss your requirements*

LZ /

Ex approved line bushing

General Data



- Wild temperature range
- Free of maintenance
- Immediate applicable with X license

- Many international approvals
- Variety of wires and cable possible
- Easy installation

Description

The 2-path line bushings are used to electrically connect equipment from flameproof enclosures (Ex d) and/or an increased safety enclosure (Ex e), certified for zone 1/21 and 2/22.

Depending on the design, line bushings can be used for intrinsically safe, measurement, control and power circuits. Also the connection for safe circuits can be implementing with blue wires.

The 2-path line bushing simplifies your installation application by means of the rotating adapter. This version is particularly suitable for big wire sizes and installation that should avoid a rotation.

All line bushings are cast with high temperature and leakage current resistant resin to insulate them from the enclosure.



Applications

- Ex d, Ex e and Ex t enclosures
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Offshore-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Technical Data

Voltage: (depending on model type)	up to 6000V
Conductor sizes:	0,08mm to 185mm
Temperature range:	-55°C...+115°C
High Temperatur variant:	-60°C...+150°C
Max. conductor quantity:	99 strands
Thread size:	M20*1,5 to M72*1,5 NPT
Thread length:	> 20mm

Marking

- II 2G Ex db (eb)* IIC T4/T5/T6 Gb
- I.M2 Ex d I Mb

Certificates

ATEX and IECEx

Material of bushing: (other material on request)	Nickel plated Brass
Standard wire material: (other material on request)	Radox 125

* on request with IP66 possible. *Special applications on request, please contact us to discuss your requirements*



Ex approved line bushings
Number of xores / Strands with Radox 125

General Data



Number of cores / strands for thread sleeve

Maximum strand assembly depending on the diameter of the metric screw connection

	mm ²	0,25	0,34	0,5	0,75	1	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	99 Max Litzen
Ø		1,25	1,6	2	2,25	2,6	2,85	3,4	4,05	5,2	6,4	7,6	9,2	10,6	12,3	14,6	16,3	18,4	20,8	22,5	
Abstand		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1,5	1,5	1,5	1,5	
M10	7	2	2	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
M12	8	3	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
M14	10	6	4	4	3	3	2	2	1	1	0	0	0	0	0	0	0	0	0	0	0
M16	12	8	7	5	5	4	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0
M18	12	8	7	5	5	4	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0
M20	15	13	11	9	7	6	6	5	3	2	2	1	1	0	0	0	0	0	0	0	0
M24	19	21	17	14	12	10	9	8	6	4	3	2	1	1	1	0	0	0	0	0	0
M25	20	24	19	16	14	12	10	8	6	4	3	2	2	1	1	0	0	0	0	0	0
M30	25	37	30	25	22	18	17	13	10	7	5	4	3	2	1	1	1	0	0	0	0
M32	27	44	36	29	25	22	19	16	12	9	6	5	3	2	2	1	1	1	0	0	0
M33	28	47	38	31	27	23	21	17	13	9	7	5	4	3	2	1	1	1	0	0	0
M36	30	54	44	36	31	27	24	20	15	11	8	6	4	3	2	2	1	1	1	0	0
M38	30	54	44	36	31	27	24	20	15	11	8	6	4	3	2	2	1	1	1	0	0
M40	34	70	57	46	40	34	31	25	20	14	10	8	5	4	3	2	1	1	1	1	0
M42	36	78	64	51	45	39	35	28	22	16	11	9	6	5	4	3	2	1	1	1	0
M48	42	99	87	70	62	53	47	39	30	21	16	12	9	7	5	4	3	2	1	1	0
M50	42	99	87	70	62	53	47	39	30	21	16	12	9	7	5	4	3	2	1	1	0
M52	45	99	99	81	71	61	55	45	35	25	18	14	10	8	6	4	3	2	2	1	0
M56	50	99	99	99	88	75	68	55	43	30	22	17	12	10	7	5	4	3	2	2	0
M60	54	99	99	99	99	88	79	65	50	36	26	20	14	11	9	6	5	4	3	2	0
M63	54	99	99	99	99	88	79	65	50	36	26	20	14	11	9	6	5	4	3	2	0
M72	62	99	99	99	99	99	99	85	67	47	34	26	19	15	12	8	6	5	4	3	0
NPT																					
NPT 1/2	14	11	9	7	6	5	5	4	3	2	1	1	1	0	0	0	0	0	0	0	0
NPT 3/4	20,5	25	20	16	14	12	11	9	7	5	3	2	2	1	1	0	0	0	0	0	0
NPT1	23	32	26	21	18	16	14	11	9	6	4	3	2	2	1	1	0	0	0	0	0
NPT 1 1/4	31	58	47	38	34	29	26	21	16	11	8	6	4	3	3	2	1	1	1	0	0

Number of cores / strands for pluggable sleeve

Maximum strand assembly depending on the diameter of the pluggable sleeves

	mm ²	0,25	0,34	0,5	0,75	1	1,5	2,5	4	6	10	16	25	35	50	70	95	120	150	185	
Ø		1,25	1,6	2	2,25	2,6	2,85	3,4	4,05	5,2	6,4	7,6	9,2	10,6	12,3	14,6	16,3	18,4	20,8	22,5	
Abstand		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1,5	1,5	1,5	1,5	
10	7,5	3	2	2	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
14	11	7	5	4	4	3	3	2	2	1	1	0	0	0	0	0	0	0	0	0	0
16	13	10	8	6	5	5	4	3	2	2	1	1	0	0	0	0	0	0	0	0	0
19	16	15	12	10	9	7	6	5	4	3	2	1	1	1	0	0	0	0	0	0	0
22	19	21	17	14	12	10	9	8	6	4	3	2	1	1	1	0	0	0	0	0	0
25	22	29	23	19	17	14	13	10	8	5	4	3	2	1	1	1	0	0	0	0	0
30	25	37	30	25	22	18	17	13	10	7	5	4	3	2	1	1	1	0	0	0	0
32	27	44	36	29	25	22	19	16	12	9	6	5	3	2	2	1	1	1	0	0	0
34	29	50	41	33	29	25	22	18	14	10	7	5	4	3	2	1	1	1	0	0	0
36	31	58	47	38	34	29	26	21	16	11	8	6	4	3	3	2	1	1	1	0	0
40	35	74	60	49	43	37	33	27	21	15	11	8	6	4	3	2	2	1	1	1	0
42	36	78	64	51	45	39	35	28	22	16	11	9	6	5	4	3	2	1	1	1	0
44	38	87	71	57	51	43	39	32	25	17	13	10	7	5	4	3	2	2	1	1	0
50	39	92	75	60	53	46	41	34	26	18	13	10	7	6	4	3	2	2	1	1	0
52	40	96	79	64	56	48	43	35	27	19	14	11	8	6	5	3	2	2	1	1	0
56	44	99	95	77	68	58	52	43	33	23	17	13	9	7	6	4	3	2	2	1	0
60	48	99	99	92	81	69	62	51	40	28	20	16	11	9	7	5	3	3	2	2	0
63	51	99	99	99	92	78	70	58	45	32	23	18	13	10	8	6	4	3	2	2	0
72	60	99	99	99	99	99	97	80	62	44	32	25	18	14	11	8	6	5	4	3	0
80	68	99	99	99	99	99	99	99	80	57	41	32	23	18	14	10	7	6	5	4	0

Leitungstyp	Standard Temperature Range Ta	High Temperature Range Ta
RADOX 125	-55°C...+115°C	-60°C...+125°C
RADOX 155	-55°C...+100°C	-60°C...+150°C
RADOX UL 3271 / 3266	-55°C...+115°C	-60°C...+125°C
RADOX 4GKW-AX/9GKW-AX	-55°C...+115°C	-60°C...+120°C
BETATHERM 145	-55°C...+115°C	-55°C...+145°C
BETATHERM UL 3271 / 3266	-55°C...+115°C	-55°C...+125°C
H05V-K / H07V-K	-30°C...+80°C	
H05G-K / H07G-K	-40°C...+110°C	
BALZERTHERM 110HX	-40°C...+110°C	
NSGAF U	-40°C...+80°C	
METROFUNK Kabelunion Typ 0,09mm	-40°C...+105°C	
HELUTHERM A 145	-55°C...+115°C	-55°C...+145°C
FBL Typ 14x0,08mm	-20°C...+105°C	
H07RN-F	-30°C...+60°C	
CAN BUS	-40°C...+70°C	
UNITRONIC BUS CAN	-30°C...+80°C	
LAPP LFLEX CLASSIC 110 CY	-40°C...+80°C	
LAPP LFLEX FD90	-40°C...+90°C	
HELU F-CY-JZ / F-CY-OZ	-40°C...+80°C	
HELU JZ-500	-40°C...+80°C	
HELU JZ-500 HMH-C	-40°C...+70°C	
HELU JZ-500 PUR	-40°C...+80°C	
HELU JZ-600-Y-CY	-40°C...+80°C	
HELU PAAR-TRONIC-CY	-30°C...+80°C	
HELU SUPER-PAAR-TRONIC	-40°C...+80°C	
D TWYLER patch cord	-20°C...+60°C	
HELUKAT 100 UTP, LAN Kabel, Cat. 5	-20°C...+60°C	
HELUKAT 100S, Ethernet, Cat. 5e	-40°C...+80°C	
HELUKAT 200IND, Ethernet, Cat. 5e	-40°C...+80°C	
HELUKAT 500IND, Ethernet, Cat. 6a	-40°C...+70°C	
HELUKAT 600IND, Ethernet, Cat. 7e	-40°C...+80°C	
RG174, Coaxial cable	-35°C...+80°C	
RG178, Coaxial cable	-55°C...+115°C	-55°C...+150°C
RG213, Coaxial cable	-35°C...+80°C	
RG316, Coaxial cable	-55°C...+115°C	-55°C...+150°C
RADOX Enviroflex 178, Coaxial cable	-40°C...+100°C	
RADOX Enviroflex 179, Coaxial cable	-20°C...+60°C	
RADOX Enviroflex 316, Coaxial cable	-40°C...+100°C	
RADOX Enviroflex 316 D, Coaxial cable	-20°C...+60°C	
G50/CWJH, LWL multi mode	-20°C...+70°C	
G62,5/CWJH, LWL multi mode	-20°C...+70°C	
E9/CWJH E30, LWL single mode	-20°C...+70°C	
RADOX FO, LWL single and multi mode	-20°C...+70°C	
DRAKA FlexFlame RFOU(i)	-40°C...+90°C	
DRAKA FlexFlame RFOU	-40°C...+90°C	
Commscope LDF2RK-50	-40 C+60 C	

LB /

Ex approved line bushings
Bespoke applications

General Data



- Wild temperature range
- Free of maintenance
- Immediate applicable with X license
- Many international approvals
- Variety of wires and cable possible
- Easy installation

Description

Bespoke applications available.

You need a specific cable or wire type? You need specific bushings dimensions? Please ask us. It is our pleasure to help you. Preview examples indicated below:



Fibre optic cables
- Single mode
- Multi mode



Ethernet cable (e.g. CAT7)
Patch cable / cores / lead



Swivel gland
(angle of rotation 270)



Line bushing with thread at both ends
- Female and male threads
- Female/Female or male/male

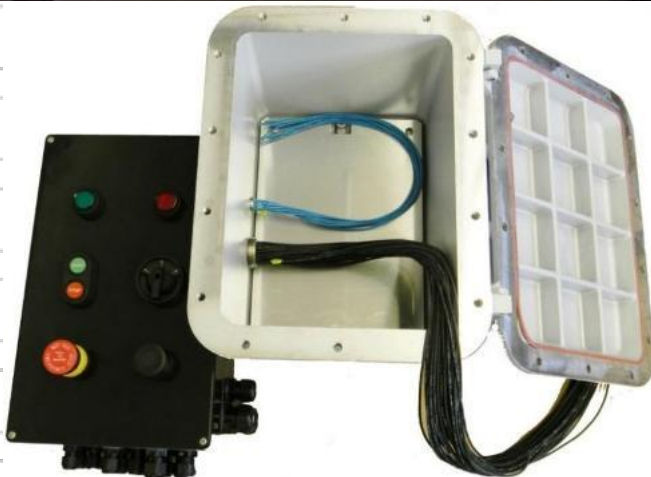
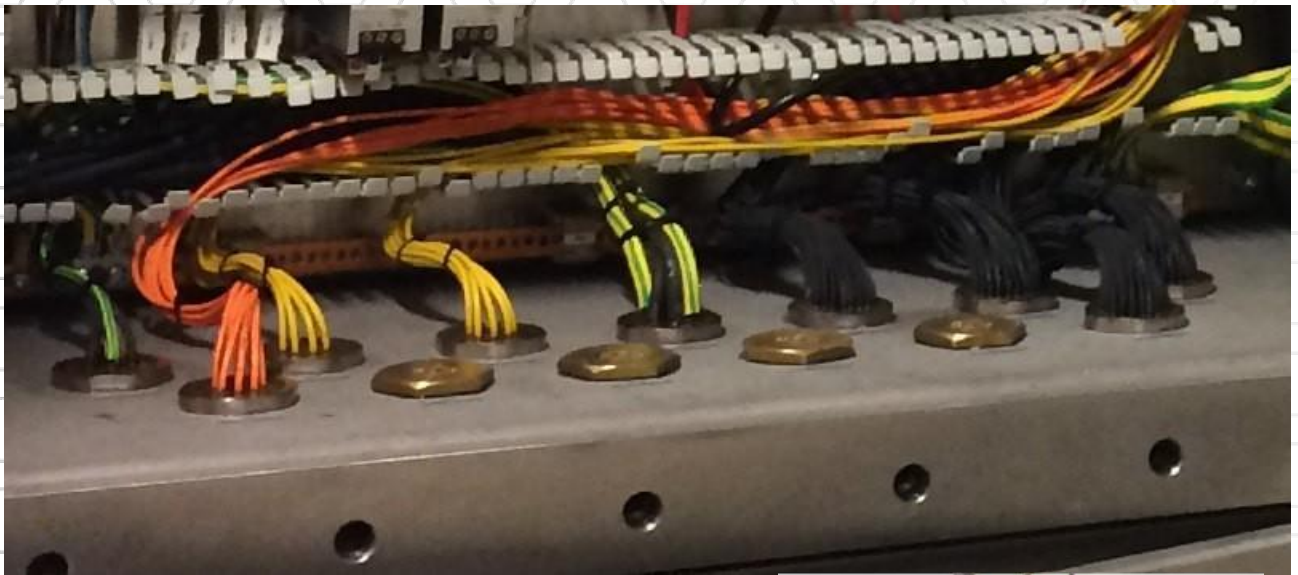


Line bushing with slip ring
(angle of rotation >360)



Line bushings with cable ends terminated
(left oder right hand threads)





LBU_000/

Ex approved blind plugs

- Wild temperature range
- Free of maintenance
- Immediate applicable with X license

Description

Blind plugs are used to seal off open entries of an enclosure, whether they be clearance holes or threaded.

They are inserted in place of an approved cable gland to ensure the enclosure is fully sealed in potentially explosive atmospheres.

All blind plugs are formed in threaded or pluggable formats.

Special applications are possible (thread on both sides, NPT thread, etc.).

Applications

- Ex d, Ex e or Ex t enclosures, housings or Pumps
- Sensors, measurement devices, motors, actuators, pneumatic and hydraulic devices, etc.
- Used on Sea-platforms, Drilling Rigs, rolling mills, gas tanks, climatic chambers, compactors, etc.

Markings

- II 2G Ex db IIC T4/T5/T6
- II 2D Ex db IIIC T135 /T100 C/T85 C
- I M2 Ex d I Mb

Certificates

ATEX and IECEx
 CSA US
 UL US (Div.), UL AEx (zone) FM
 CCC
 KCS



General Data



- Many international approvals
- Variety of wires and cable possible
- Easy installation



Technical Data

Temperature range:	-55°C...+115°C
High Temperature variant:	-60°C...+150°C
Thread / bushing size:	M8*0,75 to M72*1,5 NPT 1/2" up to NPT 2 10mm to 80mm
Thread/ Plug length:	> 10mm
Bushing material:	Nickel plated (other material on request) Brass
IP protection (ATEX, EN60529):	IP66 on request

LBU ___ 000/

Ex approved blind plugs



General Data



Type Code

LBU ___ 000 /

Identification blind plug

Thread / gap type:

M = Metric

N = NPT-thread

W= Whitworth thread

S = special thread according to the minimum requirements of IEC 600079-1 table 3 or 4 1 =

without thread

gap length $\geq 12,5\text{mm}$ $< 25\text{mm}$ 2 =

without thread

gap length $\geq 25\text{mm}$ $< 40\text{mm}$ 3 =

without thread

gap length $\geq 40\text{mm}$

P = special type according to minimum requirements of IEC 60079-1 table 1 or 2 Average surface finish $R_a < 6,3 \text{ m}$

Size of thread / bushing diameter (2digits) e.g.:

10,15,16,18,22,24,30,32,33,34,36,

without explosion protection relevance



LB /

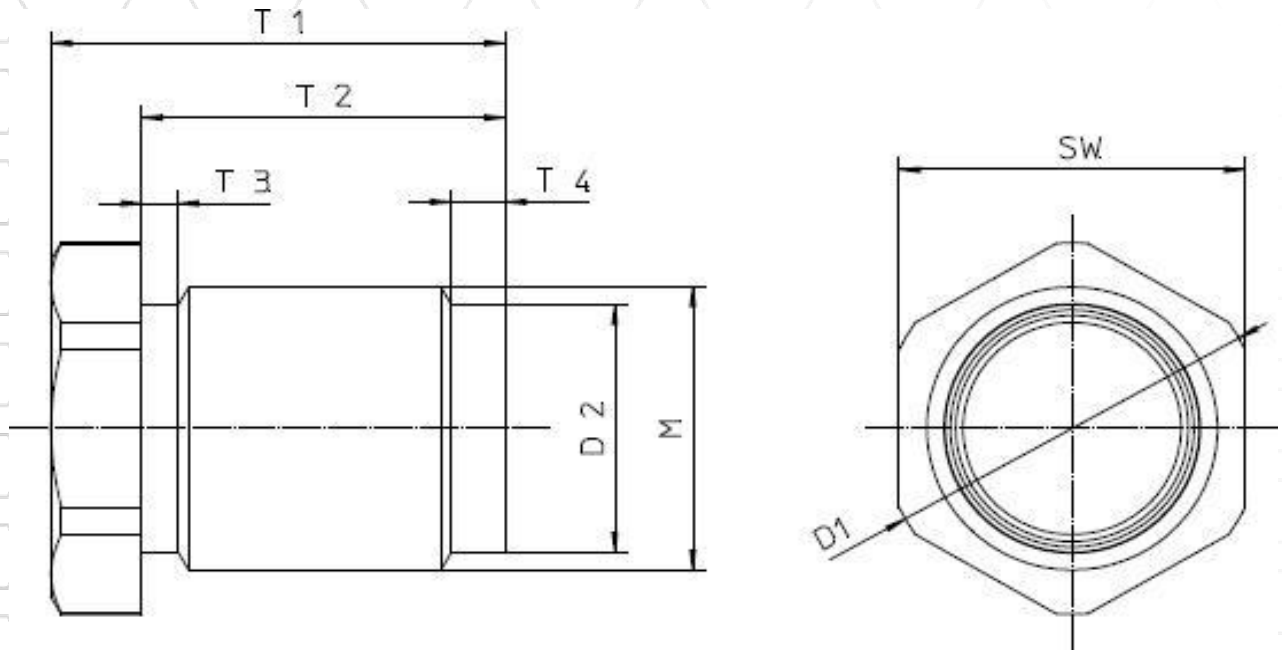
Ex approved line bushings

Please contact us if you need seal application (Exe).

Technical changes are reserved. All illustrations are without obligation.



Dimension threaded bushing



M	T1	T2	T3	T4	SW	D1	D2
M10x1,0	20 +0,4	16 -0,4	2	3	SW12	13,5	8,5 -0,1
M12x1,5	20 +0,4	16 -0,4	2	3	SW14	15,5	10,1 -0,1
M16x1,5	25 +0,4	20 -0,4	2	3 +0,5	SW19	21	14 -0,1
M20x1,5	26 +0,4	21 -0,4	2	3 +0,5	SW24	27	18 -0,1
M24x1,5	26 +0,4	21 -0,4	2	3 +0,5	SW27	29	22 -0,1
M25x1,5	26 +0,4	21 -0,4	2	3 +0,5	SW27	29	23 -0,1
M26x1,5	26 +0,4	21 -0,4	2	3 +0,5	SW30	32	24 -0,1
M30x1,5	30 +0,4	23 -0,4	2	3 +0,5	SW32	34	28 -0,1
M32x1,5	30 +0,4	23 -0,4	2	3 +0,5	SW36	38	29,9 -0,1
M33x1,5	30 +0,4	23 -0,4	2	3 +0,5	SW36	38	30,9 -0,1
M36x1,5	35	28	2	3	SW41	43	33,9 -0,2
M40x1,5	35	28	2	3	SW42	42	37,9 -0,2
M42x1,5	35	28	2	3	SW46	48	39,9 -0,2
M48x1,5	33	22	2	3 +0,5	SW55	55	42,0 -0,1
M52x1,5	34,5	23,5	2	3	SW56	58	43,0 -0,2
M56x1,5	38	28	2	3	SW60	62	46,9 -0,2
M72x1,5	50	37,5	2	3	SW75	79	52,0 -0,2



LB /

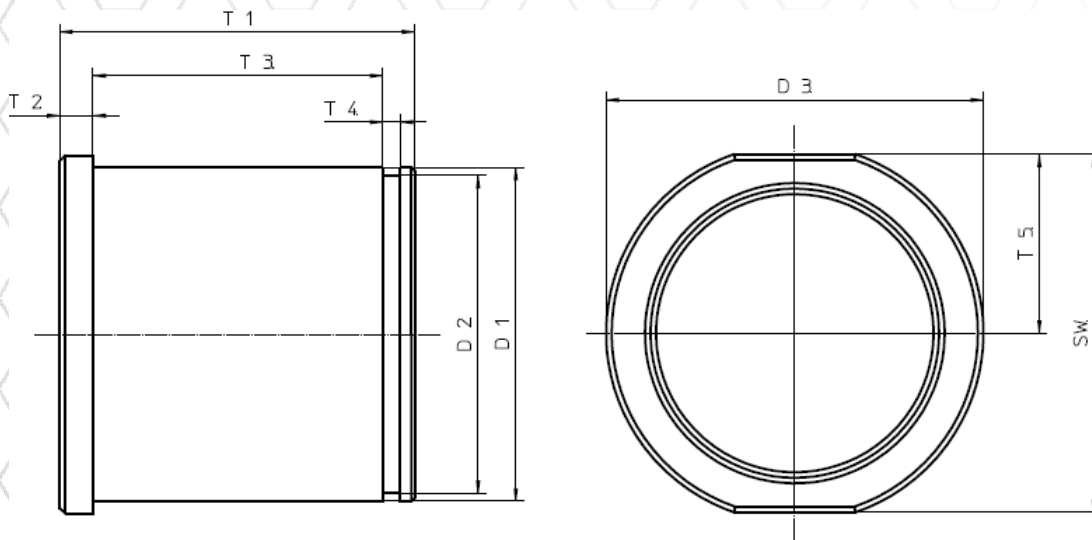
Ex approved line bushings

Please contact us if you need seal application (Exe).

Technical changes are reserved. All illustrations are without obligation.



Dimension pluggable bushing



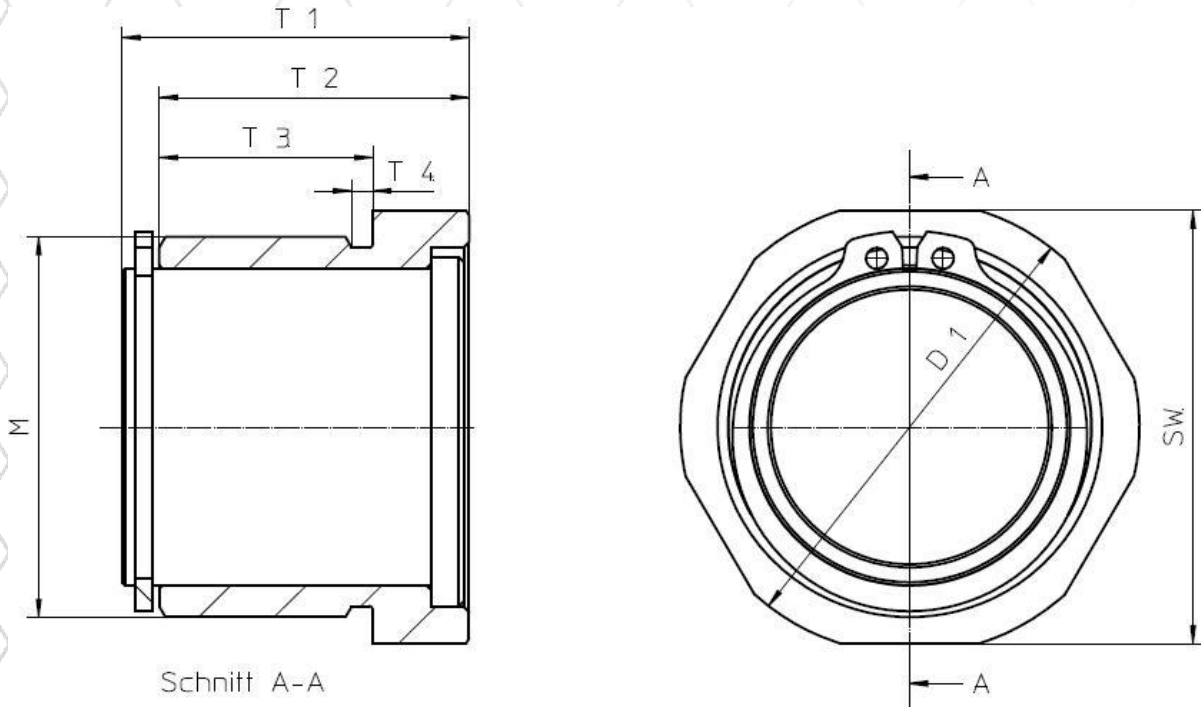
D1	T1	T2	T3	T4	T5 / SW	D2	D3
10-0,03/-0,1	25 +0,5	5	16,1 +0,1	1,1 H13	5,1 +0,2	9,6 h11	14
14-0,03/-0,1	25 +0,5	5	16,1 +0,1	1,1 H13	7,1 +0,2	13,4 h11	18
16-0,02/-0,05	25 +0,5	5	16,1 +0,1	1,1 H13	8,1 +0,2	15,2 h11	20
19-0,03/-0,1	31 +0,5	2-0,1	26,1 +0,3	1,3 H13	-	18 h11	21,8 0,1
22-0,03/-0,1	21 +0,5	2	16,1 +0,3	1,3 H13	11,1 +0,2	21 h12	25
22-0,03/-0,1	31 +0,5	2	26,1 +0,3	1,3 H13	11,1 +0,2	21 h12	25
30-0,03/-0,1	32 +0,5	3	26,1 +0,3	1,6 H13	16,1 -0,2	28,6 h12	34
32-0,03/-0,1	32 +0,5	3	26,1 +0,3	1,6 H13	17,1 -0,2	30,3 h12	36
34-0,02/-0,05	39 +0,5	7 0,1	27,3 0,1	1,85 H13	-	32 h12	40
36-0,03/-0,1	39 +0,5	7	28,2 +,03	1,85 H13	SW40	34 h12	42
40-0,03/-0,1	40 +0,5	7	28,2 +,03	1,85 H13	SW42	37,5 h12	44
50-0,03/-0,1	51+0,5	4,5	41,1+0,1	2,15H13	SW54	47H12	56



Ex approved line bushings

Please contact us if you need seal application. (Ex e)
 Technical changes are reserved. All illustrations are without obligation.

Dimension 2 path



M	T1	T2	T3	T4	SW	D1
M20x1,5	25	20,5 +0,5	14 0,1	2	SW24	27
M24x1,5	29,5	26 +0,3	21 -0,4	2	SW27	29
M25x1,5	31	27,5 +0,3	22,5 -0,4	2	SW27	29
M30x1,5	21	27,5 +0,3	20,5 -0,4	2	SW36	38
M32x1,5	31	27,5 +0,3	20,5 -0,4	2	SW36	38
M36x1,5	32,5	29 +0,3	21 -0,4	2	SW41	43
M38x1,5	32,5	29 +0,3	23,5 -0,4	2	SW41	43
M40x1,5	39	34 +0,3	23,5 -0,4	2	SW46	48
M42x1,5	39	34,5 +0,3	23,5 0,1	2	SW46	48
M48x1,5	38,5	33	22	2	SW55	58
M50x1,5	60	45,9	39,9 -0,4	2	SW55	58
M52x1,5	39	34,5 +0,1	23,5 -0,4	2	SW56	58
M72x1,5	39	46,5-0,1	34 0,2	2	SW75	79



You are welcome to visit us online at <https://www.quintex.eu/en/>

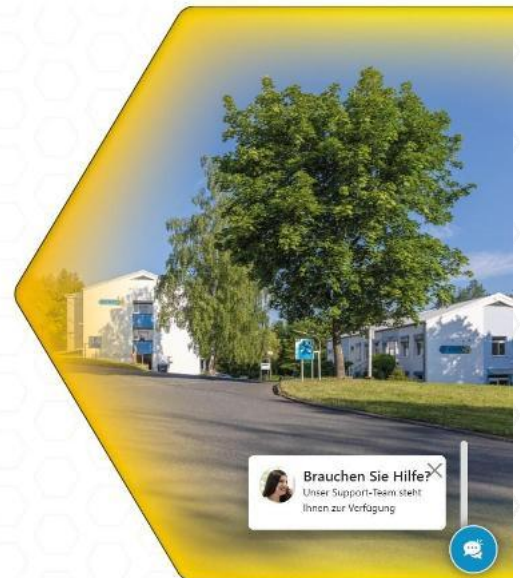
We are also happy to support you via our online support chat,
which is available on the homepage.

Welcome to Quintex!

Experts in explosion protection: Safety for people & systems

As a renowned manufacturer of high-quality components for potentially explosive atmospheres, line bushings, pressurized systems and trace heating, we are your reliable partner.

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Proviso

We reserve the right to make technical changes. Changes, errors, and literal errors do not justify any claim for damage compensation. For security components and systems, the relevant standards, as well as the relevant operating and assembly



ILLw... /Qx

Electrical heating tape for frost protection or temperature maintenance of instrument lines, pipework or vessels in safe or hazardous area



Self-Regulating Heating Tape Ex

85 C



- Automatically adjusts heat output in response to heated surface temperature.
- Can be cut to length with minimal wastage.
- Suitable for light industrial and commercial applications up to 85 C.
- Full range of terminations, controls. Accessories and approvals available.
- Will not overheat, even when overlapped.
- Available for 220...277V AC (110V...120V AC upon request)

Description

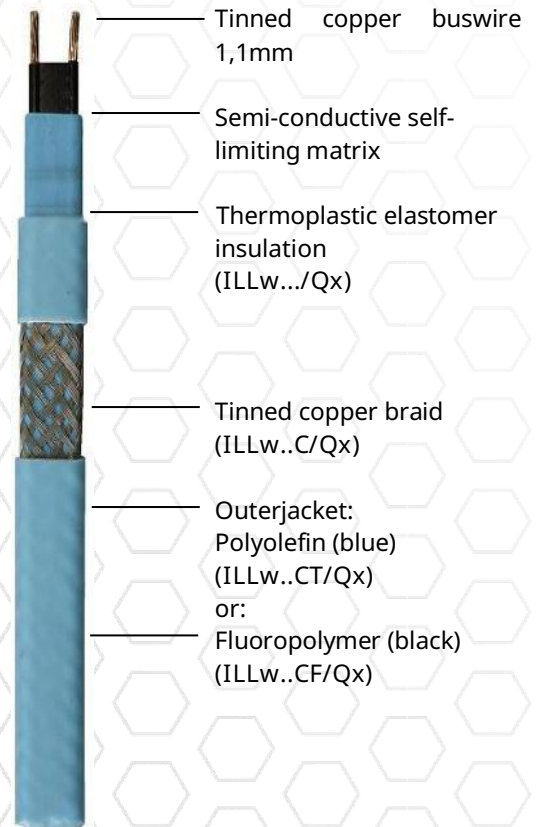
Quintherm ILLw is a light industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework or vessels in the construction and refrigeration industries up to and including 85 C which are not subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILLw is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

Its self-regulating characteristics improve safety and reliability. ILLw will not overheat or burnout, even when overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heated surface temperature.

Installation of Quintherm ILLw is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient kits.



Options

- ILLw.../Qx Base heating tape without any braiding or outerjacket. (only for non-Ex applications) *(available upon special request)*
- ILLw..C/Qx Base heating tape with tinned copper braid providing mechanical protection or where Traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces. *(available upon special request)*
- ILLw..CT/Qx Base heating tape with tinned copper braid and thermoplastic outerjacket for added mechanical and light chemical protection.
- ILLw..CF/Qx Base heating tape with tinned copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection.





ILLw... /Qx

Technical Data

Max. Exposure Temperature: 85 C
 Power On: 85 C
 Power Off: 85 C
 Min. Installation Temperature: -40 C
 Min. Operating Temperature: -40 C

Power Supply: 220-277VAC
 Cross-Section: 1.1mm²

Max. Resistance of Protective Braiding: ≤ 18.2 Ω/km
 Temperature Class: T6 up to ILLw31...
 T4 from ILLw40...

Weights and Dimensions:

Typ	Dimensions Nominal (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland size
ILLw..	10.75 x 3.75	5.6	25	M20
ILLw..C	11.75 x 4.75	9.5	30	M20
ILLw..CT	12.95 x 5.95	11.8	35	M20
ILLw..CF	12.95 x 5.95	12.6	35	M20

Approval

ATEX, IECEx

Ordering information

Example:

ILLw 40 2 C F/Qx

Quintherm tape family (ILLw)

Nominal output 40W/m at 10 C

Supply voltage 220-277V AC (2)

Supply voltage 110-120V AC (1)

Tinned copper braid (C)

Polyolefin outerjacket (T) (blue)

Fluoropolymer outerjacket (F) (black)

Further Information

Please consult the installation instructions.

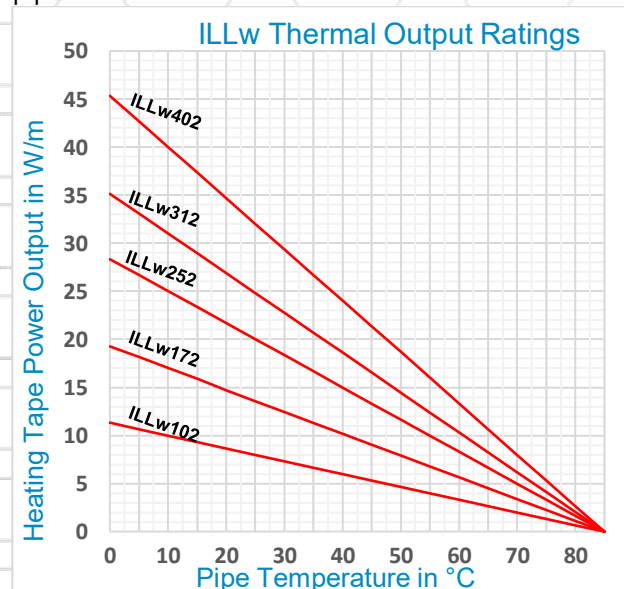
Max. Cct Length (m) vs. MCB Size (A)

Type	Start Temp.	230V AC			
		10A	16A	20A	25A
ILLw102..	+10 C	136	198	198	198
	0 C	122	188	188	188
	-20 C	108	174	176	176
	-40 C	96	154	166	166
ILLw172..	+10 C	92	148	152	152
	0 C	84	134	144	144
	-20 C	74	118	136	136
	-40 C	66	106	128	128
ILLw252..	+10 C	74	118	124	124
	0 C	68	108	120	120
	-20 C	60	94	112	112
	-40 C	52	84	106	106
ILLw312..	+10 C	58	92	112	112
	0 C	52	84	104	104
	-20 C	46	74	92	92
	-40 C	42	66	82	82
ILLw402..	+10 C	46	74	92	92
	0 C	42	66	84	84
	-20 C	36	58	74	74
	-40 C	32	52	66	66

For use with type "C" MCB in accordance with EN60898-2:2006

Thermal Ratings

Nominal power output at 230V AC when ILLw is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.



ILM(w)... /Qx

Electrical heating tape for frost protection or temperature maintenance of instrument line, pipework, or vessels in safe or hazardous area.



Self-Regulating Heating Tape Ex

100 C



- Automatically adjusts heat output in response to heated surface temperature.
- Can be cut to length with minimal wastage.
- Suitable for light industrial and commercial applications up to 100 C.
- Full range of terminations, controls, accessories and approvals available.
- Will not overheat, even when overlapped.
- Available for 220...277V AC (110V...120V AC upon request)

Description

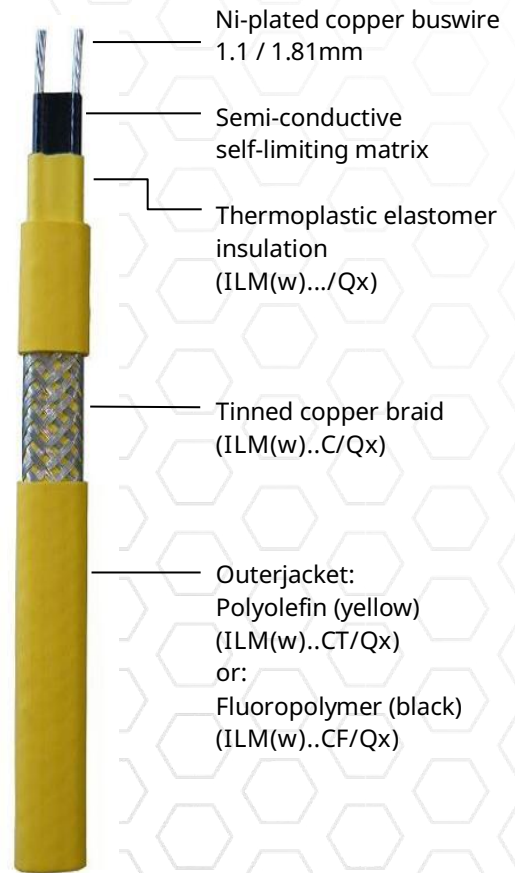
Quintherm ILM & ILMw is a medium industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework or vessels in the construction and heavy industries up to and including 100 C which are not subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILM & ILMw is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

Its self-regulating characteristics improve safety and reliability. ILM & ILMw will not overheat or burnout, even if overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heated surface temperature.

Installation of Quintherm ILM & ILMw is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient kits.



Options

(available upon special request)

- ILM(w).../Qx Base heating tape without any braiding or outerjacket. (only for non-Ex applications)
- ILM(w)..C/Qx Base heating tape with tinned copper braid providing mechanical protection or where Traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces.
- ILM(w)..CT/Qx Base heating tape with tinned copper braid and thermoplastic outerjacket for added mechanical and light chemical protection.
- ILM(w)..CF/Qx Base heating tape with tinned copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection.



ILM(w)... /Qx

Technical Data

Max. Exposure Temperature:
 Power On: 100 C
 Power Off: 100 C

 Min. Installation Temperature: -40 C
 Min. Operating Temperature: -40 C

 Power Supply: 220-277VAC
 Cross Section: 1.1/1.81mm²
 Max. Resistance of Protective Braiding: ≤ 18.2 Ω/km

 Temperature Class: T4 up to ILM31...
 T3 from ILMw45...

Weights and Dimensions:

Type	Dimensions Nominal (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland size
ILM..	10.5 x 3.75	5.7	25	M20
ILM..C	11.5 x 4.75	9.5	30	M20
ILM..CT	12.7 x 5.95	12.4	35	M20
ILM..CF	12.4 x 5.65	13.2	35	M20
ILMw..	13.2 x 4.3	8.7	25	M20
ILMw..C	14.2 x 5.3	12.9	30	M20
ILMw..CT	15.4 x 6.5	17.0	40	M25
ILMw..CF	15.1 x 6.2	17.7	40	M25

Approval

ATEX, IECEx

Ordering Information

Example: ILMw 45 2 C F/Qx
 Quintherm tape family (ILM(w)) |
 Nominal output 45W/m at 10 C |
 Supply voltage 220-277V AC (2) |
 Supply voltage 110-120V AC (1) |
 Tinned copper braid (C) |
 Polyolefin outerjacket (T) (yellow) |
 Fluoropolymer outerjacket (F) (black) |

Further Information

Please consult the installation instructions.

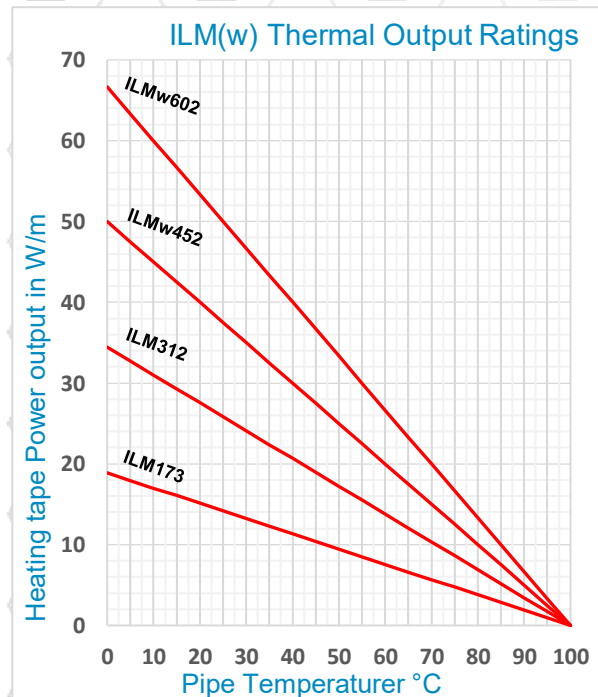
Max. Cct Length (m) vs. MCB Size (A)

Type	Start Temp.	230V AC			
		10A	16A	20A	25A
ILM172..	+10 C	76	120	148	148
	0 C	62	98	122	148
	-20 C	42	66	82	102
	-40 C	28	44	56	68
ILM312..	+10 C	52	82	104	110
	0 C	42	68	84	106
	-20 C	28	46	56	70
	-40 C	18	30	38	48
ILMw452..	+10 C	38	62	76	96
	0 C	32	50	64	80
	-20 C	22	34	42	52
	-40 C	14	22	28	34
ILMw602..	+10 C	35	52	66	82
	0 C	28	44	56	70
	-20 C	20	32	40	50
	-40 C	14	22	28	34

For use with type "C" CB in accordance with EN60898-2:2006

Thermal Ratings

Nominal power output at 230V AC, when ILM(w) is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.

ILH... /Qx



Electrical heating tape for frost protection or temperature maintenance of instrument lines, pipework or vessels in safe or hazardous area.

Self-Regulating Heating Tape

225 C



- Automatically adjusts heat output in response to heated surface temperature
- Can be cut to length with minimal wastage
- Suitable for high process temperature maintenance applications up to 200 C
- Full range of terminations, controls, accessories and approvals available
- Will not overheat, even when overlapped
- Available for 220...277V AC (110V...120V AC upon request)

Description

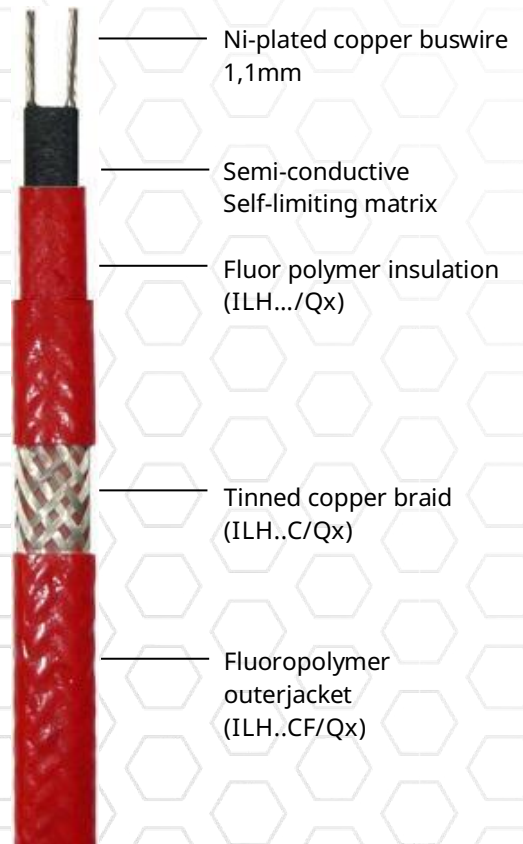
Quintherm ILH is a high temperature industrial/commercial grade self-regulating heating tape that can be used for high process temperature maintenance of pipework or vessels in the pharmaceutical & chemical or construction industries up to 225 C (switched off) which may be subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILH is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

Its self-regulating characteristics improve safety and reliability. ILH will not overheat or burnout, even if overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heated surface temperature. This ensures safety and reliability.

Installation of Quintherm ILH is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient termination kits.



Options

- ILH.../Qx Base heating tape without any braiding or outer jacket (only for non-Ex applications). *(available upon special request)*
- ILH..C/Qx Base heating tape with tinned copper braid providing mechanical protection or where Traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces. *(available upon special request)*
- ILH..CF/Qx Base heating tape with tinned copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection.



ILH... /Qx

Technical Data

Max. Exposure Temperature:	
Power On:	200 C
Power Off:	225 C
Min. Installation Temperature:	-40 C
Min. Operating Temperature:	-40 C
Power Supply:	220-277VAC
Cross Section:	1.1mm ²
Max. Resistance of Protective Braiding:	≤18.2 Ω/km
Temperature Class:	T3 up to ILH60... T2 from ILH75...

Weights and Dimensions:

Type	Dimensions nominal (mm)	Weight kg/100m	Min. bending radius (mm)	Gland size
ILH..	9.55 x 3.35	6.9	20	M20
ILH..C	10.55 x 4.35	10.4	30	M20
ILH..CF	12.35 x 6.15	13.4	35	M20

Approval

ATEX, IECEx

Ordering Information

Example:

Quintherm tape family (ILH)

Nom. output 30W/m at 10 C

Supply voltage 220-277V AC (2)

Supply voltage 110-120V AC (1)

Tinned copper braid (C)

Fluoropolymer outerjacket (F)

ILH 30 2 C F/Qx

Further Information

Please consult the installation instructions.

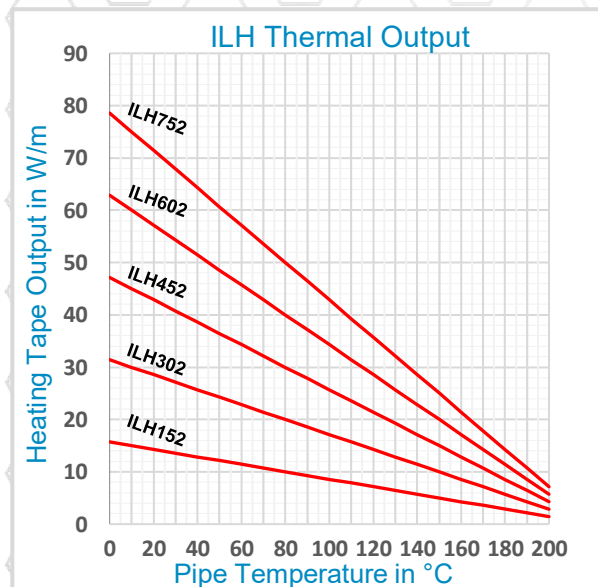
Max. Cct Length (m) vs. MCB size (A)

Type	Start temp.	230V AC			
		10A	16A	20A	32A
ILH152..	+10 C	76	122	154	172
	0 C	70	112	140	172
	-20 C	62	98	122	172
	-40 C	52	82	102	164
ILH302..	+10 C	52	82	102	122
	0 C	46	74	92	122
	-20 C	40	66	82	122
	-40 C	34	54	68	110
ILH452..	+10 C	38	62	76	100
	0 C	34	56	70	100
	-20 C	30	50	62	98
	-40 C	22	34	44	70
ILH602..	+10 C	30	50	62	86
	0 C	28	44	56	86
	-20 C	20	32	40	62
	-40 C	12	18	24	38
ILH752..	+10 C	24	40	50	76
	0 C	18	30	38	60
	-20 C	14	22	26	42
	-40 C	8	12	16	26

For use with type "C" MCB in accordance with EN60898-2:2006

Thermal Ratings

Nominal power output at 230V AC when ILH is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.

ILS... /Qx

Electrical heating tape for frost protection or temperature maintenance of instrument lines, pipework or vessels in safe or hazardous area.

Self-Regulating Heating Tape Ex

250 C



- Automatically adjusts heat output in response to heated surface temperature.
- Can be cut to length with minimal wastage.
- Suitable for high process temperature maintenance applications up to 220 C.
- Full range of terminations, controls, accessories and approvals available.
- Will not overheat, even when overlapped.
- Available for 220...277V AC. (110V...120V AC upon request)

Description

Quintherm ILS is a super high temperature industrial/commercial grade self-regulating heating tape that can be used for super high process temperature of pipework or vessels in the pharmaceutical & chemical or construction industries up to 250 C (switched off) likely to be subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILS is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

Its self-regulating characteristics improve safety and reliability. ILS will not overheat or burnout, even if overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heating surface temperature. This ensures safety and reliability.

Installation of ILS is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient kits.



Ni-plated copper buswire
1.1mm

Semi-conductive
Self-limiting matrix

Fluoropolymer insulation
(ILS.../Qx)

Ni-plated copper braid
(ILS..N/Qx)

Outerjacket:
Fluoropolymer
(ILS..NF/Qx)

* Color variants of the
Outer jacket: red or purple

Options

- | | |
|------------|--|
| ILS.../Qx | Base heating tape without any braiding or outerjacket (for non-Ex applications only) <i>(available upon special request)</i> |
| ILS..N/Qx | Base heating tape with nickel-plated copper braid providing mechanical protection or where traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces. <i>(available upon special request)</i> |
| ILS..NF/Qx | Base heating tape with nickel-plated copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection. |



ILS... /Qx

Technical Data

Max. Exposure Temperature:	
Power On:	220 C
Power Off:	250 C
Min. Installation Temperature:	-40 C
Min. Operating Temperature:	-40 C
Power Supply:	220-277VAC
Cross-Section:	1.1mm ²
Max. Resistance of Protective Braiding:	≤ 18.2 Ω/km
Temperature Class:	T3 up to ILS60... T2 from ILS75...

Weights and Dimensions:

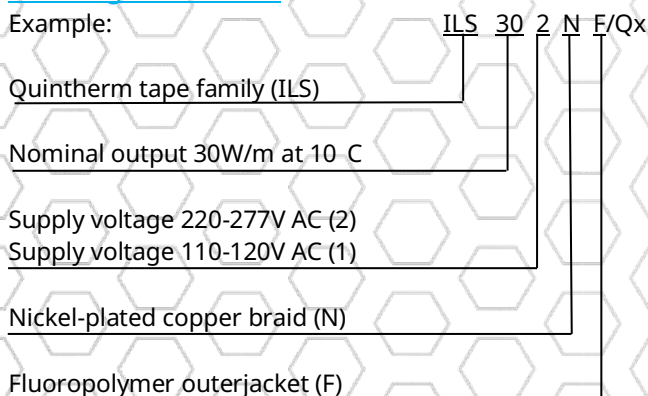
Type	Dimensions Nominal (mm)	Weight kg/100m	Min. bending radius (mm)	Gland size
ILS..	10.2 x 3.5	7.6	20	M20
ILS..N	11.2 x 4.5	11.3	30	M20
ILS..NF	12.5 x 5.8	14.6	35	M20
ILSw..	12.5 x 3.7	11.4	25	M25
ILSw..N	13.6 x 4.8	15.8	30	M25
ILSw..NF	14.8 x 6.0	19.5	35	M25

Approval

ATEX, IECEx

Ordering Information

Example:



Further Information

Please consult the installation instructions.

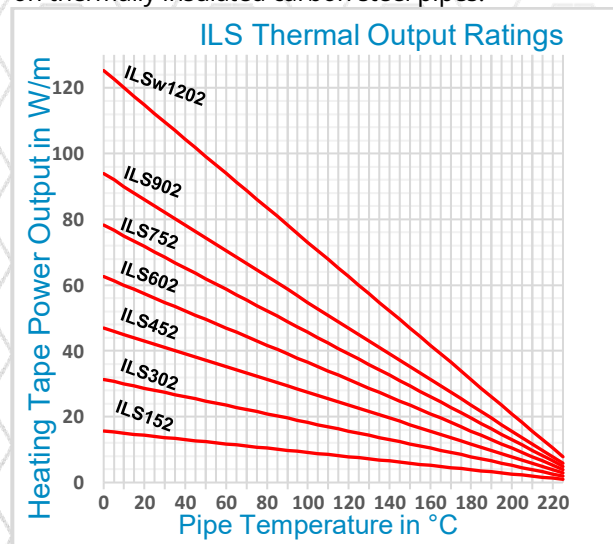
Max. Cct Length (m) vs. MCB Size (A)

Type	Start Temp.	230V AC			
		10A	16A	20A	25A
ILS152..	+10 C	76	122	154	154
	0 C	70	112	140	146
	-20 C	62	98	122	138
	-40 C	52	82	102	126
ILS302..	+10 C	52	82	102	108
	0 C	46	74	92	104
	-20 C	40	66	82	98
	-40 C	30	50	62	88
ILS452..	+10 C	38	62	76	88
	0 C	34	56	70	84
	-20 C	30	50	62	76
	-40 C	22	34	44	46
ILS602..	+10 C	30	50	62	76
	0 C	28	44	56	58
	-20 C	20	32	40	42
	-40 C	12	18	24	24
ILS752..	+10 C	22	34	44	46
	0 C	16	26	34	36
	-20 C	12	18	24	24
	-40 C	8	12	14	14
ILS902..	+10 C	14	24	28	46
	0 C	12	18	22	36
	-20 C	8	12	16	24
	-40 C	4	8	10	14
ILSw1202..	+10 C	14	22	28	46
	0 C	12	18	24	36
	-20 C	8	14	16	26
	-40 C	6	10	12	20

For use with type "C" MCB in accordance with EN60898-2:2006

Thermal Ratings

Nominal Power Output at 230V AC when ILS is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.

ILL..S../Qx

Electrical heating tape for frost protection or temperature maintenance of pipework and vessels in hazardous area.



Self-Limiting Heating Tape Ex

85 C



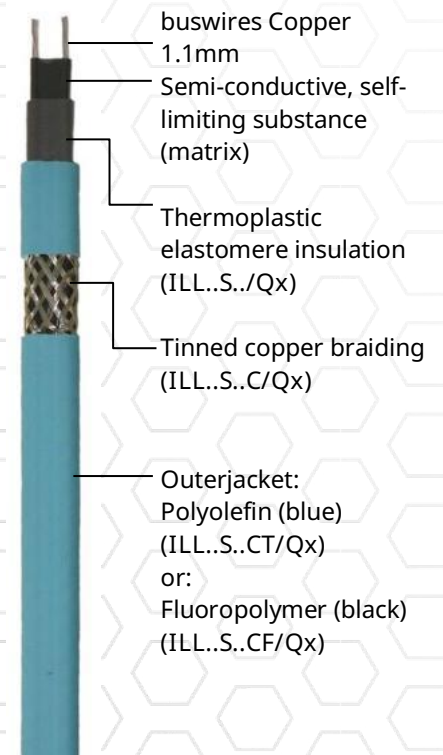
- Can be cut to length with minimal wastage
- Broad variety of termination sets, controllers and accessories available
- Will not overheat, even when overlapped
- Ideal for battery powered applications
- For 24V AC/DC (12V upon request)
- Automatically adjusts power output in response to pipe/ workpiece temperature

Description

Quintherm ILL..S.. is a light industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework and vessels in the construction and refrigeration industries. It can be cut-to-length at site and exact piping lengths can be matched without any complicated design considerations.

Its self-regulating characteristics improve safety and reliability. ILL..S.. will not overheat or burnout, even when overlapped upon itself. Its power output is self-regulated in response to the pipe temperature.

The installation of Quintherm ILL..S.. is quick and simple and requires no special skills or tools. Termination, splicing and power connection components are all provided in convenient kits.



Options

- ILL..S../Qx Basic heating tape without copper braiding and without outerjacket (only for non-Ex applications) *(no stock, only available upon request)*
- ILL..S..C/Qx Tinned copper braid provides effective grounding (where not already provided by e.g. pipework).
- ILL..S..CT/Qx Standard heating cable with tinned copper braid and polyolefin outerjacket for enhanced mechanical and chemical protection.
- ILL..S..CF/Qx Standard heating cable with tinned copper braid and fluoropolymer outerjacket to withstand corrosive chemicals or vapours.





Technical Data

Max. Permitted Temperature: 85 C
 Power On: 85 C
 Power Off: 85 C
 Min. Installation Temperature: -40 C
 Power Supply: 22-24V
 (11-12V) AC/DC
 Max. Resistance of Protective Braid: 18,2 Ohm/km
 Temperature Class: T6 12W/m,
 17W/m;
 T4 30W/m

Weights and Dimensions:

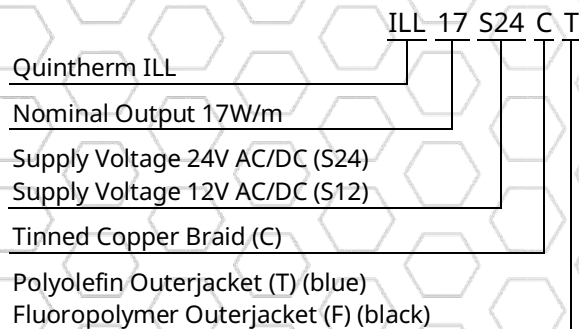
Type	Dimensions Nominal (mm)	Weight Kg/100m	Min. Bending Radius (mm)	Gland Size
ILL..S..	10.8 x 3.8	4.8	25	M20
ILL..S..C	11.8 x 4.8	9.5	30	M20
ILL..S..CT	13 x 6	11.8	35	M20
ILL..S..CF	12.7 x 5.7	12.6	35	M20

Approval

ATEX, IECEx

Ordering Information

Example:



Further Information

Please consult the installation instructions.

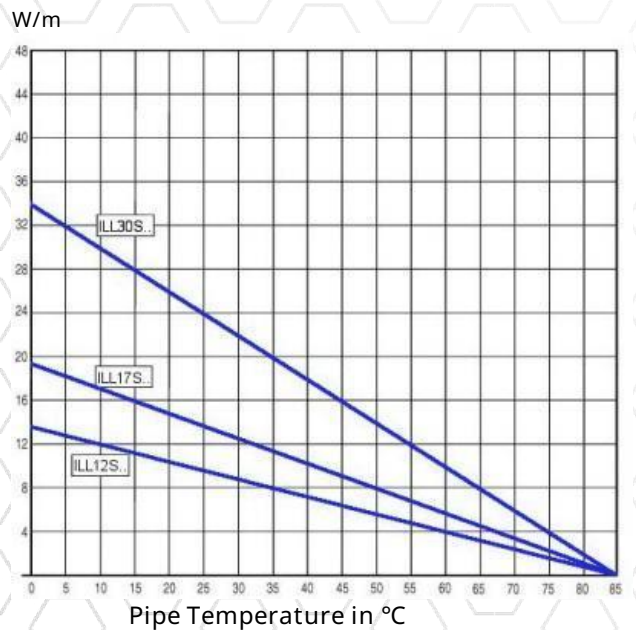
Max. Length (m) vs. Circuit Braker Si

Type	Start Temp.	6A	10A	16A	20A
ILL12S24..	5 C	8	14	18	
	0 C	8	12	18	
	-20 C	6	12	16	
	-40 C	6	10	14	
ILL17S24..	5 C	6	8	14	16
	0 C	4	8	12	14
	-20C	4	6	10	14
	-40 C	4	6	10	12
ILL30S24...	5 C	4	6	1	12
	0 C	4	6	8	10
	-20 C	2	4	8	10
	-40 C	2	4	6	8

For use with Type C circuit breakers to EN60898

Thermal Ratings

Nominal output at 12V or 24V when the heating tape is installed on insulated metal pipes.



Accessories

Quintex offers a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. Such items carry separate approvals from the heating tapes. When used in hazardous areas, only use approved components.



CLD.../Qx

Electrical heating tape for roof and gutter protection from snow and ice buildup.

Self-Regulating Heating Tape non-Ex

85 C



- High UV-resistance
- Will not overheat, even when overlapped
- Can be cut to length with minimal wastage
- Available for different voltages
- Temperature resistant up to 85 C
- Available with fluoro-polymer outerjacket

Description

Quintherm CLD is a special self-limiting heating cable for gutter heating and to prevent formation of snow slab on roofs areas.

Thanks to the UV resistance, these heating tapes are well suitable to the requirements of this particular application. By the temperature resistance of 85 C this heating tape resists even hot surfaces caused by sun exposure.

Its self-regulating characteristics improve safety and reliability. Quintherm CLD will not overheat or burnout, even when overlapped. The power output is self-regulated in response to the ambient temperature. On the characteristics can be seen that the heating tape can reach a power output of 36W/m in ice water to ensure the required defrost ability.



Possible Applications

- Gutter heating
- Roof valley heating
- Downspout heating
- Roof area heating
- Roof draining heating
- Facade heating



CLD.../Qx

Technical Data

Max. Allowed Temperature:
 Power On: 85 C
 Power Off: 85 C

Min. Installation Temperature: -40 C

Power Supply: 208 - 277V AC
 Cross Section: 1.1mm²
 Maximum Resistance of Protective Braid: ≤ 18.20hm/km

Type	Nominal Dimensions (mm)	Weight Kg/100m	Min. Bending Radius (mm)
CLD	10.5 x 5.9	10.0	35

Power Output

at 0 C

In air: 18W/m

In ice water: 36W/m

Cold Start Data

Values for 300 seconds

Starting Temperature	Current (A/m) at 230V AC
-15 C	0.295
0 C	0.259
+15 C	0.236

Ordering Information

Example:

Quintherm CLD

Nominal Output 18W/m at 0 C

Supply Voltage 208 – 277VAC

Tinned Copper Braid (C)

Outerjacket Polyolefin (T) or Fluoropolymer (F)

CLD18 2 CT/CF

Max. Length of Heating Circuit (m)

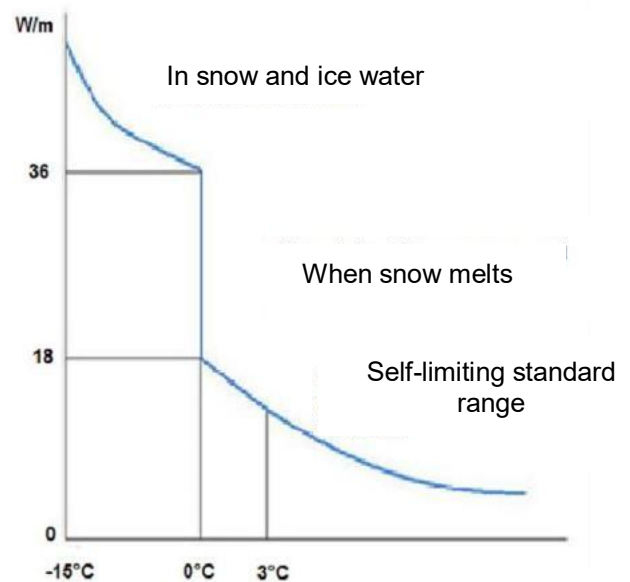
In relationship to used circuit breaker.

Start Temp.	10A	16A	20A	32A
+10 C	56	88	92	-
0 C	48	76	92	-
-15 C	36	58	74	92

Circuit breaker Type C to IEC 60898

Thermal Ratings

Nominal output at 230V AC



Power Output Multiplying Factors

Supply Voltage	Multiplying Factors
208VAC	0.93
220VAC	0.97
230VAC	1.00
240VAC	1.03
250VAC	1.06
277VAC	1.15

IAL1...



Termination and connection set for use in hazardous area.

Termination Set Ex



- For heating cables up to 150 / 200 C
- For 1 or 2 heating circuits
- No damage by sheet metal insulation
- No mounting plate necessary
- No mounting angle necessary

Description

The IAL1... Connection and Termination set consists of a direct entry sealed termination unit, a Junction Box and all necessary accessories.

With this assembly no mounting plate or mounting angle is needed.

Function

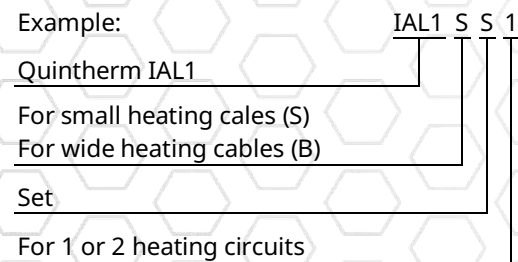
It has been designed specifically to reduce the risk of damage to heating tapes at termination points, thus avoiding the need to expose the heating tape as it emerges from the thermal insulation for connection into the junction box.



Technical Data

Dimensions:	
Enclosure (LxBxH in mm):	122x120x90
Mounting Unit (LxBxH in mm):	115x110x42
Max. Temperature:	
Enclosure:	Non-Ex: -55 C..+80 C
	T6: -55 C..+50 C
	T5: -55 C..+55 C
	T4: -55 C..+60 C
Max. Temp. Mounting Unit:	
Protection Class:	Non-Ex: 180 C
	IP66

Ordering Information



Small heating cables: ILL..S, ILLW, ILM, ILH, ILS

Wide heating cables: ILMw, ILSw

Approval

ATEX, IECEx

Marking

II 2G Ex eb IIC T6 GB

Further Information

Please consult the installation instructions!

Additional Products

Quintex offers a wide range of accessories like controllers, heating cables, termination kits, junction boxes etc.



IAL3SK1 (F)

Termination set in shrinking technology for use in non-hazardous area.



Termination Set non-Ex



- Compact design
- Temperature resistant up to 130 C (IAL3SK1 F 120 C)
- Quick and easy to assemble
- Applicable for different heating tapes CLD; ILL..S; ILLw; ILM, ILMw; ILH (up to 120 C);
- Different sets seperately available

Description

The IAL3SK1 is a termination set which is easy and fast to assemble.

The heating tape will be connected with the feeding cable by using a ceramic terminal block and afterwards overshrunk with a special shrink tubing.

Because of the illustrated instruction manual the installation is very easy and requires no special tools.



Technical Data

Max. Ambient Temperature:	+130 C
or	+120 C for IAL3SK1 F
Heating Tapes:	CLD, ILL..S, ILLw, ILM, ILMw, ILH
Cross Section:	up to 2.5mm ²
Length Connection Side:	120mm
Length End Seal:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL3SK1:	Power connection and end seal in one kit, for heating tapes with polyolefin outerjacket
IAL3SK1 F:	Power connection and end seal in one kit, for heating tapes with fluoropolymer outerjacket

Alternative Products

Part number:	
IAL5SS:	Non-Ex Termination set in screw technology

Additional Products

Part number:	
IAL3VK1:	Connection set (Heating tape - Heating tape)
IAL3AG1:	Power connection and end seal for direct entry in a special enclosure
AG 101:	Non-Ex glasfiber reinforced Polyester enclosure for 1-3 heating circuits



IAL3SAG1 (F)



Termination set in shrinking technology for use in non-hazardous area.

Termination Set non-Ex



- Compact design
- Direct entry in enclosure by using an M20 cable gland
- Quick and easy to assemble
- Different sets separately available
- Applicable for different heating tapes CLD; ILL..S; ILLw; ILM, ILMw; ILH (up to 120 C);

Description

The IAL3SK1 is a termination set which is easy and fast to assemble.

The bus wires of the heating cable will be inserted over an M20 cable gland directly into an enclosure.

Because of the illustrated instruction manual the installation is very easy and requires no special tools.



Technical Data

Max. Ambient Temperature:	+130 C
or	+120 C for IAL3SK1 F
Heating Tapes:	CLD, ILL..S, ILLw, ILM, ILMw, ILH
Cable Gland:	1x M20
Length End Seal:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL3SAG1:	supply & termination kit for direct entry into an enclosure, for heating tapes with polyolefin outerjacket
IAL3SAG1 F:	supply & termination kit for direct entry into an enclosure, for heating tapes with fluoropolymer outerjacket

Alternative Products

Part number:	
IAL5SS:	Non-Ex Termination set in screw technology

Additional Products

Part number:	
IAL3VK1:	Connection set (Heating tape – Heating tape)
IAL3SK1:	Power connection and end seal in one kit,
AG 101:	Non-Ex glasfiber reinforced Polyester enclosure for 1-3 heating circuits



IAL3Ex MK.. (F)

Termination set in shrinking technology for use in hazardous area.



Termination Set Ex



- For supply cables up to 2,5mm²
- Compact design
- Quick and easy to assemble
- Different versions available
- Applicable with the following heating tapes ILLw...CT/CF, ILM(w)...CT/CF

Description

The IAL3Ex MKSS contains a very flexible and space saving termination set and is used in hazardous area.

The heating cable is connected to a special feeding cable by using a ceramic terminal block and afterwards overshrunk with a special shrink tubing. The compact design enable to use this set in cramped space conditions.

The illustrated manual helps for an error-free installation.



Technical Data

Ambient Temperatures:	min. -20/-40 C max. +65 C/+85 C
For Heating Tapes:	ILLw, ILM(w)
Cross Section:	bis 2.5mm
Length Connection Side:	140mm
Length End Seal:	ca. 60mm

Approval

ATEX, IECEx, UKEX

Marking

- II 2G Ex mb IIC T6/T5/T4/T3 Gb
- II 2D Ex mb IIIC
T85 C/T100 C/T135 C/T200 C-Db

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	(for heating tapes with polyolefin outerjacket)
IAL3Ex MKSS:	Power connection and end seal
IAL3Ex MKSA:	Power connection only
IAL3Ex MKSE:	End seal only
IAL3Ex MKSV:	Connection heating tape - heating tape

Part number:	(for heating tapes with fluoropolymer outerjacket)
IAL3Ex MKSS F:	Power connection and end seal
IAL3Ex MKSA F:	Power connection only
IAL3Ex MKSE F:	End seal only
IAL3Ex MKSV F:	Connection heating tape - heating tape

Additional Products

Part number:	AG 101 Ex: Ex-junction box for up to 3 heating circuits (further versions, please see data sheet)
Radox-125 3G x 1.5:	Temperature resistant connection cable.

IAL3Ex MQ.. (F)

Termination set in shrinking technology for use in hazardous area.



Termination Set Ex



- For supply cables up to 1.5mm²
- Compact design
- Quick and easy to assemble
- Suitable for following heating tapes ILL(w)...CT/CF, ILM(w)...CT/CF
- Different versions available upon request

Description

The IAL3Ex MQSS contains a very flexible and space saving termination set and can be used in hazardous area.

The heating cable is connected to a special feeding cable by using isolated butt connectors and afterwards overshrunk with a special shrink tubing. The compact design enables use even under cramped space conditions.

The illustrated manual helps for an error-free installation. This set contains power connection and end seal.



Technical Data

Ambient Temperatures:	min. -20/-25 C max. +65 C/+85 C
For Heating Tapes:	ILLw, ILM(w)
Cross Section:	up to 1.5mm
Length Connection Side:	140mm
Length End Seal:	ca. 60mm

Approval

ATEX, IECEx, UKEX

Marking

- II 2G Ex mb IIC T6/T5/T4/T3 Gb
- II 2D Ex mb IIIC
T85 C/T100 C/T135 C/T200 C Db

Further Information

Please consult the installation instruction

Ordering Information

Part number: (for heating tapes with polyolefin outerjacket)	
IAL3Ex MQSS:	Power connection and end seal
IAL3Ex MQSA:	Power connection only
IAL3Ex MQSE:	End seal only
IAL3Ex MQSV:	Connection heating tape - heating tape
Part number: (for heating tapes with flourpolymer outerjacket)	
IAL3Ex MQSS F:	Power connection and end seal
IAL3Ex MQSA F:	Power connection only
IAL3Ex MQSE F:	End seal only
IAL3Ex MQSV F:	Connection heating tape - heating tape

Additional Products

Part number:	
AG 101 Ex:Ex-junction box for 1-3 heating circuits (for further information see datasheet)	
Radox-125 3G x 1,5:	Temperature resistant connection cable Ex

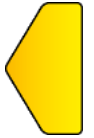


IAL3Ex HQ..

Termination set in shrink technology for application in hazardous area.



Termination Set Ex



- Compact design
- Temperature resistant up to 180 C
- Flexible usage
- Different sets separately available
- Applicable for: ILH...CF/Qx , ILS...NF/Qx

Description

The IAL3Ex HQSS contains a very flexible and space saving termination set and is used in hazardous areas.

The usage of a special temperature resistant FEP-Connection cable grants different application possibilities at very high temperatures.

This set is composed of connection and end seal parts. These are also separately available.



Technical Data

Temperature Resistant up to: 180 C
 For Heating Tapes: ILH, ILS...NF/Qx
 Length Connection Side: 140mm
 Length End Seal: ca. 55mm

Approval

ATEX, IECEx, UKEX

Marking

- II 2G Ex mb IIC T3 Gb
- II 2D Ex mb IIIC T200 C-Db

Further Information

Please consult the installation instructions!

Ordering Information

- Part number:
 IAL3Ex HQSS: Power connection and end seal.
 IAL3Ex HQSA: Power connection only
 IAL3Ex HQSE: End seal only
 IAL3Ex HQSV: Connection heating tape - heating tape

Alternative Products

- Part number:
 IAL4SS: Ex-termination set for direct entry

Additional Products

- Part number:
 AG 101 Ex: Ex-enclosure for up to 3 heating circuits (for different versions view enclosure datasheet)
 ALF 25: Heat resistant FEP-Supply cable 3Gx2.5mm



IAL4BS

Silicon termination set for use in hazardous area.



Termination Set Ex



- Compact design
- Temperature resistant up to 200 C
- Quick and easy to assemble
- Applicable with different types of heating tapes
- Further sets available

Description

The termination kits of the IAL4-series are silicon-made termination parts which contains power supply, end seal, a special cable gland and various accessories. These termination kits can be used to connect the heating circuit directly in an Exe approved junction box e.g. AG.. Ex or thermostat enclosure IR2M..Ex.

There is no separate supply cable needed. Because of the high temperature resistance up to 200 C, heating cable types ILL.. are suitable as well as mid- & high temperature heating cable types ILM, ILH and ILS.



Technical Data

Temperature Resistant:	-60°C...200 C
Material:	Silicone
Length Connection Sleeve:	125 mm
Length End Seal:	66 mm

Approval

ATEX, IECEX, UKEX

Marking:

- II 2G Ex 60079-30-1 eb IIC T6...T2 Gb
- II 2D Ex 60079-30-1 tb IIIC T85°C...T300 C Db

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL4BS:	Termination set suitable for ILLw..CT/CF, ILM..CT/CF, ILH..CF, ILL..S, ILS..NF
IALLBSW:	Termination set suitable for ILLw..CT/CF, ILM..CT/CF, ILH..CF, ILL..S, ILS..NF
IAL4BAW:	like IALBSW, but only power supply
IAL4BA:	like IAL4BS, but only power supply
IAL4BEW:	like IALBSW, but only end seal
IAL4BE:	like IAL4BS, but only end seal

Additional Products

AG 101 Ex:	Ex-Junction box for 1-3 heating circuits
IR2M0012Ex:	Ex-Capillary thermostat 0...+120°C for 1 heating circuit



IAL5SS / BS

Termination set in screwing technology for use in non-hazardous area.

- Compact design
- Temperature resistant up to 130 C
- Quick and easy to assemble

Description

The Quincon system contains a termination set which is easy and fast to assemble, based on approved screw technology. The compact dimension makes it possible, that this system can be installed even underneath the thermal insulation of the pipe.

The IAL5 product range contains several components such as power supply, end termination, branches and connections.

The installation is very easy to handle and requires no special tools.

Technical Data

Temperature Resistant:	-40°C...130 C
For Heating Tapes:	ILLw, ILL..S, ILM, ILMw, ILH, ILS
Cross Section:	up to 2.5mm ²
Length Power Connection:	125mm
Length End Termination:	58mm

Further Information

Please consult the installation instructions!



Termination Set non-Ex



- Suitable for different types of heating tapes ILL..S, ILLw, ILM, ILMw, ILH, ILS (up to 130 C)
- Power supply and end termination seperately available



Ordering Information

Part number:	
IAL5SS:	Power connection and end termination set
IAL5BS:	Like IAL5SS, but for ILMw
IAL5SA:	Power connection (single)
IAL5SE:	End termination (single)
IAL5ST:	T-Branch (supply cable + 2 heating cables or 3 heating cables)
IAL5SV:	Connection heating cable - heating cable, except for ILMw

Alternative Products

Part number:	
IAL3SK1:	Non-Ex termination set in shrinking technology

Further Products

Part number:	
AG 101:	Junction box made of glasfiber enhanced polyester for up to 3 heating circuits (different versions see datasheet)



IAL5SC

Termination kit with integrated bimetal-temperature switch for use in non-hazardous area.



Termination Kit non-Ex



- Compact design
- Operating temperature up to 125 C
- Quick and easy to assemble
- Suitable for wide range of heating cables
- End termination kit separately available

Description

The Quincon system contains a termination kit, based on approved screw technology, which is quick and easy to assemble. The integrated bimetal-temperature-switch eliminates the use of an additional thermostat. This compact design saves both space and time because no additional enclosure is required.

When the temperature is measured under the thermal insulation, it ensures a more economical solution with reduced operation, unlike conventional systems measuring the ambient temperature outside the thermal insulation.



Technical Data

Max. Operating Temperature:	125 C
Suitable Heating Cables:	ILLw, ILL..S, ILM (depending on operating temperature also ILH, ILS)
Terminal Capacity:	up to 2.5mm
Max. Current Rating:	16A at 230V AC
Dimensions (LxWxH in mm):	140 x 60 x 30
Protection Class:	IP68
Switching Points:	4 C On, 11 C Off (Further temperature ranges available upon request)

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL5SC:	Power termination with in-line bimetal temperature switch
IAL5SE:	End termination kit

Alternative Products

Part number:	
IAL8Ex HKSC:	Power termination with in-line bimetal temperature switch for hazardous area

Further Products

Article code:	
AG 101:	Fiber glass enhanced junction box for 1-3 heating circuits (for different versions please see junction box data sheet)



IAL8EX ...

Compact termination kit for self-limiting heating cables with terminal block for use in hazardous area.



Termination Kit Ex



- Temperature resistant up to 190 C
- Current rating 20A
- Suitable for use with many types of heating cables
- Version brass nickel plated
- Version in stainless steel upon request
- Compact design

Description

The IAL8Ex... system is a very easy and quick to install connection kit for connecting power supply cable as well as heating cable, end termination, based on an approved screw connection.

Due to the very compact design, it is possible to mount the parts directly on the surface of the pipe, tank, or enclosure underneath the insulation.

There is no blow-heater or special skills required for assembling. Further on branches can easily be realized with the T-branch.



Technical Data

Temperature Range:	-60...190 C
Heating Cables:	ILLw, ILM, ILH, ILS, IPH, IPL
Clamping Range Supply:	7.0 - 10.5mm
Clamping Range Heating Cable:	4.7x10 - 6.5x13mm
Max. Current Rating:	20A AC
Supply Voltage:	12...400V AC
Terminal Diameter:	2.5mm
Protection Class:	IP65
Length Supply/ End:	110 mm / 70 mm
T-Branch (L/W)	125 mm / 60 mm
Diameter:	25mm (SW24)
Weight Supply/ End/ T:	168g / 116g / 290g
Material:	Brass nickel Plated

Approval

ATEX, IECEX, UKEX

Marking

- II 2G Ex eb IIC T6/T5/T4/T3/T2 Gb
- II 2D Ex tb IIIC T135 C Db IP65

Ordering Information

Part number:

Example: IAL8EX H K S S

Quintherm IAL8EX

Operation temperature range: -60..+190 C

Terminal block (K)

Narrow heating tapes (see clamping range)

Connection and termination set (S)

Connection set, supply heating cable (A)

End-Termination set (E)

Connection set, heating cable – heating cable (V)

T-branch (T)

Integrated frost protection thermostat (C)

Alternative Products

IAL3Ex....: Connection and termination kit for self-limiting heating cables in heat shrink technology

Further Products

ILLw, ILM, ILH; ILS, self-limiting parallel heating cables

AG 101Ex : Ex-junction box (different types)

Further Information

Please consult the installation instructions!



IAL8wEX...



Compact termination kit for self-limiting heating cables with terminal block for use in hazardous area.

Termination Kit Ex



- Temperature resistant up to 190 C
- Current rating 20A
- Suitable for use with many types of heating cables
- Version brass nickel plated
- Version in stainless steel upon request
- Compact design

Description

The IAL8wEX... system is a very easy and quick to install connection kit for connecting power supply cable as well as heating cable, end termination, based on an approved screw connection.

Due to the very compact design, it is possible to mount the parts directly on the surface of the pipe, tank, or enclosure underneath the insulation.

There is no blow-heater or special skills required for assembling.



Technical Data

Temperature Range:	-60...190°C
Heating Cables:	ILMw, ILSw, other heating tapes (see clamping range)
Clamping Range Supply:	7.0 - 10.5mm
Clamping Range Heating Cable:	6.5x13 - 7.5x15.5mm
Max. Current Rating:	20A AC
Supply Voltage:	12...400V AC
Terminal Diameter:	2.5mm
Protection Class:	IP65
Length:	110 mm
Diameter:	31mm (SW29)
Weight Supply/ End/ T:	202g
Material:	Brass nickel Plated

Further Information

Please consult the installation instructions!

Ordering Information

Part number:

Example:	IAL8wEX H K W S
Quintherm IAL8wEX	
Operation temperature range: -60...+190 C	
Terminal block (K)	
Wide heating tapes (see clamping range)	
Connection and termination set (S)	
Connection set, supply - heating cable (A)	
End-Termination set (E)	
Connection set, heating cable - heating cable (V)	

Approval

ATEX, IECEX, UKEX

Marking

- II 2G Ex eb IIC T6/T5/T4/T3/T2 Gb
- II 2D Ex tb IIIC T135 C Db IP65

Alternative Products

IAL3Ex....: Connection and termination kit for self-limiting heating cables in heat shrink technology

Further Products

- ILMw: self-limiting parallel heating
- IAL8EX... : fast connection kit
- AG 101Ex : Ex-junction box (different types)



IAL8EX HKSC



Termination kit for self-limiting heating cables with integrated ambient thermostat type IRM2Ex; for use in non-hazardous and hazardous area.

Termination Kit Ex



- High temperature resistance
- Switching capacity up to 16A
- Suitable for use with many types of heating cables
- Version brass nickel plated
- Compact design
- Thermostat already integrated

Description

The IAL8EX< system is a very easy and fast to install connection kit, based on an approved screw technology. Our version with integrated ambient thermostat makes it possible to realize power supply, branch of heating cable and thermostat – all in one device!



Direct switching capacity is up to 16A.
Typical applications are simple frost protection applications on pipes, tanks, and heat jackets.

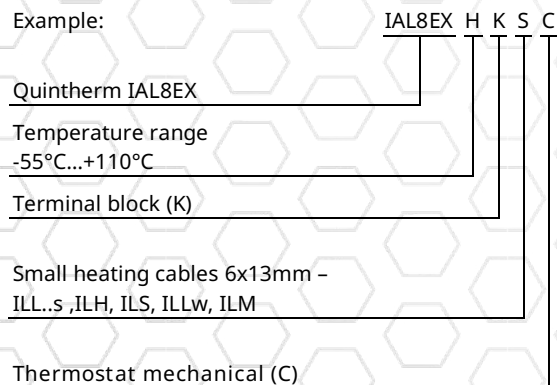
Technical Data

Temperature Range:	-55...110 C
Cable Clamping Range:	7,0 - 10,5mm
Cable cap. Heating cable:	Type S: 6x13mm
Max. Current Rating:	16A AC
Switching Points:	4 C On / 11 C Off
Supply Voltage:	250V AC
Terminal Diameter:	2,5mm
Protection Class:	IP65
Total Length/ Width	125 mm / 60 mm
Diameter:	25mm (SW24)
Weight:	ca. 350g
Material:	Brass Nickel Plated

Ordering Information

Part number:

Example:



Approval

ATEX, IECEx, UKEX

Marking

- II 2G Ex eb IIC T6/T5/T4/T3 Gb
- II 2D Ex tb IIIC T195 C Db IP65
- II 2G Ex mb IIC T6/T5/T4/T3 Gb

Further Information

Please consult the installation instructions.

Alternative Products

- IRM2Ex Mechanical thermostat in M20 cable gland
- IRM2Ex/AG Mechanical thermostat mounted in Enclosure

Further Products

ILLw, ILM, ILH, ILS self-limiting parallel heating cables.



IPL.../Qx

Electrical heating tape for temperature maintenance or frost protection of pipework or vessels in non-hazardous area.



Constant Wattage Heating Tape non-Ex

200 C



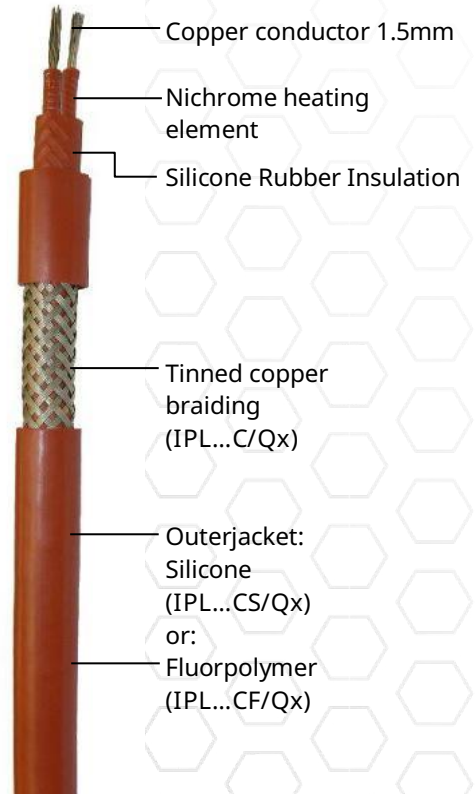
- Temperature resistant up to 200 C
- Can be cut to length without wastage
- Outputs available up to 50W/m
- High flexibility
- Available for 208 - 277V AC (110 - 120V AC upon request)

Description

IPL is a constant wattage heating tape that can be used for freeze protection or maintenance of process temperatures in pipework and vessels. It can be cut-to-length at site and can replace mineral insulated (MI) cables for applications where the cut-to-length feature or field fabricated heating cable is preferred.

IPL is approved for use in non-hazardous areas. Because of the special construction with "heating zones" no additional cold lead is needed. From cut point to the next heating wire bonding point the heating cable remains cold and serves as cold lead.

The installation of IPS heating tape is quick and simple and requires few special skills or tools. Termination and power connection components are all provided in convenient kits.



Options

- IPL...C With tinned copper braid for mechanical protection and an effective grounding.
- IPL...CS Silicone outerjacket over the braiding provides additional protection.
- IPL...CF Fluoropolymer outerjacket provides protection from aggressive chemicals and vapours.



IPL.../Qx

Technical Data

Max. Temperature:	
Power On:	see table
Power Off:	200 C
Minimal Installation Temperature:	-40 C
Cross Section:	1.5mm ²
Power Supply:	208 - 277V AC
Max. Resistance of Protective Braid:	18,2 Ohm/km

Weights and Dimensions:

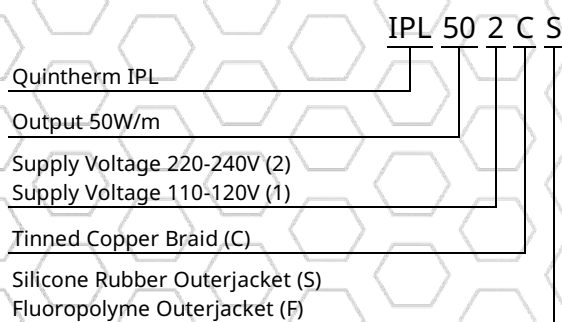
Type	Nom. Dimensions (mm)	Weight Kg/100m	Min. Bending (mm)	Cable Glands
IPL...C	9.4 x 6.2	11.7	12	M16
IPL...CS	11.4 x 8.2	14.3	15	M20
IPL...CF	10.2 x 7.0	14.3	25	M20

Structure

Heating Element:	Nickel-Chromium
Power Conductors:	Tin Plated Copper 1.5mm
Conductor Insulation:	Silicone Rubber
Primary Insulation:	Silicone Rubber
Braiding:	Tinned Copper
Outerjacket:	Silicone Rubber or Fluoropolymer

Ordering Information

Example:



Further Information

Please consult the installation instructions.

Maximum Pipe/ Workpiece Temperature

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials or the Temperature Classification (if installed in a hazardous area). This is ensured by limiting the pipe or workpiece temperature to a safe level either by design calculation (a Stabilised Design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels:

Output (W/m)	Maximum Pipe Temperature (C)		
	IPL...C	IPL...CS	IPL...CF
6.5	190	190	190
13	180	185	185
23	150	160	160
33	110	115	115
50	75	80	75

Maximum Circuit Length

Output (W/m)	Max. Circuit Length		Zone Length	
	115V	230V	115V	230V
6.5	82m	164m	1000mm	1500mm
13	58m	116m	800mm	1100mm
23	44m	87m	900mm	1000mm
33	36m	73m	750mm	1000mm
50	30m	59m	1000mm	1000mm

Power Conversion Factors

115V Heating Tape		230V Heating Tape	
277V	Factor 5.80	277V	Factor 1.45
230V	Factor 4.00	240V	Factor 1.09
208V	Factor 3.27	220V	Factor 0.91
120V	Factor 1.09	208V	Factor 0.82
110V	Factor 0.91	115V	Factor 0.25

Accessories

Quintex offers a complete line of accessories, temperature controller, connection sets as well as different enclosures. These products are recommended for a failure free operation.

IPH.../Qx

Electrical heating tape for process temperature maintenance of pipework and vessels in hazardous area.



Constant Wattage Heating Tape Ex

285 C



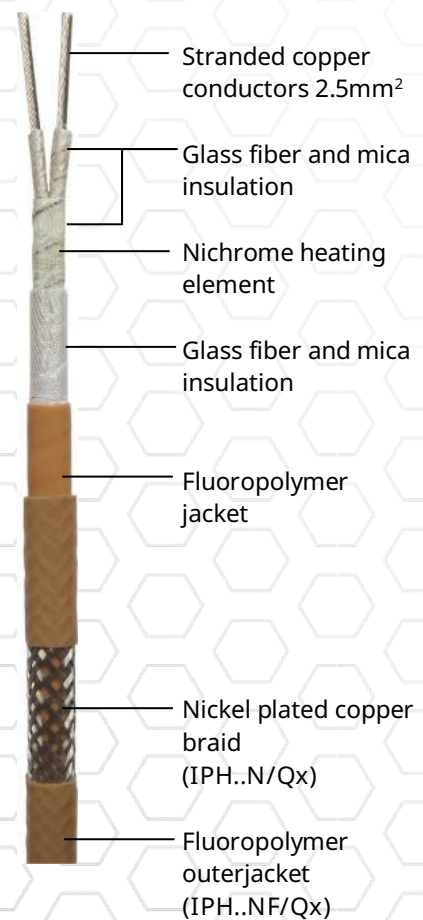
- Temperature resistant up to 285 C
- Can be cut to length without wastage
- Outputs available up to 70W/m
- Full range of controls, accessories and approvals
- Available in 220..240V AC (110..120V AC on request)

Description

Quintherm IPH is a constant wattage heating tape that can be used for freeze protection or maintenance of process temperatures in pipework and vessels. It can be cut-to-length at site and can replace mineral insulated cables for applications where the cut-to-length feature or field fabricated heating cable is preferred. Quintherm IPH is approved for use in hazardous, safe and corrosive environments.

Because of the special construction with heating zones no additional cold lead is required. From cut point to the next heating wire bonding point the heating cable remains cold and serves as a cold lead.

The installation of IPH heating tape is quick and simple and requires few special skills and tools. Termination and power connection components are provided in convenient kits.



Options

- IPH..N A nickel plated copper braid provides mechanical protection and (where needed) an effective grounding.
- IPH..NF Fluoropolymer outerjacket over nickel plated copper braid provides protection against corrosive chemicals or vapours.



Technical Data

Max. Temperature: see table
 Power On: 285 C
 Power Off: 285 C
 Min. Installation Temperature: -40 C

 Power Supply: 220-240V AC
 Cross Section: 2.5mm²
 Temperature Class: see table right side

Weight and Dimensions:

Type	Nominal Dimensions (mm)	Weight kg/100m	Min. Bending Radius (mm)	Gland Size
IPH..	8,8 x 6,0	12	25	M20
IPH..N	10,23 x 7,1	15	30	M20
IPH..NF	11,13 x 8,0	17	35	M20

Approvals

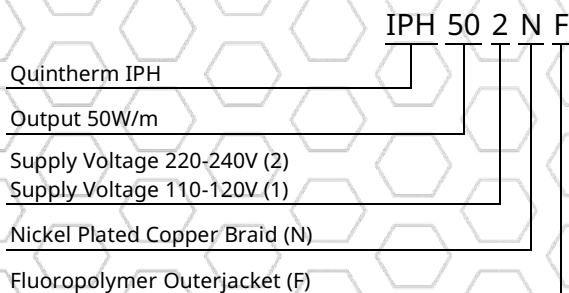
ATEX, IECEX

Structure

Heating Element: Nickel - Chromium
 Power Conductor: Nickel Plated Copper 2.5mm
 Conductor Insulation: Glass Fiber - Mica
 Primary Insulation: Fluoropolymer
 Braid: Nickel Plated Copper
 Outerjacket: Fluoropolymer

Ordering Information

Example:



Further Information

Please consult the installation instructions for IAPH4BS.

Maximum Pipe/ Workpiece Temperature

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials or the Temperature Classification (if installed in a hazardous area). This is ensured by limiting the pipe or workpiece temperature to a safe level either by design calculation (a Stabilised Design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels:

Type	Output (W/m)	T6	T5	T4	T3	T2	T1	Non-Ex (C)
IPH...	10	Not Approved						275
	30							239
	50							192
	70							133
IPH..N	10	43	60	100	181	275	275	275
	30	-	-	25	114	234	234	234
	50	-	-	-	49	186	186	186
	70	-	-	-	-	125	125	125
IPH..NF	10	39	59	106	186	275	275	275
	30	-	-	20	133	243	243	243
	50	-	-	-	64	201	201	201
	70	-	-	-	-	147	147	147

Maximum Circuit Length

Output (W/m)	Max. Circuit Length		Zone Length	
	115V	230V	115V	230V
10	79m	152m	1.000mm	
30	46m	88m		
50	35m	68m		
70	30m	56m		

Power Conversion Factors

115V Heating Tape		230V Heating Tape	
277V	Factor 5.80	277V	Factor 1.45
230V	Factor 4.00	240V	Factor 1.09
208V	Factor 3.27	220V	Factor 0.91
120V	Factor 1.09	208V	Factor 0.82
110V	Factor 0.91	115V	Factor 0.25

Accessories

Quintex offers a complete line of accessories, temperature controllers, connection kits as well as junction boxes. These products are recommended for a failure free operation.

IPS.../Qx

Electrical heating tape for process temperature maintenance of pipework and vessels in hazardous area.



Constant Wattage Heating Tape Ex

500 C



- Temperature resistant up to 500 C
- Can be cut to length without wastage
- Outputs available up to 150W/m
- Full range of controls, accessories and approvals
- Available for 220..277V AC
- 110..120V AC upon request

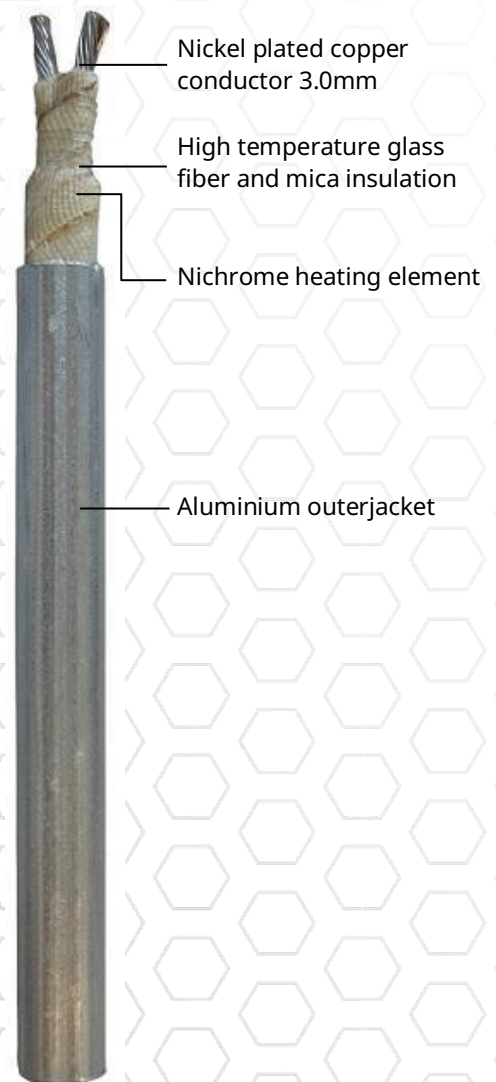
Description

IPS is a constant wattage heating tape that can be used for freeze protection or maintenance of process temperatures in pipework and vessels.

It can be cut-to-length at site and can replace mineral insulated (MI) cables for applications where the cut-to-length feature or field fabricated heating cable is preferred.

IPS is approved for use in non-hazardous, and hazardous areas to world-wide standards. Because of the special construction with "heating zones" no additional cold lead is needed. From cut point to the next heating wire bonding point the heating cable remains cold and serves as cold lead. The installation of IPS heating tape is quick and simple and requires few special skills or tools. Termination and power connection components are all provided in convenient kits.

IPS is jacketted in a continuous aluminium extrusion for maximum mechanical strength, even after severe process upsets.





IPS.../Qx

Technical Data

Temperature Resistant:	
Continuous:	500 C
Min. Installation Temperature:	-40 C
Min. Operating Temperature:	-65 C
Power Supply:	12-277V AC
Cross Section:	3.0mm ²
Temperature Class:	T1 – T5
Dimensions Nominal (in mm):	10.0 x 7.0
Weight (Kg/100m):	16.5
Min. Bending Radius (in mm):	25

Approval

ATEX, IECEX

Structure

Heating Element:	Nickel-Chromium
Power Conductor:	Nickel Plated Copper 3mm ²
Conductor Insulation:	Glass Fiber/ Mica
Primary Insulation:	Glass Fiber/ Mica
Outerjacket:	Aluminium

Ordering Information

Example:

Quintherm IPS

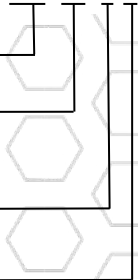
Output 50W/m

Supply Voltage 220-277V (2)

Supply Voltage 110-120V (1)

Aluminium Outerjacket

IPS 50 2 A



Accessories

Quintex offers a complete range of accessories including termination/ splice kits, end seals, junction boxes and controls. When used in hazardous areas, only use approved components.

Maximum Pipe/ Workpiece Temperature

The surface of the heater must not exceed the maximum withstand temperature of its constructional materials or the Temperature Classification (if installed in a hazardous area). This is ensured by limiting the pipe or workpiece temperature to a safe level either by design calculation (a Stabilised Design) or by means of temperature controls.

For worst case conditions, the temperature of steel pipes should be limited to the following levels:

Type	T6	T5	T4	T3	T2	T1	Non- Ex (C)
IPS152A	-	36	71	160	289	350	350
IPS302A	-	11	28	100	246	323	323
IPS502A	-	-	-	39	178	276	276
IPS1002A	-	-	-	-	48	140	140
IPS1502A	-	-	-	-	-	36	36

Maximum Circuit Length

Output (W/m)	Max. Circuit Length		Zone Length	
	115V	230V	115V	230V
15	59m	118m	1.000mm	
30	42m	83m		
50	32m	64m		
100	23m	46m		
150	19m	37m		

Power Conversion Factors

115V Heating Tape		230V Heating Tape	
125V	Factor 1.18	277V	Factor 1.45
120V	Factor 1.09	240V	Factor 1.09
110V	Factor 0.91	220V	Factor 0.91
100V	Factor 0.76	208V	Factor 0.82



IAP_4B_

Silicon termination set for use in hazardous area.



Termination Set Ex



- Compact design
- Temperature resistant up to 200 C
- Quick and easy assembled
- Applicable with different types of constant wattage heating tapes
- For various constant-wattage heating cables

Description

The termination kits of the IAP_4-series are silicon- made termination parts which contain power supply, end seal, a special cable gland and various accessories. These termination kits can be used to connect the heating circuit directly in an Ex e approved junction box e.g. AG...Ex or thermostat enclosure IR2M...Ex.

The high temperature resistance up to 200 C allows the connection technology to be used for all constant-heating heating cables of the types IPH and IPS as well as IPL (non Ex).



Technical Data

Temperature Resistant:	-60°C...200 C
Material:	Silicone
Length Connection Sleeve:	125 mm
Length End Seal:	66 mm

Approval

ATEX, IECEx, UKEX

Further Information

Please consult the installation instructions!

Ordering Information

IAPH4BS:	Termination set for IPH	
IAPH4BA:	Connection set for IPH	
IAPH4BE:	End Seal for IPH	
IAPS4BS:	Termination set for IPS	
IAPS4BA:	Connection set for IPS	
IAPS4BE:	End Seal for IPS	
IAPL4BS:	Termination set for IPL	} non Ex
IAPL4BA:	Connection set for IPL	
IAPL4BE:	End Seal for IPL	

Connection set also available with brass cable gland

Additional Products

AG 101 Ex:	Ex-Junction box for 1-3 heating circuits
IR2M0012Ex:	Ex-Capillary thermostat 0...+120°C for 1 heating circuit



Questionnaire for heating systems



General Information:	
Company:	Contact person:
Street:	Zip Code/City:
Phone:	Fax Number:
Email:	Mobile:

Pipe Information:	
Length[m]	Nominal Diameter[DN,mm]:
Material	Wall thickness[mm]:
Internal pipe coating	
No. Flanges	No. of supports
No. of valves	No. of pumpes
Insulation material	Insultaion thickness[mm]
Therm. Conduct [W/m K]:	

Tank Information:	
Diameter[m]	Height/length[m]
Material	Wall thickness[mm]
Tank position: Vertikal <input type="radio"/> Horizontal <input type="radio"/>	
Roof: flat <input type="radio"/> dome <input type="radio"/>	Bottom flat <input type="radio"/> dome <input type="radio"/>
If conical: Cone height[m]	
Min. product content[m]	Max. product content [m]
Insulation material[m]	Insulation thickness [mm]
Therm. Conduct [W/m K]:	

Temperature:	
Maintain temperature [C]	Max. ambient temperature[C]
Min. ambient temperature[C]	Wind velocity[m/s]
Max. allowed temperature[[C]	Max. allowed temperature tank[C]
Max. allowed Product temperature[[C]	Max. operatiorn temp.[C]

Additional Data:	
Elektrical Data	Remarks:
Voltage [V] Frequency[Hz]	
Type of electrical net	
Ex-Area:	
Gas <input type="radio"/> Dust <input type="radio"/>	
Temperature class:	



ISK...7PFF-H/L

Electrical heating cable for frost protection or temperature maintenance of pipework and vessels in hazardous area.



Flexible Series Resistance Heating Tape Ex



- Quick and easy to assemble
- Constant power output
- Highly flexible and chemical resistant
- Temperature resistant up to 260 C (suitable for high pressure steam cleaning)
- Long heating circuits possible (>250m)

Description

Quintherm ISK single core heating cable is easy to use and install due to its light and flexible construction. It is rugged and safe for use in most hazardous area industrial applications. The materials

of the heating cable are highly resistant to chemical attack and mechanical abuse.

The specific resistance of ISK cables allow the power output to increase or decrease by shortening or lengthening the heating cable respectively.

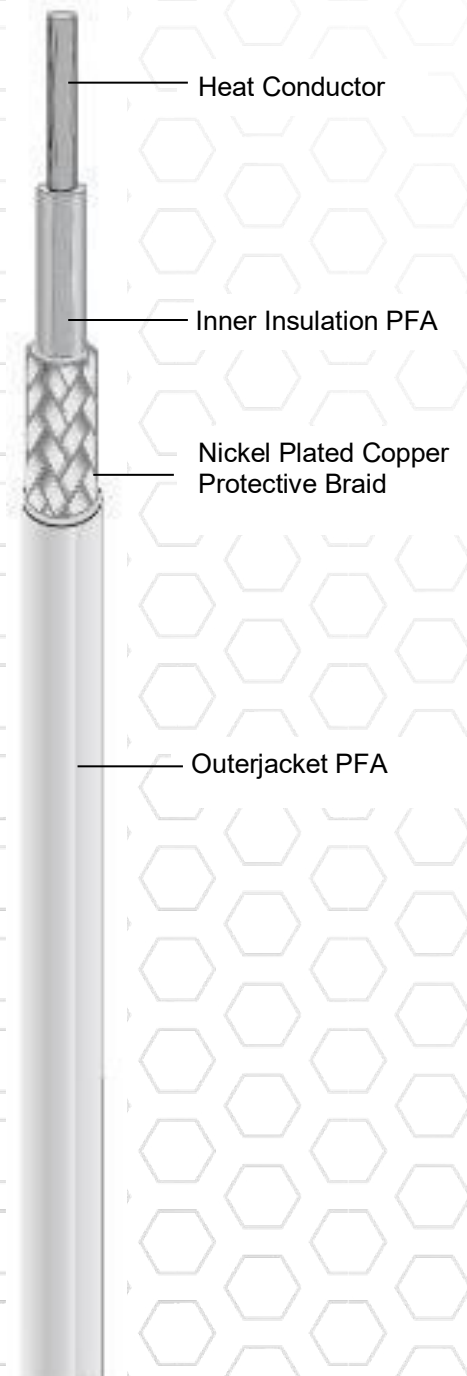
The high temperature resistance up to 260 C allows for use even under difficult conditions.

Technical Data

Nominal Voltage:	450/750V AC
Tested Voltage:	2.5kV
Temperature Resistant:	-60 C...+260 C
Resistance of Braiding:	<18.2 Ohm/km
Min. Inst. Temperature:	-60 C
Min. Bending Radius:	25mm for >8mm 15mm for ≤8mm
Max. Mechanical Stress:	4J tested ≥ 7.2 Ohm/km 7J tested < 4.4 Ohm/km

Approval

ATEX, IECEx



ISK...7PFF-H/L



Resistance Chart ISK

Part Number	Ohm/km at 20°C	Outer Diameter (mm)
ISK 1R08 7PFF-H	1.08	10.20
ISK 1R71 7PFF-H	1.71	8.60
ISK 2R90 7PFF-H	2.90	7.60
ISK 4R40 7PFF-H	4.40	6.70
ISK 7R20 7PFF-H*	7.20	4.94
ISK 0010 7PFF-L	10.00	4.75
ISK 11R7 7PFF-L	11.70	4.60
ISK 0015 7PFF-L	15.00	4.42
ISK 17R8 7PFF-L	17.80	4.30
ISK 0025 7PFF-L	25.00	4.27
ISK 31R5 7PFF-L	31.50	4.59
ISK 0050 7PFF-L*	50.00	4.27
ISK 0065 7PFF-L	65.00	4.11
ISK 0080 7PFF-L	80.00	4.01
ISK 0100 7PFF-L*	100.00	4.56
ISK 0150 7PFF-L	150.00	4.27
ISK 0180 7PFF-L	180.00	3.96
ISK 0200 7PFF-L	200.00	4.10
ISK 0230 7PFF-L	230.00	4.10
ISK 0320 7PFF-L*	320.00	4.23
ISK 0360 7PFF-L	360.00	3.82
ISK 0380 7PFF-L	380.00	4.13
ISK 0450 7PFF-L	450.00	4.10
ISK 0480 7PFF-L*	480.00	4.01
ISK 0600 7PFF-L	600.00	3.90
ISK 0650 7PFF-L	650.00	3.87
ISK 0700 7PFF-L	700.00	3.83
ISK 0810 7PFF-L	810.00	3.99
ISK 1000 7PFF-L*	1000.00	3.89
ISK 1440 7PFF-L*	1440.00	3.74
ISK 1750 7PFF-L	1750.00	3.70
ISK 2000 7PFF-L	2000.00	3.92
ISK 3000 7PFF-L*	3000.00	3.75
ISK 8000 7PFF-L*	8000.00	3.47

* on stock available

Delivery time for not available types 4-6 weeks. Minimum order quantity: 500m



IAK8EK

Connection kit for single core heating cables for use in hazardous area.



Termination Kit Ex



- Temperature resistant up to 190 C
- Current rating of 20A
- For single core cables ISK etc.
- Brass nickel plated, thus very solid
- Stainless steel version upon request
- Compact design

Description

The IAK8EK system is a very easy and fast to install connection kit for connecting cold lead and heating cable or for reparation of heating cables based on a screw connection. Because of the very compact design the set can be placed between surface and insulation. There is no blow-heater or special skills required for assembling.



Technical Data

Temperature range:	-60...190 C
Cable Capacity of Seal:	3.6 – 6.5mm
Max. Current Rating:	20A AC
Supply Voltage:	12...400V AC
Terminal Diameter:	2.5mm
Protection Class:	IP65
Length incl. glands:	110mm
Diameter:	25mm
Weight incl. Glands:	168g
Material:	Brass Nickel Plated

Approval

ATEX, IECEX, UKEX

Marking

- II 2G Ex eb IIC T6/T5/T4/T3/T2 Gb
- II 2D Ex tb IIIC T135 C Db IP65

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IAK8EK: Connection set for single core heating cables.

Alternative Products

Part number:
IAK1EG1: Connection set for single core heating cables up to 32A
IAK1EG2: Connection set for single core heating cables up to 98A

Further Products

Part number:
IAKKE1Ex: Cold lead, 1.2m
ISK: Single core heating cable, Ex
AG 101Ex: Ex junction box 122x120x90mm (different types see data sheet)

IAK1EG1

Connection sleeve for single core heating cables for use in hazardous area.



Termination Kit Ex



- Compact design
- Temperature resistant up to 200 C
- Easy and fast to assemble
- Protection class IP67
- Usable for all ISK heating cables

Description

The IAK1EG1 system contains an Ex-termination sleeve which is easy and fast to assemble. It is based on a screw connection.

This sleeve connects a ISK heating cable to a special ISK cold lead to connect in a termination-/ controller enclosure. Thereby an increase of temperature in the enclosure is effectively avoided. Because of the very compact design the sleeve can be placed between surface and insulation.



Technical Data

Voltage/ Current:	max. 750V / 32A
Temperature Range:	-40 C...+200 C
Heating Cables:	ISK-...7PFF...
Cross Section:	up to 2.5mm
Length:	132mm
Diameter:	30.5mm
Protection Class:	IP67

Approval

ATEX

Marking

- II 2G Ex e II -40 C ≤ T_p ≤ +200 C
- II 2D Ex tD A21 IP67 -40 C ≤ T_p ≤ +200 C

Ordering Information

Part number:
IAK1EG1: Ex-sleeve for ISK heating cables

Alternative Products

Part number:
IAK1EG2: Ex-sleeve for ISK heating cables up to 98A

Further Products

Part number:
AG 101 Ex: Ex-enclosure for 1-3 heating circuits (further information please see data sheet for Ex-enclosures)
IAKKE1Ex: Ex-cold lead 2.5mm², length 1.2m

Further Information

Please consult the installation instructions!



IAKKE1 Ex

Cold lead for single-core heating cables for use in hazardous area.



Terminal Accessory Ex



- Compact design
- Direct termination in enclosure
- Easy and quick to assemble
- Suitable for all ISK heating cables
- Customized lengths possible

Description

The IAKKE1 Ex system contains a 1,2m long 2,5mm cold lead, which will be connected with a ISK single core heating cables by using a special termination kit.

The low resistance of the cold lead prevents, that the cold leads get warm. A warm-up of the used enclosure/controller is effectively prevented.

The termination of this cold lead is very easy and does not require special skills.



Technical Data

Length:	1.2m
Cable Glands (Plastic):	M20x1.5
Material Outerjacket:	PFA
Cross Section:	2,5mm ²
Resistance:	7.2 Ohm/km
Length of Connection Wire:	120mm

Approval

ATEX, IECEx

Marking

- II 2G Ex e IIC Gb
- II 2D Ex tb IIIC Gb

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAKKE1 Ex:	Ex-cold lead 2.5mm 1.2m
IAKKE2 Ex:	Ex-cold lead 4.0mm 1.2m
IAKKE3 Ex:	Ex-cold lead 6.0mm 1.2m

Alternative Products

Part number:	
IAKKE1:	non-Ex-cold lead 2.5mm 1.2m
IAKKE2:	non-Ex-cold lead 4.0mm 1.2m
IAKKE3:	non-Ex-cold lead 6.0mm 1.2m

Further Products

Part number:	
IAK8EK:	Connection set for single-core heating cables.
IAK1EG1:	Ex-connection sleeve 32A
IAK1EG2:	Ex-connection sleeve 98A
AG 101 Ex:	Ex-enclosure 122x120x90mm (for different versions please Ex-enclosure data sheet)



IAKAT1

Termination kit in shrinking technology for single core heating cables for use in safe area.



Termination Kit non-Ex



- Compact design
- Temperature resistant up to 120 C
- Easy and fast to assemble
- Usable for all heating cables type ISK

Description

The IAKAT1 system contains an easy and fast to assemble termination kit based on shrinking technology.

Because of the compact design it is easy to use below the thermal insulation.

The IAKAT1 enables to connect a heating tape with a special cold lead. With this cold lead it is easy to connect to a termination box or a controller box.

The illustrated manual helps for an error-free installation.



Technical Data

Max. Workpiece Temperature:	120 C
Heating Cables:	ISK
Cross Section:	up to 2.5mm
Length of Terminal Block:	20mm
Length of Shrinking Cable:	120mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IAKAT1: Termination kit for ISK heating cables

Alternative Products

Part number:
IAK8EK: Ex-sleeve for ISK heating cables up to 20A

Further Products

Part number:
AG 101: Termination box for up to 3 self-limiting heating circuits or 1 single core heating circuit
IAKKE1: Cold lead 2.5mm², length 1,2m



IAKKE1

Cold lead for single core heating cables for use in safe area.



Termination Kit non-Ex



- Compact design
- Quick and easy to assemble
- Applicable for all ISK heating cables
- Ready-made to connect to a suitable junction box

Description

The IAKKE1 system contains a 1,2m long 2,5mm cold lead, which will be connected to the heating cable using a special termination kit.

The very low resistance of the cold lead prevents temperature increases. Thus, a heating of the junction box/ control unit can be effectively prevented.

The cold end can be connected to the heating quickly, easily and without special knowledge.



Technical Data

Length:	1.2m
Applicable heating cables:	ISK
Cross section:	2.5mm
Resistance:	7.20hm/km
Length of connection wire:	120mm

Further Information

Please consult the installation instructions!

Ordering Information

Part Number: IAKKE1

Alternative Products

Part Number:
IAKKE1Ex
(2.5mm , 7.20hm/km for hazardous area)
IAKKE2Ex
(4.0mm , 4.40hm/km for hazardous area)
IAKKE3Ex
(6.0mm , 2.90hm/km for hazardous area)

Further Products

Part number: IAKAT1:	Non-Ex termination kit in shrinking technology
AG 101:	Junction box for up to 3 self-limiting heating circuits or single-core heating circuits



Testing and Acceptance Report



Building:	Project:	Drawing:
Cabling from:	to:	Ex-Zone: Zone ____ T ____
Elektrical Supply:		

General		Controller and Limiter unit	
Type of heating cable			
Length of heating cable	m	Fuse control circuit	A
P/I (Power per meter)	W/m	Type of controller	
P (Entire heating power)	W	Temperature setting of controller	C
Supply voltage	V	Function of controller OK	Yes/No
Connection Voltage	V	Sensor broken signal OK	Yes/No
Operation Current	A	Amount of limiter	pcs
Supply cable		Type of limiter	
Fuse	A	Temperature setting of limiter	C
Amount of connection units	pcs	Function of limiter OK	Yes/No
Amount of supply units	pcs	Sensor broken signal OK	Yes/No
Amount of cold leads	pcs	Function - Disconnection broken wire	Yes/No
Amount of temperature sensor	pcs	Setting of limiter secured	Yes/No
Construction of temperature sensor		Amount of ELCB	pcs
Type of temperature sensor		Current of ELCB	A
Test made according DIN VDE 0100 DIN VDE 0100 part 610	Yes/No	Function of ELCB OK	Yes/No
Measuring of temperature profile	Yes/No		
Insulation Measurement		Operation and Fault signals OK	
Measurement device		Function OK	Yes/No
Insulation test voltage	V	Signal low temperature	C
Insulation resistance heating line 1	MΩ		
Insulation resistance heating line 2	MΩ		
Insulation resistance heating line 3	MΩ		
Junction Boxes		Visual Inspection	
Manufacturer:		Insulation complete an weather proof	
Type:		Identification / Marking labels	
Protection class: IP		Junction boxes closed	
EC-Certificate		Documentation	
Manufacturer:			Raiser
Type:		Name:	
Protection class: IP		Date:	
EC-Certificate		Sign:	



ISM...VA/CuNi (System QX-SH)

Electrical heating tape for temperature maintenance of pipework and vessels in hazardous area.

Constant Wattage Heating Tape Ex

650 C



- Temperature resistant up to 650 C (depending on version)
- Extremely high output possible
- High chemical resistance
- Large range of approvals
- Also available as ready-to-use heating circuit

Description

The mineral-insulated heating cable ISM is due to their structure very sturdy and safe for use in industrial and hazardous environments. The different types of Jackets are highly resistant to chemical attack.

The specific resistance of ISM will cause the power output increases or decreases by changing the length of the heating cable.

The heating cable will be soldered or laser-welded with connection sleeves to special cold-ends (Standard length 1,2m).

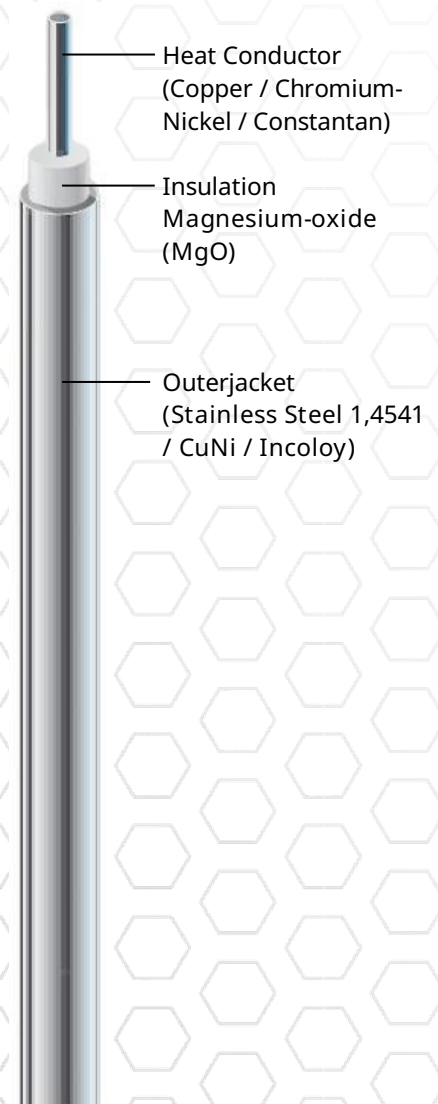
Depending on the application and temperature requirements, various outer jackets made of stainless steel, Cupronickel or Incoloy are available.

Technical Data

Rating Voltage:	500V
Testing Voltage:	>1,2kV
Material Heat Conductor:	Copper, Chromium-Nickel, Constantan
Insulation:	Magnesium-oxide
Min. Installation Temperature:	-20 C
Min. Bending Radius:	3 x outer Dia. or 5 x outer Dia. (Ex)

Approval

Component:	upon request
System:	ATEX



ISM...VA/CuNi (System QX-SH)

Resistance Chart ISM

Part Number CuNi	Ohm/km at 20°C	Material Conductor	Outer Diameter (mm)	Resistance Outerjacket (Ohm/km)
ISM0011CuNi	11.00	Copper	4.90	58.30
ISM0017CuNi	17.00	Copper	4.60	65.60
ISM0025CuNi	25.00	Copper	3.70	93.30
ISM0040CuNi	40.00	Copper	3.40	107.60
ISM0063CuNi	63.00	Copper	3.20	121.00
ISM0160CuNi	160.00	Constantan	4.90	58.81
ISM0250CuNi	250.00	Constantan	4.40	71.99
ISM0400CuNi	400.00	Constantan	4.00	87.69
ISM0630CuNi	630.00	Constantan	3.70	103.10
ISM1000CuNi	1000.00	Constantan	3.40	123.00
ISM1600CuNi	1600.00	Constantan	3.20	139.60

Part Number Stainless Steel	Ohm/km at 20°C	Material Conductor	Outer Diameter (mm)	Resistance Outerjacket (Ohm/km)
ISM0160VA	160.00	Chromium-Nickel	4.04	92.38
ISM0250VA	250.00	Chromium-Nickel	3.95	137.60
ISM0400VA	400.00	Chromium-Nickel	3.97	173.70
ISM0630VA	630.00	Chromium-Nickel	3.96	152.40
ISM1000VA	1000.00	Chromium-Nickel	3.95	187.00
ISM1600VA	1600.00	Chromium-Nickel	3.87	215.30
ISM2500VA	2500.00	Chromium-Nickel	3.99	235.80
ISM4000VA	4000.00	Chromium-Nickel	3.78	284.20
ISM6300VA	6300.00	Chromium-Nickel	3.89	284.20
ISM10k0VA	10000.00	Chromium-Nickel	4.03	284.20

Further resistance values available upon request.

Junction Box AG...

Glass fiber reinforced polyester enclosure for use in non-hazardous area.



Junction Box non-Ex



- Temperature resistant
- Resistant to chemical influences
- Antistatic
- Corrosion resistant/ UV-resistant
- Customized versions available upon request

Description

Junction Boxes made of glass fiber reinforced polyester to connect self-limiting-, single core- as well as mineral insulated heating-cables.

These enclosures are available in several versions and useful for almost all kind of trace heating application.

This box can be used in extremely environmental conditions and also chemically aggressive environments and resists exposure to mechanical stress.

Customized versions available upon request.



Technical Data

Dimensions
(LxWxH in mm):

AG 99...	110 x 75 x 55
AG 101...	122 x 120 x 90
AG 102...	160 x 160 x 90
AG 103...	260 x 160 x 90

Protection Class:IP66

Ordering Information

For part numbers and specific data please see page 2.

Additional products

Part number:
IRM040b: Mechanical Capillary-thermostat, 122x120x90mm
Temperature range 0 C..+40 C
(for other temperature ranges see specific data sheet)

Further information

Please consult the installation instructions!



Junction Box AG...

Standard Versions



Part number	Dimensions (in mm)	Cross-section	Cable Glands	Description
AG 99	110x75x55	2.5mm	1x M20 2x M12	Sensor box for up to 2 sensors
AG 99 HK	110x75x55	2.5mm	2x M20	Junction box 1 phase for 1 heating circuit
AG 101	122x120x90	6mm	1x M25 3x M20	Junction box 1 phase for up to 3 heating circuits
AG 101 3P	122x120x90	6mm	1x M25 3x M20	Junction box 3 phase for up to 3 heating circuits
AG 101 S	122x120x90	6mm	1x M25 3x M20	Junction box equipped for star connection
AG 102	160x160x90	6mm	1x M32 4x M20	Junction box 1 phase for up to 4 heating circuits
AG 102 3P	160x160x90	6mm	1x M32 4x M20	Junction box 3 phase for up to 4 heating circuits
AG 103	260x160x90	6mm	1x M32 6x M20	Junction box 1 phase for up to 6 heating circuits
AG 103 D	260x160x90	6mm	1xM32 6xM20	Junction box 3 phase equipped for delta connection

Customized versions available upon request!



Ex-Junction Box AG...

Glass fiber reinforced polyester enclosure for use in hazardous area.



Junction Box Ex



- Temperature resistant
- Resistant to chemical influences
- Antistatic
- Corrosion-resistant / UV-resistant
- Customized versions available upon request

Description

Ex-Junction Boxes made of glass fiber reinforced polyester to connect self-limiting-, serial resistance- as well as mineral insulated heating-cables.

This enclosure series is available in different versions and can be used for almost all trace heating application.

This box can be used in extremely environmental conditions, chemically aggressive environments and it resists exposure to mechanical stress.

Customized versions available upon request.



Technical Data

Dimensions	(LxWxH in mm):
AG 99...Ex	110 x 75 x 55
AG 101...Ex	122 x 120 x 90
AG 102...Ex	160 x 160 x 90
AG 103...Ex	260 x 160 x 90
Protection class:	IP65
Min. ambient temperature:	-60 C
Temperature class:	T6 at +40 C T5 at +55 C T4 at +60 C

Marking

- II 2G Ex eb ia IIC T6 Gb
- II 2D Ex tb IIIC T85 C Db

Approval

ATEX, IECEx, UKEX

Ordering Information

For part numbers and technical data please see page 2.

Additional Products

Part number
IRM0012Ex: Mechanical Ex-Capillary-
Thermostat, 122x120x90mm
Temperature range 0..+120 C
(for other temperature ranges
see specific data sheet)

Further Information

Please consult the installation instructions!





Standard Versions

Part number	Dimensions (in mm)	Cross-section	Cable Glands	Description
AG 99 Ex	110x75x55	2.5mm	1x M20 2x M12	Sensor-box for up to 2 Sensoren
AG 99 HK Ex	110x75x55	2.5mm	2x M20	Junction box 1 phase for 1 heating circuit
AG 101 Ex	122x120x90	6mm	1x M25 3x M20	Junction box 1 phase for up to 3 heating circuits
AG 101 3P Ex	122x120x90	6mm	1x M25 3x M20	Junction box 3 phase for up to 3 heating circuits
AG 101 S Ex	122x120x90	6mm	1x M25 3x M20	Junction box equipped for star connection
AG 102 Ex	160x160x90	6mm	1x M32 4x M20	Junction box 1 phase for up to 4 heating circuits
AG 102 3P Ex	160x160x90	6mm	1x M32 4x M20	Junction box 3 phase for up to 4 heating circuits
AG 103 Ex	260x160x90	6mm	1x M32 6x M20	Junction box 1 phase for up to 6 heating circuits
AG 103 D Ex	260x160x90	6mm	1xM32 6xM20	Junction box 3 phase equipped for delta connection

Customized versions available upon request!



Junction Box AG 2..

Glass fiber reinforced polyester enclosure for use in non-hazardous area.



Junction Box Ex



- Temperature resistant
- Resistant to chemical influences
- Antistatic
- Corrosion-resistant / UV-resistant
- Easy tool-free installation
- Variably equippable

Description

Junction Boxes made of glass fibre reinforced polyester for connecting self-limiting heating cables, single-core heating cables and mineral-insulated heating cables. The connection enclosures are equipped with Wago type 221 terminals, which enable tool-free installation of the heating circuits.

Thanks to the pre-installed mounting adapters, the supplied 3-pole or 5-pole terminals can be mounted flexibly and as required. The variable configuration makes it easy to implement different switching variants, ensuring a high degree of adaptability to different requirements



Technical Data

Dimensions	(LxWxH in mm):
AG 299 HK	110 x 75 x 55
AG 201	122 x 120 x 90
AG 202	160 x 160 x 90
Rated Voltage:	275V (without spacer element) 440V (with spacer element)
Protection Class:	IP66

Ordering Information

For part numbers and technical data please see page 2.

Additional Products

Part number: AG 101 Junction box for up to 3 Heating circuits

Further Information

Please consult the installation instructions!





Standard Versions

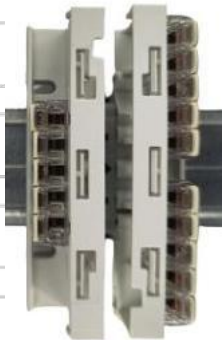
Part number	Dimensions (in mm)	Cable Glands	Cross section	Description
AG 299 HK	110x75x55	2x M20	4mm	Junction box 1 phase for 1 Heating circuit
AG 201	122x120x90	1x M25 3x M20	4mm	Terminals suitable for: 1 phase for up to 3 Heating circuits 3 phase for up to 3 Heating circuits Star connection
AG 202	160x160x90	1x M25 4x M20	6mm	Terminals suitable for: 1 phase for up to 4 Heating circuits 3 phase for up to 4 Heating circuits Star connection

Terminal assembly AG 299 HK

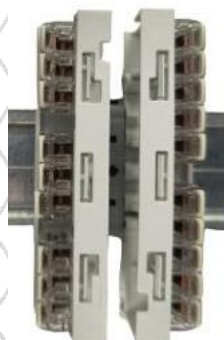


Terminal assembly for 1 Heating circuit
(3x 3-pole)

Terminal assembly AG 201 und AG 202 :



Terminal assembly 1-phase
(3x 5-pole)



Terminal assembly 3-phase
(3x 3-pole, 2x 5-pole)



Terminal assembly Star connection
(2x 5-pole)

* All required clamps included in the scope of delivery



Ex-Junction Box AG 2..

Glass fiber reinforced polyester enclosure for use in hazardous area.



Junction Box Ex



- Temperature resistant
- Resistant to chemical influences
- Antistatic
- Corrosion-resistant / UV-resistant
- Easy tool-free installation
- Variably equippable

Description

Ex-junction Boxes made of glass fibre reinforced polyester for connecting self-limiting heating cables, single-core heating cables and mineral-insulated heating cables.

The connection enclosures are equipped with Ex e Wago type 221 terminals, which enable tool-free installation of the heating circuits.

Thanks to the pre-installed mounting adapters, the supplied 3-pole or 5-pole terminals can be mounted flexibly and as required. The variable configuration makes it easy to implement different switching variants, ensuring a high degree of adaptability to different requirements



Technical Data

Dimensions	(LxWxH in mm):
AG 299 Ex HK	110 x 75 x 55
AG 201 Ex	122 x 120 x 90
AG 202 Ex	160 x 160 x 90
Rated Voltage:	275V (without spacer element) 440V (with spacer element)
Protection Class:	IP66
Min. Ambient temperature:	-55 C
Temperature class:	T6 bei +40 C T5 bei +55 C T4 bei +60 C

Approval

ATEX, IECEx, UKEx

Ordering Information

For part numbers and technical data please see page 2.

Additional Products

Part number:
AG 101 Ex Junction box for up to 3 Heating circuits

Further Information

Please consult the installation instructions!

Marking

- II 2G Ex eb ia IIC T6 Gb
- II 2D Ex tb IIIC T85 C Db



Ex-Junction Box AG 2..



Standard Versions

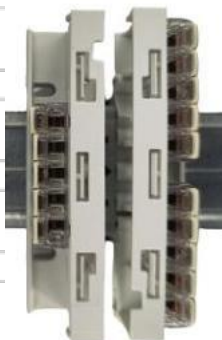
Part number	Dimensions (in mm)	Cable Glands	Cross section	Description
AG 299 HK Ex	110x75x55	2x M20	4mm	Junction box 1 phase for 1 Heating circuit
AG 201 Ex	122x120x90	1x M25 3x M20	4mm	Terminals suitable for: 1 phase for up to 3 Heating circuits 3 phase for up to 3 Heating circuits Star connection
AG 202 Ex	160x160x90	1x M25 4x M20	6mm	Terminals suitable for: 1 phase for up to 4 Heating circuits 3 phase for up to 4 Heating circuits Star connection

Terminal assembly AG 299 HK Ex



Terminal assembly for 1 Heating circuit
(3x 3-pole)

Terminal assembly AG 201 Ex und AG 202 Ex:



Terminal assembly 1-phase
(3x 5-pole)



Terminal assembly 3-phase
(3x 3-pole, 2x 5-pole)



Terminal assembly Star connection
(2x 5-pole)

* All required clamps included in the scope of delivery



AG 101 EOL .. Ex

End of circuit LED lamps in polyester enclosure for use in hazardous area.



Termination Set Ex



- Temperature resistant
- Corrosion-resistant/ UV-resistant
- Direct heating tape connection
- Installation on pipe with mounting feet

Description

Ex-End of circuit lamp made of glass fiber reinforced polyester to connect self-limiting heating-cables.

The EOL lamps are used for visual operation indicators for electrical heat-tracing systems.

This box can be used in extremely environmental conditions, chemically aggressive environments and it resists exposure to mechanical stress



Technical Data

Dimensions	(LxBxH in mm):
AG 101 EOL	122 x 120 x 90
Mounting unit	115 x 110 x 42
Protection class	IP66
Min. ambient temp:	-40 C
Temperature class:	T6 bei +50 C

Marking

- II 2G Ex db eb IIC T6 Gb
- II 2D Ex tb IIIC T80 C Db IP66

Approval

ATEX, IECEx

Further Informations

Please consult the installation instructions!

Ordering Information

Part number:	
AG 101 EOL 1G Ex	EOL-Lamp with green LED, 1x M20
AG 101 EOL 1R Ex	EOL-Lamp with red LED, 1xM20
AG 101 EOL 2G Ex	EOL-Lamp with green LED, 2xM20
AG 101 EOL 2R Ex	EOL-Lamp with red LED, 2xM20
AG 101 EOL DG Ex	EOL-Lamp with green LED, 1x M20, with IAL1D1 mounting unit
AG 101 EOL DR Ex	EOL-Lamp with red LED, 1x M20, with IAL1D1 mounting unit

Additional Products

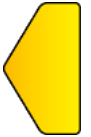
Part Number:	
IAL4BA	Silicon termination set

IRM1/...



Mechanical mini-thermostat for frost protection or temperature maintenance applications in non-hazardous area.

Mechanical Controller non-Ex



- Robust and compact design
- 16A/230V AC switching capacity
- Protection class IP66/68
- Narrow switching hysteresis
- Various temperature ranges available
- Customized lead length available

Description

This Mini-Thermostat is used to monitor the ambient temperature of heating systems as well as for the control of internal temperatures inside protective transmitter boxes or control and switchgear cabinets.

The switching contact is moulded in a M20x1,5 cable gland. Due to the compact design it is suitable for many applications. It is complete with a nylon locknut for securing in clearance hole.

The IRM1 thermostat is available with different switching points or customised lead lengths.



Technical Data

Rated Voltage:	max. 250V AC
Rated Current:	max. 16A AC
Switching Contacts:	1x NC
Switching Points:	4 C On; 11 C Off
Switching Tolerance:	+/- 3K
Cable Gland:	M20x1,5
Material:	PVDF
Dimensions:	L: 30mm x : 22mm
Across Flats:	24mm
Connection Leads:	2x 1,5mm
Material:	Radox 125
Length:	400mm/1000mm (further lengths upon request)
Protection Class:	IP66/68
Ambient Temperature:	-50 / +125 C
Weight:	50g

Ordering Information

Part number:	
IRM1/400:	Mini-Thermostat 4/11 C On/Off with 400mm connection leads
IRM1/1000:	Mini-Thermostat 4/11 C On/Off with 1000m connection leads

Further temperature ranges and lead lengths available upon request.

Alternative Products

Part number:	
IRM1 AG Pro:	...with 92x92x60mm enclosure
IRM2Ex/400:	...Ex Mini-Thermostat
IRM...b:	control thermostat (adjustable)
IR2M...Ex:	Ex control thermostat (adjustable)
IRE168DS:	Electronic temperature controller (see datasheet)

Further Products

Part number:	
MW 3:	L-shaped mounting bracket



IRM1AG/PRO

Mechanical mini-thermostat in enclosure for frost protection applications for use in non-hazardous area.



Mechanical Controller non-Ex



- Compact design
- High switching capacity
- Protection class IP66
- Screwless terminal connection
- Stable polycarbonate enclosure
- Different temperature ranges available

Description

The IRM1AG/PRO mini thermostat is used to monitor the ambient temperature. It can switch heating circuits directly up to a load of 16A.

The thermostat is installed in a robust polycarbonate enclosure. The use of screwless terminals enables quick and tool-free connection.

The housing is equipped with two M20 screw connections, one for the supply line and one for the heating cable.



Technical Data

Supply Voltage:	250V AC
Switching Contact:	1 NC 16A / 250V AC
Switching Points:	4 C On / 11 C Off
Hysteresis:	3K
Cable Glands:	2xM20
Protection Class:	IP66
Dimensions (LxWxH in mm):	92 x 92 x 60
Material Enclosure:	Polycarbonate
Ambient Temperature:	-35...+60 C

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IRM1AG/PRO: Mini-thermostat for frost protection, installed in enclosure.

Alternative Products

Part number:
IRM1/400: IRM1 mini-thermostat in M20 cable gland with 400mm connection wires.

Further Products

Part number:
ILLw102CT/QX: Self-regulating heating tape for Frost protection. (Various types and wattages available – see datasheet.)



IRM1AG/Poly

Mechanical mini-thermostat in glass fiber reinforced polyester enclosure for frost protection applications in non-hazardous area.

Mechanical Controller non-Ex



- Compact design
- High switching capacity
- Protection class IP66
- Rugged polyester enclosure
- Different temperature ranges available

Description

The Mini-Thermostat IRM1AG/Poly is usually be used for ambient temperature controlling. It switches heating circuits directly up to 16A or alternatively with load contactors.

The thermostat is installed in a rugged glass fiber reinforced polyester enclosure with 2 M20 cable glands for heating circuit and supply cable.

Other temperature ranges are available on request.



Technical Data

Rated Voltage:	250V AC
Switching Pin:	1 NC 16A / 250V AC
Switching Points:	4 C On / 11 C Off
Switching Tolerance:	3K
Cable Glands:	2xM20
Protection Class:	IP 66
Dimensions (LxWxH in mm):	110 x 75 x 55
Material Enclosure:	Glass fiber reinforced polyester

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IRM1AG/Poly: Mini-thermostat for frost protection applications, installed in polyester enclosure.

Alternative Products

Part number:
IRM1/400: IRM1 mini-thermostat without enclosure, molded in M20 cable glands with 400mm connection wires.

Further Products

Part number:
ILLw102CT/QX: Self-regulating heating tape for applications. (Various types and wattages available – see datasheet.)

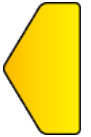


IRM1Ex / IRM2Ex



Mechanical mini-thermostat for frost-protection applications, molded in a M20 cable gland. For use in hazardous area.

Mechanical Controller Ex



- Compact design
- High switching capacity
- Protection class IP68
- Narrow switching hysteresis
- Different temperature ranges available

Description

The IRM_Ex is a mechanical bimetal thermostat. Because of the compact design and the high switching capacity it is well suited for frost protection applications with heating tapes as well as heating plates.

The thermostat is molded in a M20x1,5 cable gland and can be fitted in a junction box with ignition protection class Ex e.

Other temperature ranges are available on request.



Technical Data

Rated Voltage:	250V AC
Switching Contact:	1 NC / 16A
Switching Points:	4 C On / 11 C Off
Temperature Class:	-60°C...+40°C T6 -60°C...+55°C T5 -60°C...+90°C T4 -60°C...+110°C T4
Switching Tolerance:	3K
Protection Class:	IP68
Supply Cable:	400mm 3G1.5mm
Cable Glands:	1x M20

Marking

- Ex II 2G Ex mb IIC T4 Gb
- Ex II 2D Ex tb IIIC T100 C Db IP68

Approval

ATEX, IECEX, UKEX

Ordering Information

- Part number:
- IRM1Ex: Plastic Ex-mini-thermostat for frost protection applications.
 - IRM2Ex: Metal Ex-mini-thermostat for frost protection applications.

Further Information

Please consult the installation instructions!



IRM1Ex/AG / IRM2Ex/AG

Thermostat in enclosure for use in hazardous area.



Mechanical Controller Ex



- Compact design
- For up to 2 heating circuits
- 16A switching capacity
- Narrow switching hysteresis
- Protection class IP66

Description

The IRM_Ex/AG features a bimetallic, compact design, combined with a high switching capacity.

It is appropriate for frost protection applications with heating tape or heating plates.

The thermostat is molded in a M20 thread which is installed in a glass fiber reinforced polyester enclosure.

You can connect up to 2 heating circuits on this pre-wired case.



Technical Data

Rated Voltage:	250V AC
Switching Capacity:	16A
Switching Points:	On 4 C Off 11 C
Switching Hysteresis:	+/- 3K
Min. Ambient Temperature:	-55 C
Max. Ambient Temperature:	+40 C (T6) +50 C (T5)
Protection Class:	IP66
Dimensions (LxWxH in mm):	122 x 122 x 90
Cable Glands:	2x M20, 1x M25

Approval

ATEX, IECEx, UKEX

Ordering Information

IRM1 Ex/AG	
Mechanical Controller	
Thermostat with plastic cable gland (1)	
Thermostat with metal cable gland (2)	
Ex-design	
In the adapter housing	

Further Information

Please consult the installation instructions!



IRM1Ex/AG mini IRM2Ex/AG mini



Mechanical mini-thermostat in glass fiber reinforced polyester enclosure for frost protection applications in hazardous area.

Mechanical Controller Ex



- Compact design
- Robust polyester enclosure
- Different temperature ranges available
- Narrow switching hysteresis
- High switching capacity
- Protection class IP66

Description

The IRM_Ex/AG mini is a mechanical bimetal thermostat. Because of the compact design and the high switching capacity of 16A it is well suited for frost protection applications with heating tapes as well as heating plates.

The very rugged glass fibre reinforced polyester enclosure has 2x M20 glands for heating circuit / heating plate and supply cable.

Other temperature ranges are available on request.



Technical Data

Rated Voltage:	250V AC
Switching Pin:	1 NC / 16A
Switching Points:	4 C On/ 11 C Off
Switching Tolerance:	3K
Protection Class:	IP66
Min. Ambient Temperature:	-55°C...+40 C
Dimensions (LxWxH in mm):	110 x 75 x 55
Enclosure Material:	Glas fiber enhanced polyester
Cable Glands:	2x M20

Marking

- Enclosure:
- Ex II 2G Ex eb IIC T6 Gb
 - Ex II 2D Ex tb IIIC T80 C IP66
- Thermostat:
- Ex II 2G Ex mb IIC T4 Gb
 - Ex II 2D Ex tb IIIC T100 C Db IP68

Approval

ATEX, IECEx, UKEX

Ordering Information

Ex-mini-thermostat for frost protection applications, installed in polyester enclosure

Partnumber:
IRM1Ex/AG mini: thermostat with plastic cable gland
IRM2Ex/AG mini: thermostat with metal cable gland

Alternative Products

Part number:
IRM2Ex/400: Mini-thermostat without enclosure, moulded in M20 metal cable gland with 400mm supply cable

Further Information

Please consult the installation instructions!



IRM...b

Mechanical capillary tube thermostat for use in non-hazardous area.



Mechanical Controller non-Ex



- Compact Design
- Switching capacity 25A
- Protection class IP66
- Very rugged design
- Stable polycarbonate enclosure

Description

The controllers of the IRM-series are mechanical capillary tube line-sensing thermostats.

The black glass fiber reinforced polyester enclosure is mechanically robust and perfectly designed for the connection of self-limiting heating cables.

The controller can be used for a switching capacity up to 25A. If the set temperature is exceeded, the contact opens automatically and closes again as soon as the temperature falls below the set value.



Technical Data

Typ IRM	040b	0120b	0200b	70320b
Temperature range (C)	0..40	0..120	0..200	70..320
Rating voltage (V AC)	250	250	250	250
Rating current (A)	25	25	25	25
Switching difference (K)	2 1	3 1,5	12 6	30 5
Max. sensor temperature (C)	45	144	230	350
Protection class	IP66	IP66	IP66	IP66
Capillary tube length (mm)	1600	1600	1500	1500
Sensor dimensions (in mm)	5,8/126	5,0/106	3,0/179	3,0/135
Dimensions LxBxH (mm)	122x120 x90	122x120 x90	122x120 x90	122x120 x90
Glands M25 / M20	1 / 2	1 / 2	1 / 2	1 / 2
Cross section (mm ²)	4	4	4	4
Weight (kg)	1,2	1,2	1,2	1,2

Ordering Information

Part number:
 IRM040b: 0 C..+40 C
 IRM0120b: 0 C..+120 C
 IRM0200b: 0 C..+200 C
 IRM70320b: +70 C..+320 C

Alternative Products

Mechanical Ex-capillary thermostat.

Part number:
 IR2M-0205Ex: -20 C..+50 C
 IR2M0012Ex: 0 C..+120 C
 IR2M0019Ex: 0 C..+190 C
 IR2M0630Ex: +60 C..+300 C
 IR2M1450Ex: +140 C..+500 C

Further Products

Please consult the installation instructions!



IR2M...Ex

Mechanical capillary temperature controller for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 4/6mm
- 4/6mm sensor diameter
- Resistant against chemical influences

Description

The Ex-Temperature Controller devices of the IR2M-Series are mechanical 2-point capillary temperature controller.

The black glass fiber enhanced polyester enclosure is very rugged and is used as a connector for single core heating cables as well as self-limiting heating cables. The controller can handle a switching capacity of up to 25A.

When exceeding the adjusted temperature, the controller switches off.



Technical Data

Min. Ambient Temp.:	-55 C
Switching Capacity:	16A/230V 25A/230V (16A/400V upon request)
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +40 C (25A) T4 at +55 C (25A) T6 at +50 C (16A) T4 at +80 C (16A)

Ordering Information

Part number:	
IR2M-0205Ex	Temperature range: -20 C..+50 C
IR2M0012Ex:	Temperature range: 0 C..+120 C
IR2M0019Ex:	Temperature range: 0 C..+190 C
IR2M0630Ex:	Temperature range: +60 C..+300 C
IR2M1450Ex:	Temperature range: +140 C..+500 C

Further Information

Please consult the installation instructions!

Marking

- Ex II 2G Ex db eb IIC T6...T4 Gb
- Ex II 2D Ex tb IIIC T85 C... T135°C Db IP66

Approval

ATEX, IECEx



IR2M...Ex

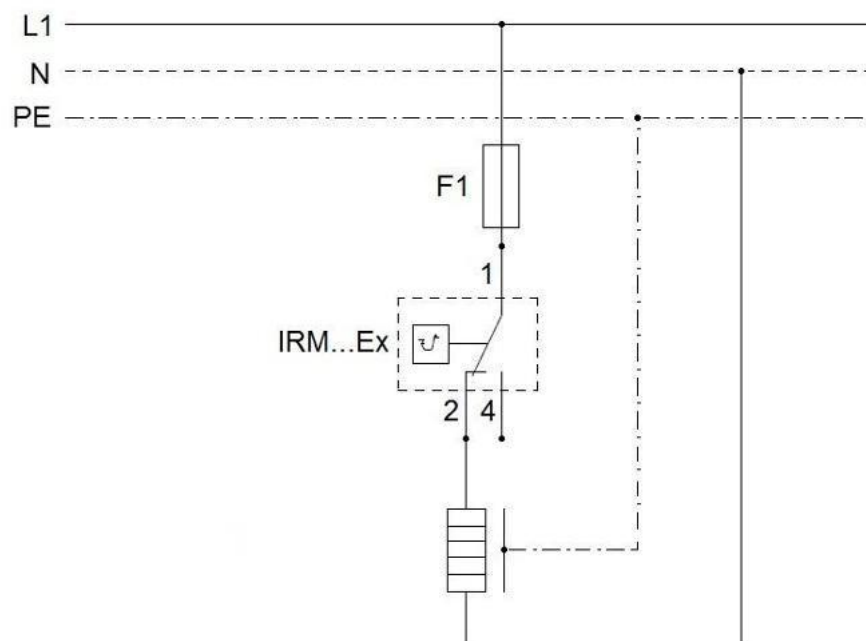
Standard Versions



Additional Technical Data

Temperature Range (°C)	-20...50	0...120	0...190	60...300	140...500
Rating Voltage (VAC)	230	230	230	230	230
Switching Capacity (cos φ = 1) (A)	16 / 25	16 / 25	16 / 25	16 / 25	16 / 25
Switching Difference (%) of Full Scale Value approx	7	7	7	7	7
Max. Sensor Temperature(C)	80	145	220	345	530
Protection Class	IP66	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000	1000	1000	1000	1000
Capillary Diameter (mm)	6	4	4	6	6
Dimensions (LxWxH in mm)	122x120x90	122x120x90	122x120x90	122x120x90	122x120x90
Cable Glands M20/M25	1/1	1/1	1/1	1/1	1/1
Clamping Zone M20/M25 (mm)	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17
Cross Section (mm)	4/6	4/6	4/6	4/6	4/6
Weight (kg)	1.2	1.2	1.2	1.2	1.2

Wiring Diagram



IB2M...Ex

Mechanical fail-safe protection temperature limiter for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 4/6mm
- Sensor diameter 4/6mm
- Resistant to chemicals

Description

The Ex-fail-safe protection temperature limiter devices of the IB2M-series are mechanical 2-point capillary temperature protection limiter.

The black glass fiber reinforced polyester enclosure is very rugged and serves as a connector for single core heating cables. The limiter can handle a switching capacity of 25A directly.

When exceeding the set temperature, the limiter switches off. The restart lockout gives additional safety, a manual reset is needed.



Technical Data

Min. Ambient Temperature:	-55 C
Switching Capacity:	16A/230V 25A/230V (16A/400V upon request)
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +40 C (25A) T4 at +55 C (25A) T6 at +50 C (16A) T4 at +80 C (16A)

Ordering Information

Part number:	
IB2M0719Ex	Temperature Range: +70 C..+190 C
IB2M1319Ex:	Temperature Range: +130 C..+190 C
IB2M1530Ex:	Temperature Range: +150 C..+300 C
IB2M1450Ex:	Temperature Range: +140 C..+500 C

Marking

- II 2G Ex db eb IIC T6...T4 Gb
- II 2D Ex tb IIIC T85°C... T135°C Db IP66

Approval

ATEX, IECEx



Further Information

Please consult the installation instructions!

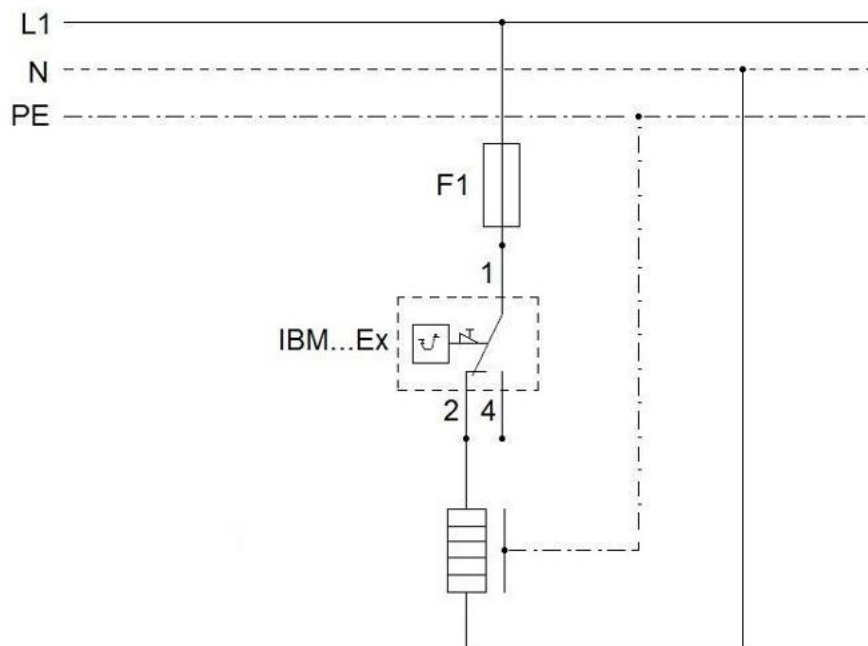


Standard Versions

Technical Data

Temperature Range (°C)	70-190	130-190	150-300	140-500
Rating Voltage (VAC)	230	230	230	230
Switching Cap. (cos φ = 1) (A)	16 / 25	16 / 25	16 / 25	16 / 25
Switching Diff. (%) of full scale value approx	-	-	-	-
Max. Sensor Temperature (C)	220	220	345	530
Protection Class	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000	1000	1000	1000
Capillary Diameter (mm)	4	4	4	4
Dimensions LxWxH (in mm)	122x120x90	122x120x90	122x120x90	122x120x90
Cable Glands M20/M25	1/1	1/1	1/1	1/1
Clamping Zone M20/M25 (mm)	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17
Cross Section (mm)	4/6	4/6	4/6	4/6
Weight (kg)	1.2	1.2	1.2	1.2

Wiring Diagram



IRB2M...Ex

Combination of capillary temperature controller and limiter for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 4/6mm
- 4/6mm sensor diameter
- Resistant against chemical influences

Description

The Ex-Controller-/Limiter devices of the IRB2M-Series are a combination of mechanical 2-point capillary temperature controller/limiter.

The black glass fiber enhanced polyester enclosure is very rugged and is used as a connector for single core heating cables.

The combination of controller and limiter allows an easy and space-saving application for electrical trace heating in hazardous areas. The sensors with 4mm outer-diameter are particularly suitable for mounting on pipelines or containers.



Technical Data

Min. Ambient Temperature:	-55 C
Switching Capacity:	16A/230V 25A/230V (16A/400V upon request)
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +40 C (25A) T4 at +55 C (25A) T6 at +50 C (16A) T4 at +80 C (16A)

Marking

- II 2G Ex db eb IIC T6...T4 Gb
- II 2D Ex tb IIIC T85°C... T135°C Db IP66

Approval

ATEX, IECEx

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IRB2M-0205/0719Ex:	Controller: -20..50 C Limiter: 70..190 C
IRB2M0012/1319Ex:	Controller: 0..120 C Limiter: 130..190 C
IRB2M0019/1319Ex:	Controller: 0..190 C Limiter: 130..190 C
IRB2M0012/0719Ex:	Controller: 0..120 C Limiter: 70..190 C
IRB2M0019/0719Ex:	Controller: 0..190 C Limiter: 70..190 C
IRB2M0630/1530Ex:	Controller: 60..300 C Limiter: 150..300 C

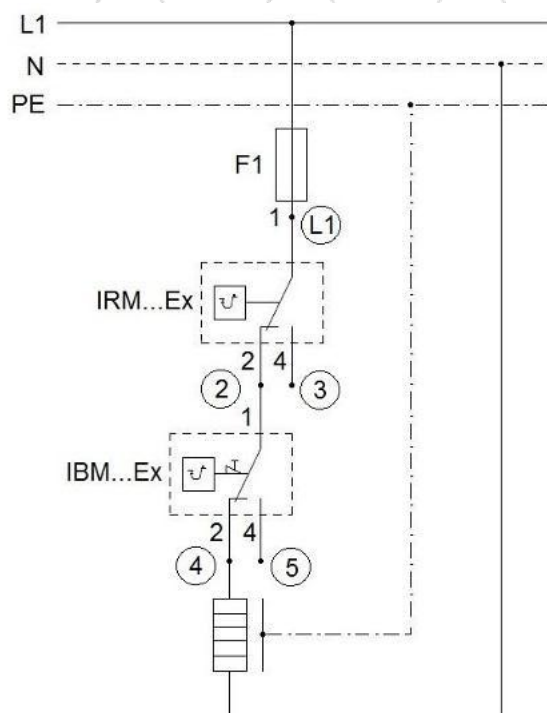
Further combinations available upon request.

Standard Versions

Additional Technical Data

Temperature Range (°C)	-20..50/70..190	0..120/130..190	0..190/130..190	0..120/70..190	0..190/70..190	60..300/150..300
Rating Voltage (VAC)	230	230	230	230	230	230
Switching Cap. (cos φ = 1) (A)	16 / 25	16 / 25	16 / 25	16 / 25	16 / 25	16 / 25
Switching difference (%) of Full Scale Value approx	7/-	7/-	7/-	7/-	7/-	7/-
Max. Sensor Temperature (C)	80/220	145/220	220/220	145/220	220/220	345/345
Protection Class	IP66	IP66	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000/1000	1000/1000	1000/1000	1000/1000	1000/1000	1000/1000
Capillary Diameter (mm)	6/4	4/4	4/4	4/4	4/4	6/6
Dimensions LxWxH (in mm)	220x120x90	220x120x90	220x120x90	220x120x90	220x120x90	220x120x90
Cable Glands M20/M25	2/1	2/1	2/1	2/1	2/1	2/1
Clamping Zone M20/M25 (mm)	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17	7-13/12-17
Cross Section (mm)	4/6	4/6	4/6	4/6	4/6	4/6
Weight (kg)	2	2	2	2	2	2

Wiring Diagram



IR2M...Ex/g

Mechanical capillary temperature controller for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 4/6mm
- 4/6mm sensor diameter
- Resistant against chemical influences

Description

The Ex-Temperature Controller devices of the IR2M-Series are mechanical 2-point capillary temperature controller.

The black glass fiber enhanced polyester enclosure is very rugged and is used as a connector for single core heating cables as well as self-limiting heating cables. This controller can handle a switching capacity of 25A directly.

When exceeding the adjusted temperature, the controller switches off.



Technical Data

Min. Ambient Temp.:	-55 C
Switching Capacity:	25A/230V
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +40 C (25A) T4 at +55 C (25A)

Ordering Information

Part number:	
IR2M-0205Ex/g	Temperature range: -20 C..+50 C
IR2M0012Ex/g	Temperature range: 0 C..+120 C
IR2M0019Ex/g	Temperature range: 0 C..+190 C
IR2M0630Ex/g	Temperature range: +60 C..+300 C
IR2M1450Ex/g	Temperature range: +140 C..+500 C

Marking

- Ex II 2G Ex db eb IIC T6...T4 Gb
- Ex II 2D Ex tb IIIC T85°C... T135°C Db IP66

Approval

ATEX, IECEx

Further Information

Please consult the installation instructions!



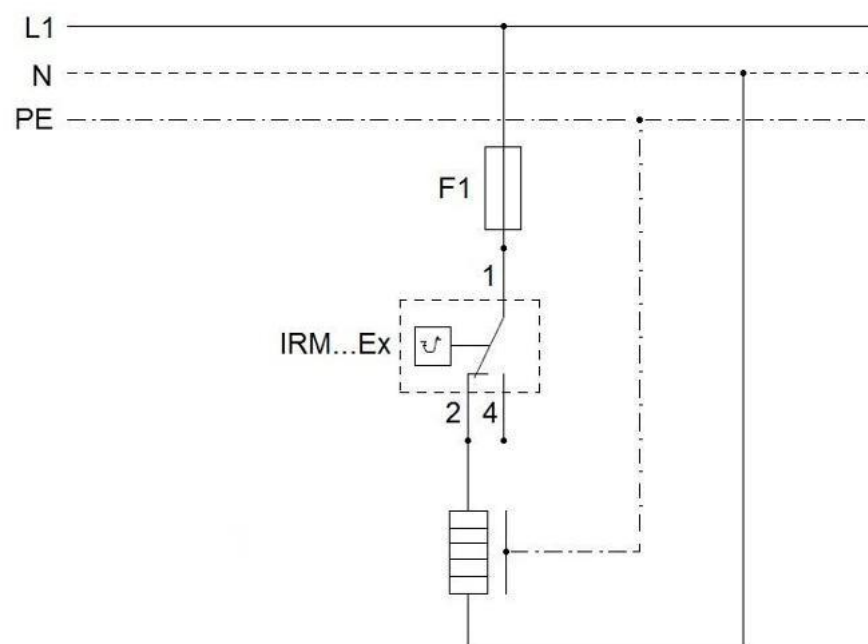
Standard Versions



[Additional Technical Data](#)

Temperature Range (°C)	-20...50	0...120	0...190	60...300	140...500
Rating Voltage (VAC)	230	230	230	230	230
Switching Capacity (cos φ = 1) (A)	25	25	25	25	25
Switching Difference (%) of Full Scale Value approx	7	7	7	7	7
Max. Sensor Temperature(C)	80	145	220	345	530
Protection Class	IP66	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000	1000	1000	1000	1000
Capillary Diameter (mm)	6	4	4	6	6
Dimensions (LxWxH in mm)	160x160x90	160x160x90	160x160x90	160x160x90	160x160x90
Cable Glands M20/M32	1/1	1/1	1/1	1/1	1/1
Clamping Zone M20/M32 (mm)	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21
Cross Section (mm)	10	10	10	10	10
Weight (kg)	1.9	1.9	1.9	1.9	1.9

[Wiring Diagram](#)



IB2M...Ex/g

Mechanical fail-safe protection temperature limiter for use in hazardous area.

Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 10mm
- Sensor diameter 4/6mm
- Resistant to chemicals

Description

The Ex-fail-safe protection temperature limiter devices of the IB2M-series are mechanical 2-point capillary temperature protection limiter.

The black glass fiber reinforced polyester enclosure is very rugged and serves as a connector for single core heating cables. The limiter can handle a switching capacity of 25A directly.

When exceeding the set temperature, the limiter switches off. The restart lockout gives additional safety, a manual reset is needed.





Technical Data

Min. Ambient Temperature:	-55 C
Switching Capacity:	25A/230V
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +50 C (25A) T4 at +55 C (25A)

Ordering Information

Part number:	
IB2M0719Ex/g	Temperature Range: +70 C..+190 C
IB2M1319Ex/g	Temperature Range: +130 C..+190 C
IB2M01530Ex/g	Temperature Range: +150 C..+300 C
IB2M1450Ex/g	Temperature Range: +140 C..+500 C

Marking

-  II 2G Ex db eb IIC T6...T4 Gb
-  II 2D Ex tb IIIC T85°C... T135°C Db IP66

Approval

ATEX, IECEx

Further Information

Please consult the installation instructions!

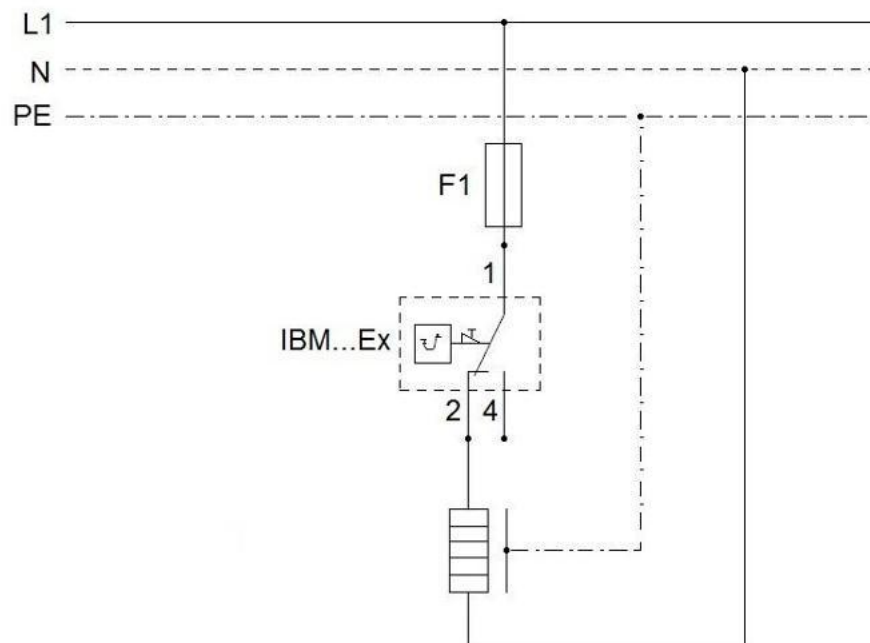




Technical Data

Temperature Range (°C)	70-190	130-190	150-300	140-500
Rating Voltage (VAC)	230	230	230	230
Switching Cap. (cos φ = 1) (A)	25	25	25	25
Switching Diff. (%) of full scale value approx	-	-	-	-
Max. Sensor Temperature (C)	220	220	345	530
Protection Class	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000	1000	1000	1000
Capillary Diameter (mm)	4	4	6	6
Dimensions LxWxH (in mm)	160x160x90	160x160x90	160x160x90	160x160x90
Cable Glands M20/M32	1/1	1/1	1/1	1/1
Clamping Zone M20/M32 (mm)	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21
Cross Section (mm)	10	10	10	10
Weight (kg)	1.9	1.9	1.9	1.9

Wiring Diagram



IRB2M...Ex/g



Combination of capillary temperature controller and limiter for use in hazardous area.

Mechanical Controller Ex



- Compact design
- 25A/230V switching capacity
- Cross section 4/6mm
- 4/6mm sensor diameter
- Resistant against chemical influences

Description

The Ex-Controller-/Limiter devices of the IRB2M-Series are a combination of mechanical 2-point capillary temperature controller/limiter.

The black glass fiber enhanced polyester enclosure is very rugged and is used as a connector for single core heating cables.

The combination of controller and limiter allows an easy and space-saving application for electrical trace heating in hazardous areas. The sensors with 4mm outer-diameter are particularly suitable for mounting on pipelines or containers.



Technical Data

Min. Ambient Temperature:	-55 C
Switching Capacity:	25A/230V
Temperature Class:	T6 at +40 C T4 at +55 C

Marking

- II 2G Ex db eb IIC T6...T4 Gb
- II 2D Ex tb IIIC T85°C... T135°C Db IP66

Approval

ATEX, IECEx

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IRB2M-0205/0719Ex/g	Controller: -20..50 C Limiter: 70..190 C
IRB2M0012/0719Ex/g	Controller: 0..120 C Limiter: 70..190 C
IRB2M0012/1319Ex/g	Controller: 0..120 C Limiter: 130..190 C
IRB2M0019/0719Ex/g	Controller: 0..190 C Limiter: 70..190 C
IRB2M0019/1319Ex:	Controller: 0..190 C Limiter: 130..190 C
IRB2M0630/1530Ex:	Controller: 60..300 C Limiter: 150..300 C

Further combinations available upon request.



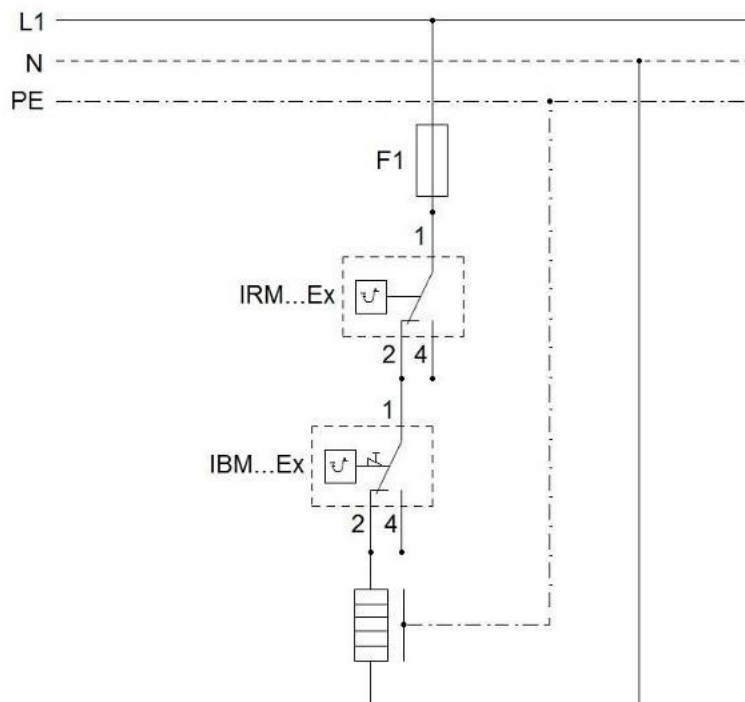
IRB2M...Ex/g

Standard Versions

Additional Technical Data

Temperature Range (°C)	-20..50/70..190	0..120/130..190	0..120/130..190	0..190/70..190	0..190/70..190	60..300/150..300
Rating Voltage (VAC)	230	230	230	230	230	230
Switching Cap. (cos φ = 1) (A)	25	25	25	25	25	25
Switching difference (%) of Full Scale Value approx	7/-	7/-	7/-	7/-	7/-	7/-
Max. Sensor Temperature (C)	80/220	145/220	145/220	220/220	220/220	345/345
Protection Class	IP66	IP66	IP66	IP66	IP66	IP66
Capillary Tube Length (mm)	1000/1000	1000/1000	1000/1000	1000/1000	1000/1000	1000/1000
Capillary Diameter (mm)	6/4	4/4	4/4	4/4	4/4	6/6
Dimensions LxWxH (in mm)	260x160x90	260x160x90	260x160x90	260x160x90	260x160x90	260x160x90
Cable Glands M20/M32	2/1	2/1	2/1	2/1	2/1	2/1
Clamping Zone M20/M32 (mm)	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21	7-13/16-21
Cross Section (mm.)	10	10	10	10	10	10
Weight (kg)	2.9	2.9	2.9	2.9	2.9	2.9

Wiring Diagram



IR2M..VAEx

Fail-safe capillary temperature controller in stainless steel enclosure (1.4404 / 316L) for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V AC switching capacity
- Robust and rugged design

- 4/6mm sensor diameter
- Highly resistant to aggressive chemicals
- Huge temperature range: -20...+500°C

Description

The IRM..VAEx series of fail-safe capillary temperature devices consist of capillary type temperature thermostats with mechanical change-over contacts in a robust and rugged stainless steel enclosure. This robust enclosure is used in applications for controlling and connecting self-limiting heating tapes and heating cables in hazardous areas.

These stainless steel enclosures are approved to ATEX/IECEX and NEMA 4X and have proven themselves extremely well under harsh conditions and for food & hygienic areas.

Aggressive chemicals or severe mechanical impacts cannot harm or even damage these rugged & robust enclosures.



Technical Data

Permitted Ambient Temperatures:	-55 C ... +40 C in T6
Material:	Stainless steel 1.4404 / 316L
Protection Class:	IP66
Dimensions (LxWxH in mm):	200 x 200 x 120

Marking

- II 2G Ex eb db IIC T6 Gb
- II 2D Ex tb IIIC T80 C Db IP65

Approval

ATEX, IECEX

Further Information

Operation instruction must be consulted before use.

Ordering Information

Fail-safe temperature controller	IR2M ... VAEx
Code temperature range (see code below)	
Stainless steel and Ex version	

Available Temperature Ranges

Controller (safety temperature monitor):	
Code: -0205	= -20...+50°C
Code: 0012	= 0...+120°C
Code: 0019	= 0...+190 C
Code: 0630	= +60...+300°C
Code: 1450	= +140...+500°C

Example

IR2M0630VAEx
(controller with temperature range: +60...+300 C)



IR2M..VAEx



Additional Technical Data

Rated Voltage: 230V AC
(400V upon request)

Rated Current (cos φ = 1): 25A

Switching Point Deviation:

Temp. Range in °C	Deviation approx (% of full scale)	Sensor Diameter (mm)
-20...+50°C	+7/-0	6
0...+120°C	+7/-0	4
0...+190°C	+7/-0	4
+60...+300°C	+7/-0	6
+140...+500°C	+7/-0	6

Max. Permitted Sensor Temperature: +15% of full scale or max. +25K

Capillary Length: 1,000mm
(3,000mm upon request)

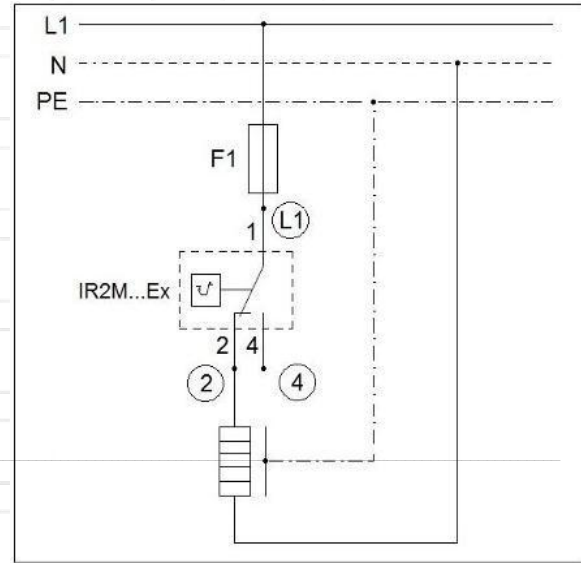
Bulb Diameter: 4mm / 6mm

Cable Glands: 1x M25 Ni-plated brass
1x M20 Ni-plated brass

Terminal Cross Section (Cage Clamp Type): 0.5 – 6mm (solid or stranded cable)

Weight: ca. 3.5kg

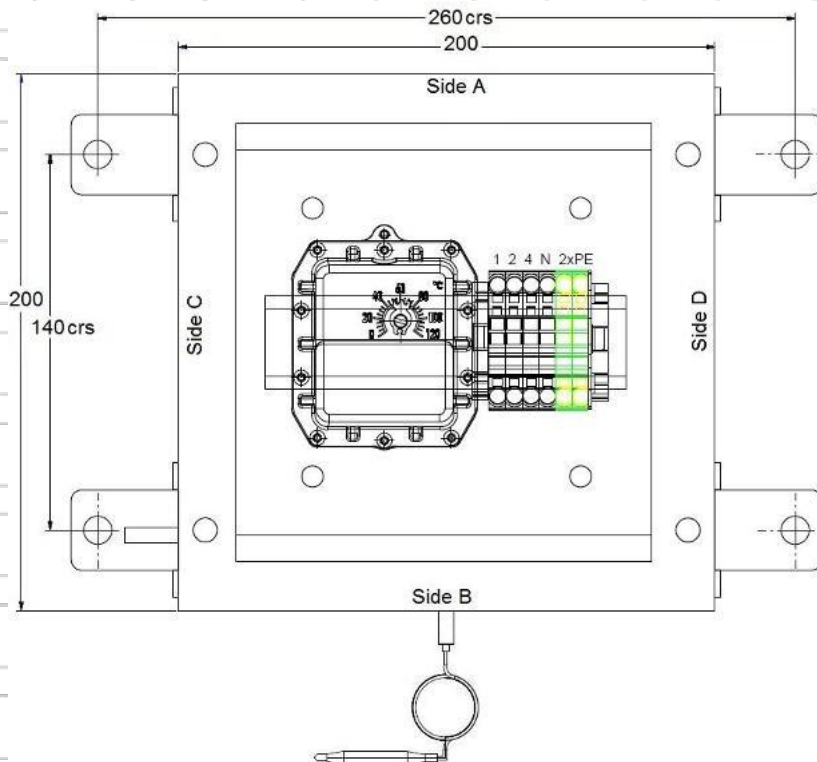
Typical Schematic



(L1) (2) (4) = Terminal identis

F1: MCB (by others)

Internal Layout



IB2M..VAEx

Fail-safe capillary temperature limiter in stainless steel enclosure (1.4404 / 316L) for use in hazardous area.



Mechanical Controller Ex



- Compact design
- 25A/230V AC switching capacity
- Robust & rugged design
- 4/6mm sensor diameter
- Highly resistant to aggressive chemicals
- Wide temperature range of 0...+500°C

Description

The IB2M..VAEx series of fail-safe capillary thermostat consist of capillary type temperature limiter with mechanical change-over contacts in a robust and rugged stainless steel enclosure.

This robust enclosure is used in applications for controlling and connecting constant wattage heating tapes and heating cables in hazardous areas.

These stainless steel enclosures are approved according to ATEX, IECEx and NEMA4X and have proven themselves extremely well under harsh conditions and for food & hygienic areas.

Aggressive chemicals or severe mechanical impacts cannot harm or even damage these rugged & robust enclosures.



Technical Data

Permitted Ambient Temp.:	-55°C ... +40 C in T6
Material:	Stainless steel 1.4404 / 316L
Protection Class:	IP66
Dimensions (LxWxH in mm):	200 x 200 x 120

Marking

- II 2G Ex eb db IIC T6 Gb
- II 2D Ex tb IIIC T80 C Db IP65

Certificates

ATEX, IECEx

Further Information

Please consult the installation instructions

Ordering Information

Fail-safe temperature limiter	IB2M VAEx
Code temperature range (see code below)	
Stainless steel and Ex version	

Available Temperature Ranges

Limiter (Safety temperature limiter):

- Code: 1319 = +130...+190 C
- Code: 0719 = +70...+190 C
- Code: 1530 = +150...+300°C
- Code: 1450 = +140...+500°C

Example

IB2M1530VAEx
(Limiter with temperature range: +150...+300 C)



IB2M..VAEx



Additional Technical Data

Rated Voltage: 230V AC
(400V upon request)

Rated current (cos φ = 1): 25A

Switching point deviation:

Temperature Range in °C	Deviation approx (% of full scale)	Sensor Diameter (mm)
+130...+190°C	+0/-7	4
+70...+190°C	+0/-7	4
+150...+300°C	+0/-7	6
+140...+500°C	+0/-7	6

Max. permitted sensor temp.: +15% of full scale
or max. +25K

Capillary length: 1,000mm
(3,000mm upon request)

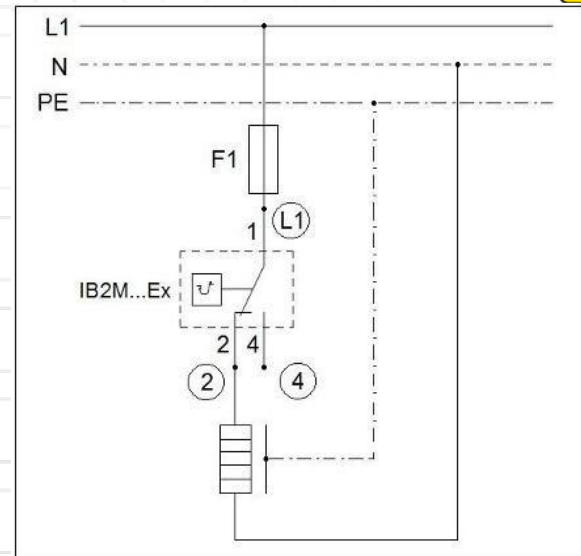
Bulb diameter: 4mm / 6mm

Cable glands: 1x M25 Ni-plated brass
1x M20 Ni-plated brass

Terminal cross section: 0.5 – 6mm²
(solid or stranded cable)

Weight: ca. 3.5kg

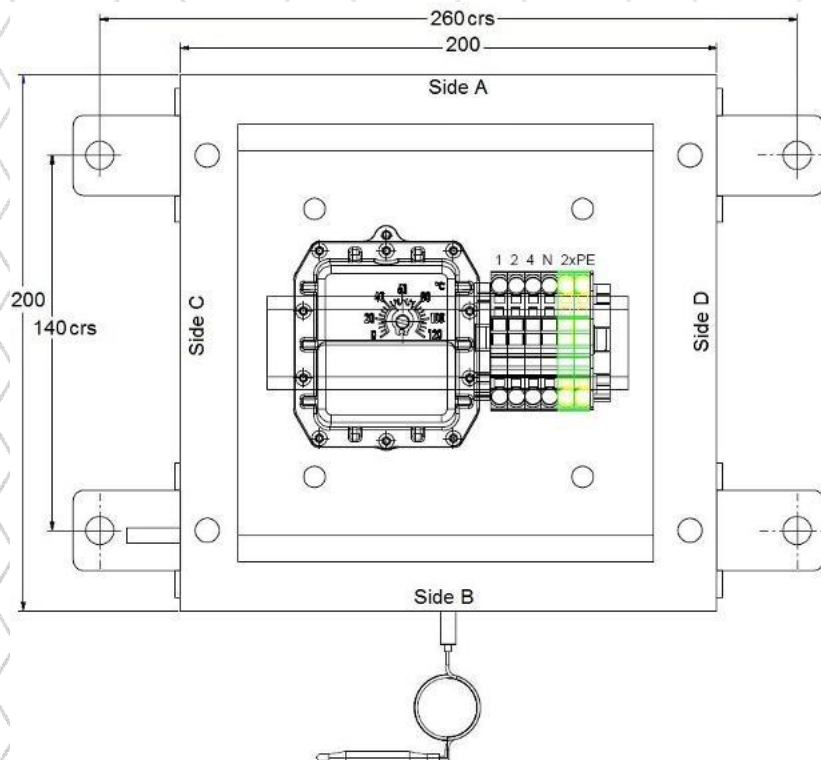
Typical Schematic



(L1) (2) (4) = Terminal identis

F1 = MCB (by others)

Internal Layout



IRB2M...VAEx



Fail-safe capillary temperature controller-limiter combination in stainless steel (1.4404 / 316L) for use in hazardous area.

Mechanical Controller Ex



- Compact design
- 25/230V AC switching capacity
- Robust & rugged design
- 4/6mm sensor diameter
- Highly resistant to aggressive chemicals
- Huge temperature range -20...+500°C

Description

The IRB2M..VAEx series of fail-safe temperature devices consist of capillary type thermostats with mechanical change-over contacts in stainless steel enclosures. These are commonly used in applications for controlling and connecting single-core heating cables in hazardous areas.

The combination of limiter & thermostat allows simple and space-saving connections for electrical trace heating circuits. These stainless steel enclosures are approved to ATEX/ IECEx and NEMA 4X and have proven themselves extremely well under harsh environmental conditions and for food & hygiene areas.



These rugged & robust enclosures stand up well to aggressive chemicals and severe mechanical impacts.

Technical Data

Permitted Ambient Temperatures:	-55 C ... +40 C in T6
Material:	Stainless Steel 1.4404 / 316L
Protection Class:	IP66
Dimensions (LxWxH in mm):	300 x 200 x 120

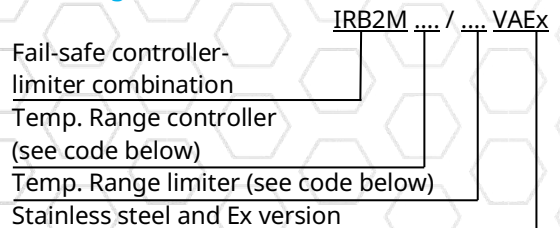
Marking

- Ex II 2G Ex eb db IIC T6 Gb
- Ex II 2D Ex tb IIIC T80 C Db IP65

Approval

ATEX, IECEx

Ordering Information



Available Temperature Ranges

Controller and limiter:	
Code: -0205	= -20...+50°C (controller only)
Code: 0012	= 0...+120°C (controller only)
Code: 1319	= +130...+190°C (limiter only)
Code: 0019	= 0...+190 C (controller only)
Code: 0719	= +70...+190°C (limiter only)
Code: 0630	= +60...+300°C
Code: 1450	= +140...+500°C

Ordering Example

IRB2M -0205/0719VAEx
(controller: -20...+50°C, limiter: +70...+190 C)

Further Information

Please consult the installation instructions.



IRB2M...VAEx



Additional Technical Data

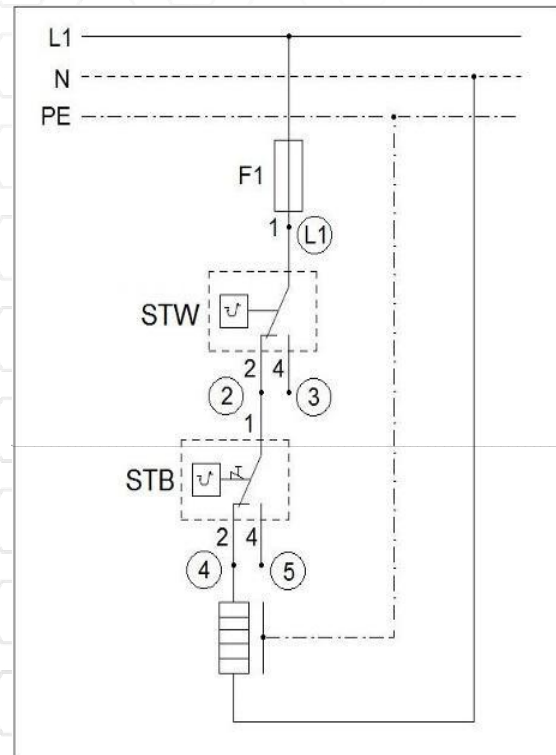
Rated Voltage: 230V AC
(400V upon request)

Rated Current (cos φ = 1): 25A

Switching Point Deviation:

Typical Schematic

Temperature Range in °C	Controller approx (% of full scale)	Limiter approx (% of full scale)
-20...+50°C	+7/-0	-/-
0...+120°C	+7/-0	-/-
+130...190°C	-/-	+0/-7
0...+190°C	+7/-0	-/-
+70...+190°C	-/-	+0/-7
+60...+300°C	+7/-0	+0/-7
+140...+500°C	+7/-0	+0/-7



Max. Permitted Sensor Temperature: +15% of full scale or +25K max

Capillary Length: 1,000mm
(3,000mm upon request)

Sensordurchmesser: 4mm/ 6mm

Cable Glands: 1x M25 Ni-plated brass
2x M20 blind plug

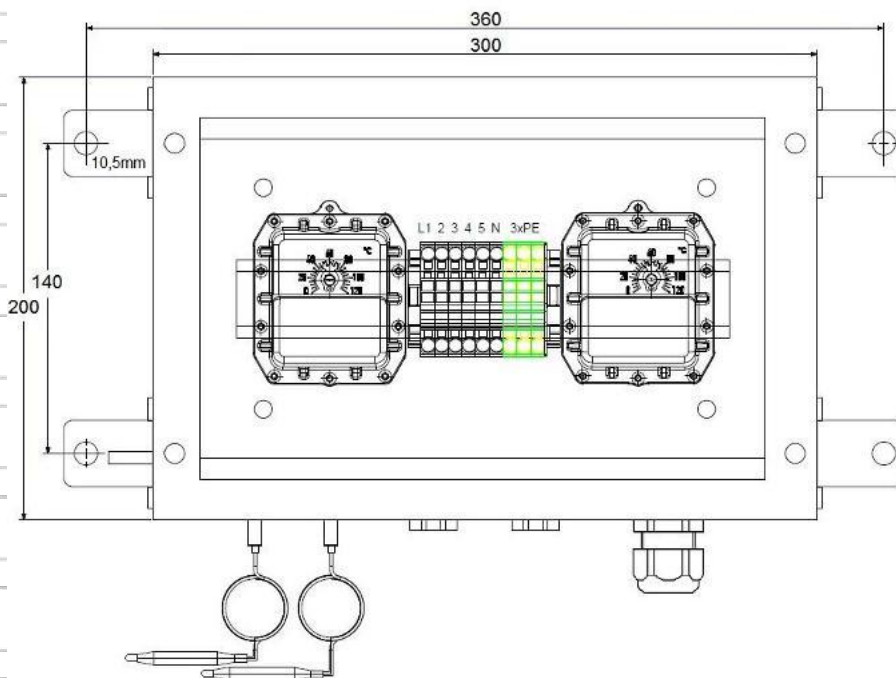
Terminal Cross Section: 0.5 - 6mm
(single- or fine-wired)

Weight: ca. 6.0kg

(L1) (2) (3) (4) (5) = Terminal idents

F1 = MCB (by others)

Internal Layout



IRM...Exd

Ex d mechanical temperature controller for use in hazardous area.



Mechanical Controller Ex d



- Robust design, IP66
- 25A/250V switching capacity
- 4mm spring clamp terminals
- 5.8mm diameter stainless steel bulb
- 1.6m long capillary tube

Description

The IRM Ex d-Series temperature controllers are mechanical 2-point capillary tube line-sensing thermostats.

The epoxy painted die-cast aluminium enclosure is very robust for harsh environments and can be used for direct connection of heating circuits with approved cable glands.

This temperature controller can be used for direct switching by the n/c contact up to 25A. The temperature set point is fully adjustable; the n/c contact opening on temperature rise.

Standard colour is cream-white RAL 9010 but other colour finishes are available upon request.



Technical Data

Min. Ambient Temperature: (-55 C upon request)	-40 C
Switching Capacity: (16A/ 400V AC upon request)	25A/250V AC
Temperature Class:	T6 at +55 C
Protection Class:	IP66

Marking

- II 2G Ex db IIB T6 Gb
- II 2D Ex tb IIIB T120 C Db IP66

Approval

ATEX

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IRM040Exd:	Temperature range: 0...+40 C
IRM0120Exd:	Temperature range: 0...+120 C
IRM0200Exd:	Temperature range: 0...+200 C
IRM70320Exd:	Temperature range: +70...+320 C



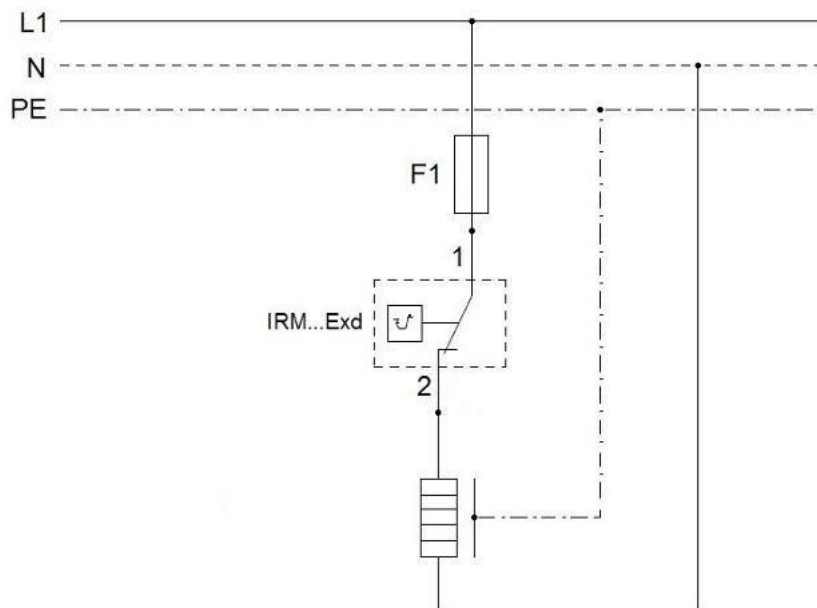
Standard Versions



Technical Data

IRM...Exd	040	0120	0200	70320
Voltage Rating (V AC)	250	250	250	250
Switching cap.: (cos φ = 1) (A)	25	25	25	25
Switching Difference (K)	2 1	3 1	12 6	30 5
Max. Sensor Temperature (°C)	45	144	230	350
Protection Class	IP66	IP66	IP66	IP66
Capillary Tube Length (in mm)	1600	1600	1500	1500
Sensor Bulb Dimensions (in mm)	126 x 5.8	106 x 5.8	179 x 3.0	135 x 3.0
Enclosure Dimensions overall (LxWxH in mm) (110mm)	145x126x108	145x126x108	145x126x108	145x126x108
Fixing crs (in mm)	7.0 x 126	7.0 x 126	7.0 x 126	7.0 x 126
Blind Plugs M20	2	2	2	2
Spring Clamp Terminal (in mm)	4	4	4	4
Approximate Weight (in kg)	1.3	1.3	1.3	1.3

Typical Wiring Diagram



IBM190Exd

Ex d mechanical temperature controller for use in hazardous area.



Mechanical Controller Ex d



- Robust design, IP66
- 20A/250V switching capacity
- 2,5mm spring clamp terminals
- 6.0mm diameter stainless steel bulb
- 2.0m long stainless steel capillary tube

Description

The IBE190Exd Ex temperature limiter is a mechanical 2-point capillary tube limiter.

The powder-coated die-cast aluminum housing is very robust and especially suitable for harsh environments. Heating circuits can be inserted directly using approved Ex d cable glands.

The limiter switches heating circuits directly up to 20A.

If the limiter temperature is exceeded, the contact opens. After the contact is triggered, a manual reset must be carried out on the device.



Technical Data

Min. Ambient Temperature:	-40 C
Switching Capacity:	20A/250V AC
Temperature Class:	T6 at +55 C
Capillary Tube Length:	2000mm
Protection Class:	IP66
Max. Bulb Temperature:	+270 C
Cable Glands:	2x M20 Blind Plug
Terminals:	2,5mm spring clamp terminals
Dimensions:	145x126x108 mm
Enclosure Colour:	cream-white RAL 9010

Marking

- Ex II 2G Ex db IIB T6 Gb
- Ex II 2D Ex tb IIIB T120 C Db IP66

Approval

ATEX

Further Information

Please consult the installation instructions!



IRE16E Exd

Ex d electronic temperature controller for use in hazardous area.



Electronic Controller Ex



- Electronic 2-point controller with potential-free fault signaling contact
- Robust design, IP65
- Easy programming from outside possible
- LED Display for actual value

Description

The Ex-approved electronic temperature controller type IRE16E Exd is an easy-to-operate 2-point controller and has a bright, easy-to-read LED display.

The controller is characterized by simple handling, which is also possible in the Ex zone by means of a magnetic switch.

The IRE16E EXd control unit has all the important setting options to enable safe and economical operation of a trace heating system

Standard colour is signal yellow RAL 1003.



Technical Data

Rated voltage:	230V~ ± 10%
Switching Capacity:	1 NO/NC 16A/230V 1 NO/NC 8A/230V
Switching-Accuracy:	0,5%
Ambient Temperature:	-20°C ... +55°C
Measuring range:	-200°C ... +650°C
Sensor:	Ex e Pt100
Protection Class:	IP 65
Clamping range Spring-cage terminals:	2.5mm
Cable glands:	3x M25 (4-12mm)

Marking

- II 2G Ex db IIB T6/T5 Gb
- II 2D Ex tb IIIB T120 C Db IP65

Approval

ATEX

Ordering Information

Part number: IRE16E Exd Electronic controller in Ex-d enclosure

Alternative Products

Part number: IR2M...Ex Mechanical Capillary-Tube Thermostat

Further Products

Part number: IR2PT100EX3CF... PT100 temperature sensor for Ex area



IRE168DS

Electronic temperature controller for use in non-hazardous area.



Electronic Controller non-Ex



- Compact design
- Multi-Voltage-Input
- 2-line display (Set- and Actual-Value)
- 4-20mA Output (Process-Value)
- Analog input for 3-wire PT100

Description

The IRE168DS is engaged on a DIN-Rail TS 35. The Dimension of 69 x 85 x 62 mm allows an ideal utilization of the cabinet.

The controller is available as 2 point- or PID-controller. High temperatures can be measured by means of 3-wire PT100. The IRE168DS has all adjustment features that are required for electric heat-tracing with easy handling.

Furthermore the two-line display allows to see the set- and actual value simultaneously.



Technical Data

Rating:	100-240V AC~ ± 10%
Switching-Capacity:	1 change-over contact 16A 1 on-contact 8A
Switching-Accuracy:	0,5% of scale range +1 digit at 25 C
Operating-/ Storage-Temperature:	-5..+55 C -20..+85 C
Temperature Range:	-200...+800°C
Dimensions (LxWxH in mm):	70 x 85 x 61
Wattage:	max. 4W

Further Information

Please consult the operation instructions!

Ordering Information

Part number:
IRE168DS: Electronic Controller 16+8A

Alternative Products

Part number:
IRM040b: Mechanical line-sensing capillary temperature controller (see datasheet)

Further Products

Part number:
IRPT100: PT100 temperature sensor 3-wire



IRE168 AG

Electronic temperature controller for use in non-hazardous area, pre-assembled in enclosure.



Electronic Controller non-Ex



- Compact design
- Analog input for 3-wire PT100 sensors
- Multi-Voltage-Input
- Installed in robust enclosure with window
- 4-20mA Output (Process-Value)
- 2-line display (Set- and Actual-Value)

Description

The Controller is installed in a glass fiber enhanced polyester enclosure, completely wired to clamps. Through the window you can see Set- and Process-Value anytime.

The Controller is available as 2 point- or PID-Controller. High temperatures can be measured by means of 3-wire PT100. The Controller supports all adjustment features that are required for electrical heat-tracing with easy operation.

Furthermore the two-line display allows to see the set- and actual value simultaneously.



Technical Data

Rating:	100-240V AC \pm 10%
Switching-Capacity:	1 Change-Over 16A/230V 1 On-Contact 8A/230V
Switching-Accuracy:	0.5% of scale range +1 Digit at 25 C
Cable Glands:	3xM20, 1xM12
Operating-/ Storage-Temperature:	-5..+55 C -20..+85 C
Temperature Range:	-200...+800°C
Dimensions (LxWxH in mm):	260 x 160 x 90
Wattage:	max. 4W

Ordering Information

Part number:
IRE168AG: Electronic controller 16+8A in
Enclosure

Alternative Products

Part number:
IRM040b: Mechanical capillary tube thermostat

Further Products

Part number:
IRPT100: PT100 temperature sensor
3 wire

Further Information

Please consult the operation instructions!



IRE168DS Exi



Electronic Temperature Controller for use with PT100 temperature sensors.

Exi Electronic Controller



- Compact Design
- Multi-Voltage Input
- 2-line Display (Set- and Process Values)
- 16A & 8A Volt-free Output Contacts
- Password Protected

Description

The IRE168DS Exi is an electronic device, part of a trace heating system, mounted in a safe area. Any Pt100 temperature sensor can be installed in a hazardous area and becomes a component of the intrinsically safe circuit when connected to this electronic controller.

Its design allows it to be either rail mounted on a standard TS35 DIN-rail or panel mounted through a 70 x 45 mm cut-out.



Technical Data

Rating:	100-240V AC
Switching Capacity:	1 x 16A c/o contact 1 x 8A n/o contact
Switching Accuracy:	0,5% of Scale Range +1 Digit at 25 C
Operating- / Storage-temperature:	-5 C to +55 C -20 C to +85 C
Temperature Range:	-200 C to +800 C
Power Consumption:	max. 4W
Sensor Loop:	$U_o = 3.72V$ $I_o = 0.433A$ $P_o = 1.057W$
Max. ext. capacity:	$C_o = 8.8\mu F$
Max. ext. inductance:	$L_o = 95\mu H$
Dimensions (LxWxH):	71 x 86 x 62mm
Panel Cut-Out:	70 x 45mm
Weight:	185 g

Marking

Ex II (2) G [Ex ib] IIC/IIB Gb

Certificates

ATEX

Ordering Information

Part-Number:
IRE168DS Exi: Electronic Controller 16+8A

Further Products

Part-Number:
IRPT100: 3-wire 2.5m PT100 Sensor

Terminal Connections

Terminal	Description
10/11/12	Sensor Connection
13/14/15	16A SPDT c/o Contacts
18/19	Power Supply 100-240V
23/24	8A SPST n/o Contacts

Further Information

Operating instructions must be observed.



IRPT100

PT100 temperature sensor for use in non-hazardous area.



Temperature Sensor non-Ex



- Compact design
- Very flexible due to silicone cable
- Up to 180 C
- 3-wire design
- According to latest standards

Description

The IRPT100 is a PT100 temperature sensor with a very flexible silicone cable.

Due to the short sensor and the flexible cable the IRPT100 can be fitted easily to almost any measuring point.

The wide temperature range of -50°C...+180 C allows a wide range of applications.



Technical Data

Rating Voltage:	max. 60V
Measurement Range:	-50...+180°C
Signal Circuit:	max. 1mA AC/DC
Sensor Diameter:	6mm
Sensor Length:	50mm
Supply Cable Length:	
IRPT100:	2,500mm
IRPT100 10M0:	10,000mm
Measurement System:	3-wire

Ordering Information

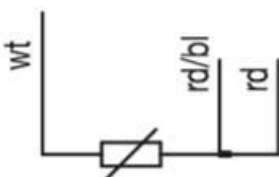
Part number:	
IRPT100:	2,500mm cable length
IRPT100 10M0:	10,000mm cable length

Alternative Products

Part number:	
IRPT100Ex/CF:	PT100 temperature sensor For hazardous area with PTFE feeding cable.

Additional Products

Part number:	
IRE168DS:	Electronic controller 2 relay 16+8A
AG 99:	Enclosure for PT100 temperature sensors



IR2PT100Ex3CF

PT100 temperature sensor for use in hazardous area.



Temperature Sensor Ex



- Compact design
- High resistance to chemicals
- Antistatic
- Resistant to corrosion/ UV resistant
- Individualized versions available

Description

The IR2PT100Ex3CF temperature sensor is very flexible in use thanks to its PFA insulated connection cable.

Because of the short 50mm sensor bulb the IR2PT100Ex3CF can be easily attached to almost any measurement point.

The large measurement range of -50 °C ... + 220 °C also enables a broad range of applications.



Technical Data

Rated Voltage:	max. 60V
Rated Current:	max. 5mA
Measurement Range:	-50°C...+220°C
Sensor Diameter/ Length:	6mm/50mm
Cable Outer Sheet Material:	PFA
Wire Cross Section (Nickel-Plated Copper):	0.22mm
Cable Length:	2.0 / 5.0 / 10.0m
Measurement System:	3-wire (2- and 4-wire upon request)

Marking

- II 2G Ex eb IIC T6...T1 Gb
- II 2D Ex tb IIIC T85°C...T220°C Db IP68

Approval

ATEX

Ordering Information

Part number:
IR2PT100Ex3CF 2M0: with 2m PFA cable
IR2PT100Ex3CF 5M0: with 5m PFA cable
IR2PT100Ex3CF 10M0: with 10m PFA cable

Alternative Products

Part number:
IRPT100: PT100 temperature sensor for use in non-hazardous area

Further Products

Part number:
AG 99 Ex: Ex-junction box for 1-2 temperature sensors
IRE168DS: Electrical control unit 16A+8A Relay, 4-20mA output (for non-hazardous area)

Further Information

Operating instructions must be observed!

IRPT100Ex3

PT100 temperature sensor for use in hazardous area.



Temperature Sensor Ex

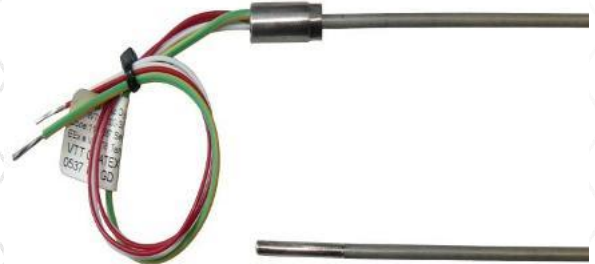


- Compact design
- Very flexible due to 3mm outer diameter
- Up to 550 C
- 4-wire design
- According to latest standards

Description

Because of the small outer diameter of 3mm, the IRPT100Ex3 temperature sensor is very flexible to use. The IRPT100Ex3 is a 3mm thick, 1.000 mm long sheathed cables, which is filled with magnesium oxide. The flexible part starts immediately after the 25mm long sensor head and thus provides maximum flexibility.

The wide temperature range of -50...+550°C allows a wide range of applications.



Technical Data

Rated Voltage:	max. 60V
Measurement Range:	-50...+550°C
Max. Temperature:	
Sensor Head:	+550 C
Terminals:	+125 C
Signal Circuit:	max. 10mA AC/DC
Sensor Diameter:	3mm
Sensor Head Length:	25mm
Flexible Part Length:	975mm
Measurement System:	4-Leiter

Approval

ATEX

Marking

- Ex II 2GD Ex e II T1-T6
- Ex II 2GD Ex tD A21 IP66 T 60 C

Ordering Information

Part number: IRPT100Ex3

Additional Products

- Part number: IRE168DS: Electronic controller 2 relay 16+8A
- AG 99 Ex: Ex-Enclosure for PT100 temperature sensors

Further Information

Please consult the installation instructions!



Adhesive Tapes

Adhesive tapes for fixing heating cables and for a better heat transfer.



Mounting Accessories



Aluminium tape



- Part number: ALK150
- Length: 50m
 - Width: 50mm
 - Temp. resistant: up to 150 C
 - Thickness: 300 m

- Part number: ALK1 150m
- Length: 100m
 - Width: 75mm
 - Temp. resistant: up to 150 C
 - Thickness: 300 m

Polyester tape



- Part number: PEK100
- Length: 50m
 - Width: 19mm
 - Temp. resistant: up to 100 C
 - Thickness: 160 m

Cloth adhesive tape



- Part number: GEK130
- Length: 50m
 - Width: 12mm
 - Temp. resistant: up to 130 C
 - Thickness: 120 m

Glass fiber Tape



- Part number: GSK180 / GSK180B
- Length: 50m
 - Width: GSK180: 12mm
GSK180B: 19mm
 - Temp. resistant: up to 260 C
(Bandaging)
 - Therman Class: H 180 C
 - Thickness: 180 m



FIXING TAPE SB1-SB4

FIXING CLIP SC1-SC4



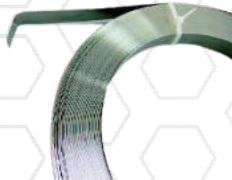
Installation Equipment



SB 1



SB 2



SB 3



SB 4



SC 1



SC 2



SC 3



SC 4



Part number	SB 1	SB 2	SB 3	SB 4
Length	30 meter	30 meter	piece goods	piece goods
Width	9.5mm; 3/8"	19mm; 3/4"	14mm; Rillenband	16mm
Thickness	0.64mm; 0.025	0.75mm; 0.03"	0.64mm; 0.025"	0.85mm; 0.033
Weight	45g / meter	130g / meter	55g / meter	12g / meter
Material	stainless steel, 1.4310	stainless steel, 1.4310	stainless steel, 1.4310	polyester
Dimensions (LxWxH in mm)	100 x 9.5 x 0.64	245 x 245 x 24	1000 x 14 x 0.64	1000 x 16 x 0.85
Part number	SC 1	SC 2	SC 3	SC 4
Quantity	100 pcs	100 pcs	1 pc	1 pc
Width (tape)	9.5mm; 3/8"	19mm; 3/4"	14mm; notch belt	16mm
Thickness (tape)	0.64mm; 0.025	0.75mm; 0.3"	0.64mm; 0.025"	0.85mm; 0.033
Weight	2g/ piece	17g/ piece	19g/ piece	12g/ piece
Material	stainless steel, 1.4310	stainless steel, 1.4310	stainless steel, 1.4310	stainless steel, 1.4310
Dimensions (LxWxH in mm)	110 x 85 x 48	148 x 120 x 80	34 x 19.5 x 13.5	1000 x 16 x 0.85



Mounting Accessories

Mounting accessories for electrical trace heating.



Mounting Accessories



Labels



Part number: KZ..

Dimensions: 175x80mm
Adhesive: permanent, acryl basis
UV-resistant

Available languages:

German → KZD
English → KZE
French → KZFR
Russian → KZR
Spanish → KZS
Finnish → KZF
Polish → KZP

Further languages available upon request.

Insulation Bushing



Part number: ID1 S/B

Insulation bushing for supply cable/ heating cable/ sensor cable protection.

Content:

Mounting plate,
M20x1.5 cable gland incl. counter nut,
round gasket + reduction inset
(clamping zone: 4-12mm),
as well as flat gaskets for ILL..S, ILLw, ILM, ILH
and ILS heating cables. (up to 100 C)

Cable Ties



Part number: PKB..

Cable ties for mounting heating tapes to e.g. pipes or wire mat.

Temperature resistant up to 80 C.
UV-resistat. Packing unit = 100 pcs.

Options:

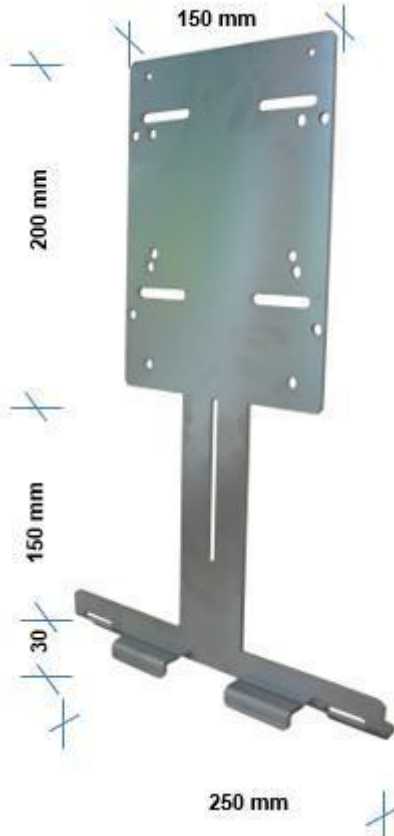
PKB1: Length: 100mm, Width: 2.5mm
PKB2: Length: 200mm, Width: 4.5mm
PKB3: Length: 280mm, Width: 4.5mm
PKB4: Length: 360mm, Width: 4.5mm
PKB5: Length: 450mm, Width: 7.5mm
PKB6: Length: 540mm, Width: 7.5mm
PKB7: Length: 780mm, Width: 9.0mm



Mounting Brackets

For mounting enclosures and thermostats to pipe-work and vessels.

Mounting Brackets



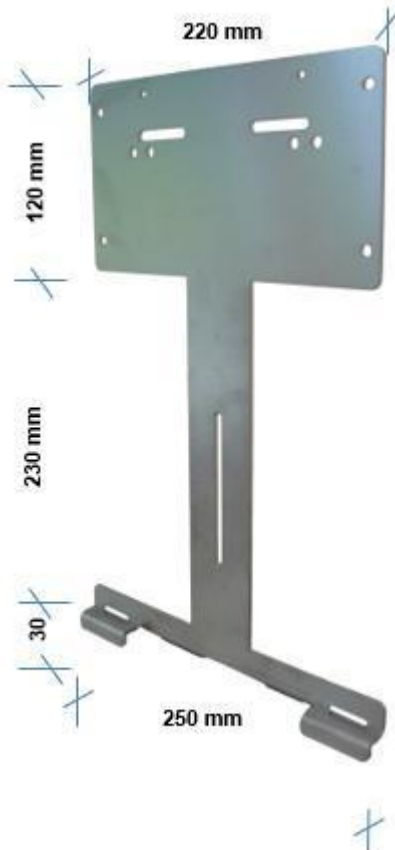
Part number: MW 1
 Description: Mounting bracket in stainless steel (1.4301) for following enclosure/ thermostat sizes:

- 122 x 120 x 90mm
- 160 x 160 x 90mm
- 110 x 75 x 55mm

Part number: MW 1 S

Description: Mounting bracket MW 1 incl. following mounting accessories:

- 2x1m stainless steel fixing strap SB3 (14 mm wide)
- 2 pcs. turnbuckles SC3
- Screws, nuts and washers to assemble the enclosure



Part number: MW 2
 Description: Mounting bracket in stainless steel (1.4301) for following enclosure/ thermostat sizes:

- 220 x 120 x 90mm

Part number: MW 2 S

Description: Mounting bracket MW 2 incl. following fixing accessories:

- 2x1m stainless steel fixing strap SB3 (14 mm wide)
- 2 pcs. turnbuckles SC3
- Screws, nuts and washers to assemble the enclosure.

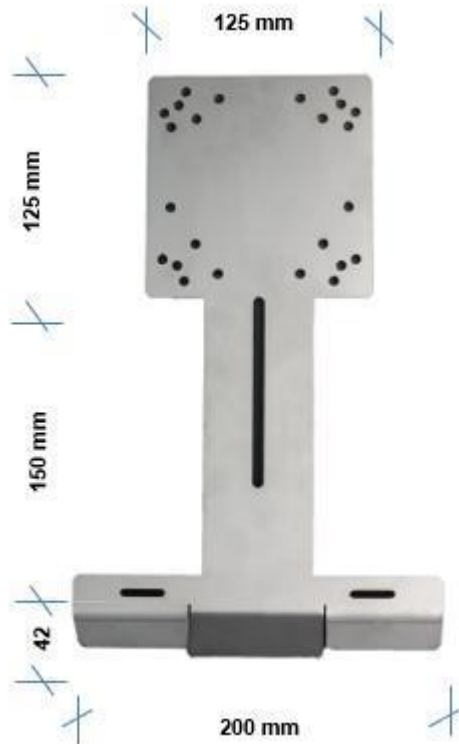


Mounting Brackets



For mounting enclosures and thermostats to pipe-work and vessels.

Mounting Brackets



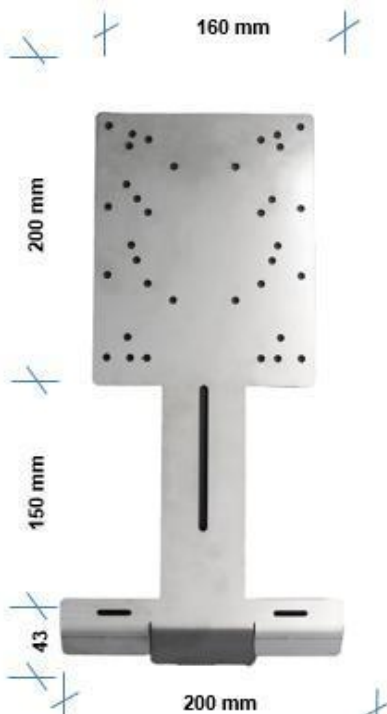
Part number: MW 4
Description: Mounting bracket in stainless steel for following enclosure/ thermostat sizes:

- 110 x 75 x 55mm
- 122 x 120 x 90mm

Part number: MW 4S

Description: Mounting bracket MW 4 incl. following mounting accessories:

- 2x1m stainless steel fixing strap SB3 (14 mm wide)
- 2 pcs. turnbuckles SC3
- Screws, nuts and washers to assemble the enclosure



Part number: MW 5
Description: Mounting bracket in stainless steel for following enclosure/ thermostat sizes:

- 160 x 160 x 90mm

Part number: MW 5S

Description: Mounting bracket MW 5 incl. following fixing accessories:

- 2x1m stainless steel fixing strap SB3 (14 mm wide)
- 2 pcs. turnbuckles SC3
- Screws, nuts and washers to assemble the enclosure.



CH-....



Constant wattage compact heater for application in hazardous area.

Heating Device Ex

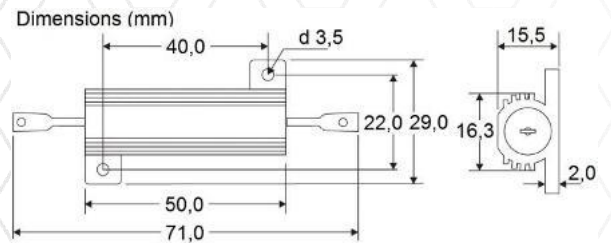


- Compact design
- Easy to use
- Heating resistance
- Robust construction
- Frost protection
- Anti condensation heating

Description

The Compact Heater can be used as a frost protection device or anti-condensation heater for enclosures, small control cabinets and electronic devices in 'Ex'-enclosures. To aid heat dissipation inside enclosures it is recommended to have a good contact to wall surface.

Based on the 'U' approval the temperature class is determined by a thermal check of the application by the user. By this method the use of a temperature limiter is not necessary (refer to approval), but can be used if required. For 'Ex' applications the Compact Heater must be mounted in an 'Ex' approved enclosure.



Technical Data

Material:	Aluminium Housed
Weight (approx.):	30g (without leads)
Dimensions LxWxH (in mm):	50 x 16.3 x 15.5 (others upon request)
Fixing Holes:	2 x 3.5mm
Fixing Centers (in mm):	40 x 22
Connection Cables:	2 x 0.5m x 1.5mm flying leads
Power Characteristics:	Constant Wattage
Power Output (W):	6 or 12 (others upon request)
Power Supply:	230V or 24V (others upon request)
Type of Heater:	Wire-Wound Resistor
Min/Max. Temperature:	-60°C/+200 C.
Temperature Class:	Defined by User

Certificates

ATEX, IECEx

Marking

Ex II 2G Ex eb IIC Gb

Possible Applications

Frost protection, anti-condensation heating within Ex-enclosures, protection of electronic devices & PCB's.

Selection Table

Power Supply (V)	Power Output (W)	Order No.
230	6	CH-230-006-05/050
230	12	CH-230-012-05/050
24	6	CH-024-006-05/050
24	12	CH-024-012-05/050



IH2 65 2 200



Self-limiting heating plate certified for use in hazardous area.

Heating Plate Ex



- Self-limiting characteristic
- Compact design
- Depending on version T3, T4, T5, T6
- Different versions available from 10W up to 1kW
- Uniform heat distribution

Description

The heating plate type "Quintherm IH2" is a self-limiting heating plate. This compact heating plate has a uniform heat distribution over the whole surface.

Due to its infinite mounting positions, the heating plate is suitable very well for small cabinets and narrow rooms. Depending on size and output available for Ex-temperature classes T3 – T6.

Possible Applications

- Heating of cabinets
- Condensation prevention
- Heating of pumps

And other typical heating plate applications.



Technical Data

Nominal Supply Voltage:	U_N 230V AC
Rated Voltage:	$U_{max.}$ 277V AC
Power Output:	ca. 65W at +5 C
Protection Class:	IP 65
Ambient Temperatures:	-55°C...+85°C
Temperature Class:	T4
Feeding Cable:	2m 3G1.5mm Radox
Dimensions (LxWxH in mm):	225 x 82 x 69
Installation Position:	any
Weight:	ca. 2.3 kg

Marking

- Ex II 2G Ex mb IIC T4 Gb
- Ex II 2D Ex mb IIIC T135 C Db

Approval

ATEX, IECEx, UKEX

Ordering Information

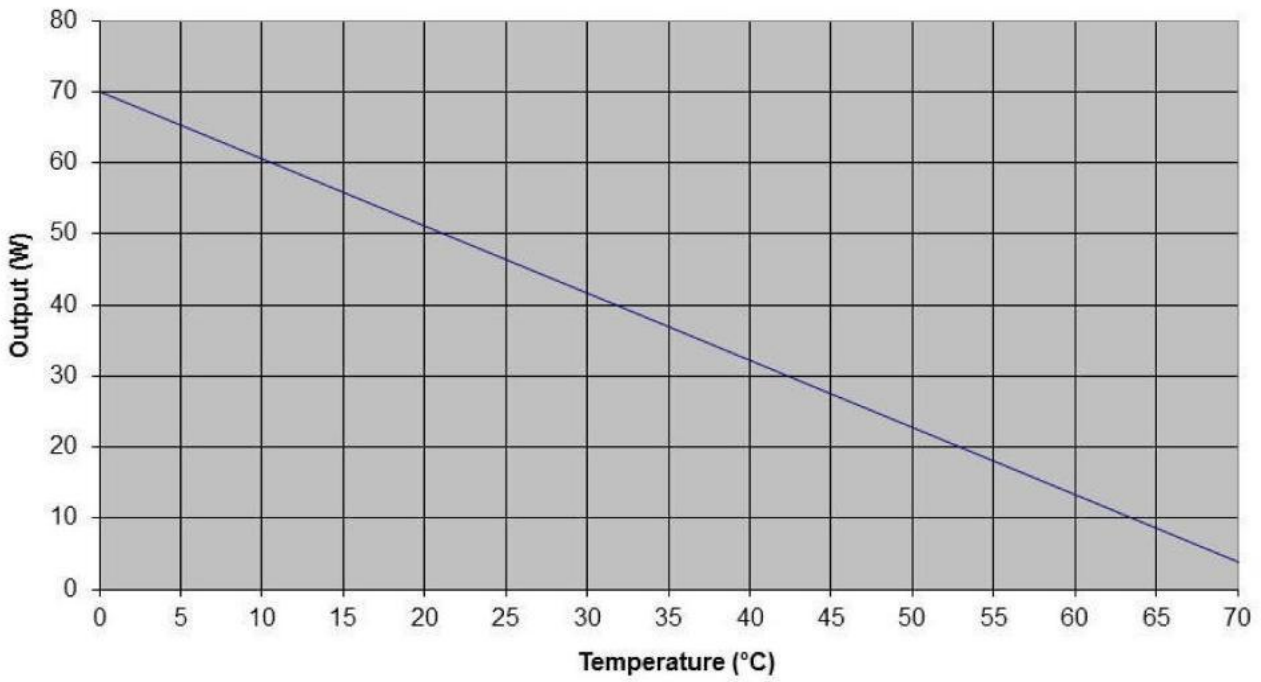
Industrial heating plate	IH2 65 2 200
Power output at +5 C	
Nominal supply voltage (230V)	
Length feeding cable (cm)	

Additional Products

Part number:
IRM2Ex/AG: Frost Guard thermostat (see data sheet)



Output Characteristic Curve



IH2 130 2 200



Self-limiting heating plate certified for use in hazardous area.

Heating Plate Ex



- Self-limiting characteristic
- Compact design
- Depending on version T3, T4, T5, T6
- Different versions available from 10W up to 1kW
- Uniform heat distribution

Description

The heating plate type "Quintherm IH2" is a self-limiting heating plate. This compact heating plate has a uniform heat distribution over the whole surface.

Due to its infinite mounting positions, the heating plate is suitable very well for small cabinets and narrow rooms. Depending on size and output available for Ex-temperature classes T3 - T6.

Possible Applications

- Heating of cabinets
- Condensation prevention
- Heating of pumps

And other typical applications.



Technical Data

Nominal Supply Voltage:	U_N 230V AC
Rated Voltage:	U_{max} 277V AC
Power Output:	ca. 130W at +5 C
Protection Class:	IP 65
Ambient Temperatures:	-55°C...+85°C
Temperature Class:	T4
Feeding Cable:	2m 3G1.5mm Radox
Dimensions (LxWxH in mm):	280 x 200 x 40
Installation Position:	any
Weight:	ca. 4.3 kg

Marking

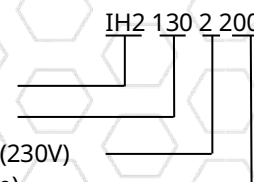
- II 2G Ex mb IIC T4 Gb
- II 2D Ex mb IIIC T135 C Db

Approval

ATEX, IECEX, UKEX, EAC

Ordering Information

Industrial heating plate
 Power output at +5 C
 Nominal supply voltage (230V)
 Length feeding cable (cm)

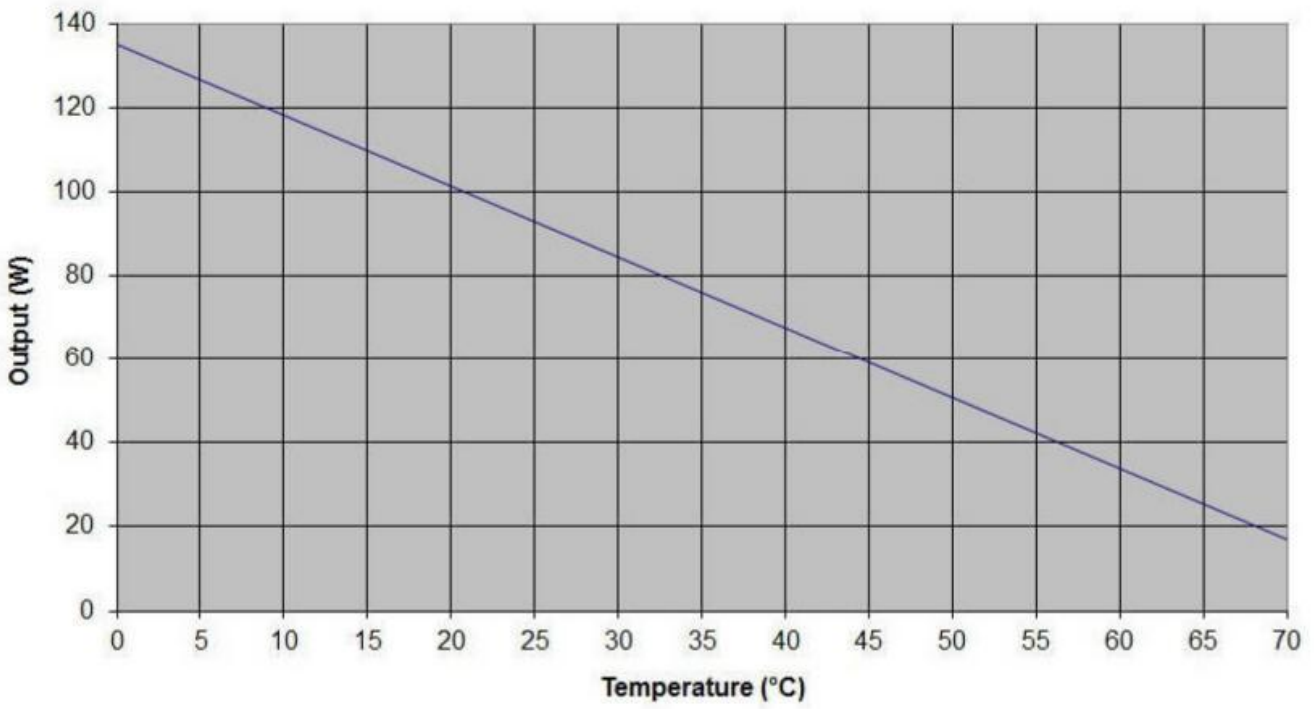


Additional Products

Part number:
 IRM2Ex/AG: Frost Guard (see data sheet)



Output Characteristic Curve



IH2 500 2 200



Self-limiting heating plate certified for use in hazardous area.

Heating Plate Ex



- Self-limiting characteristic
- Compact design
- Depending on version T3, T4, T5, T6
- Different versions available from 10W up to 1kW
- Uniform heat distribution

Description

The heating plate type "Quintherm IH2" is a self-limiting heating plate. This compact heating plate has a uniform heat distribution over the whole surface.

Due to its infinite mounting positions, the heating plate is suitable very well for small cabinets and narrow rooms. Depending on size and output available for Ex-temperature classes T3 – T6.



Possible Applications

- Heating of cabinets
- Condensation prevention
- Heating of pumps

And other typical heating plate applications.

Technical Data

Nominal Supply Voltage:	U_N 230V AC
Rated Voltage:	U_{max} 277V AC
Power Output:	ca. 500W at +5 C
Protection Class:	IP 65
Ambient Temperatures:	-55°C...+85°C
Temperature Class:	T3
Feeding Cable:	2m 3G1.5mm Radox
Dimensions (LxBxH in mm):	630 x 300 x 40
Installation Position:	any
Weight:	ca. 15 kg

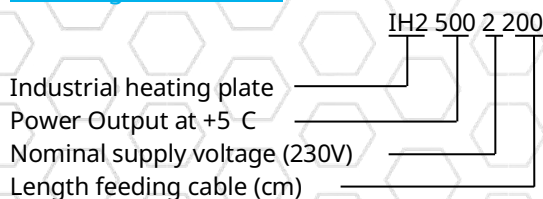
Marking

- II 2 G Ex mb IIC T3
- II 2D Ex mb IIIC T200 C Db

Approval

ATEX, IECEX, UKEX

Ordering Information



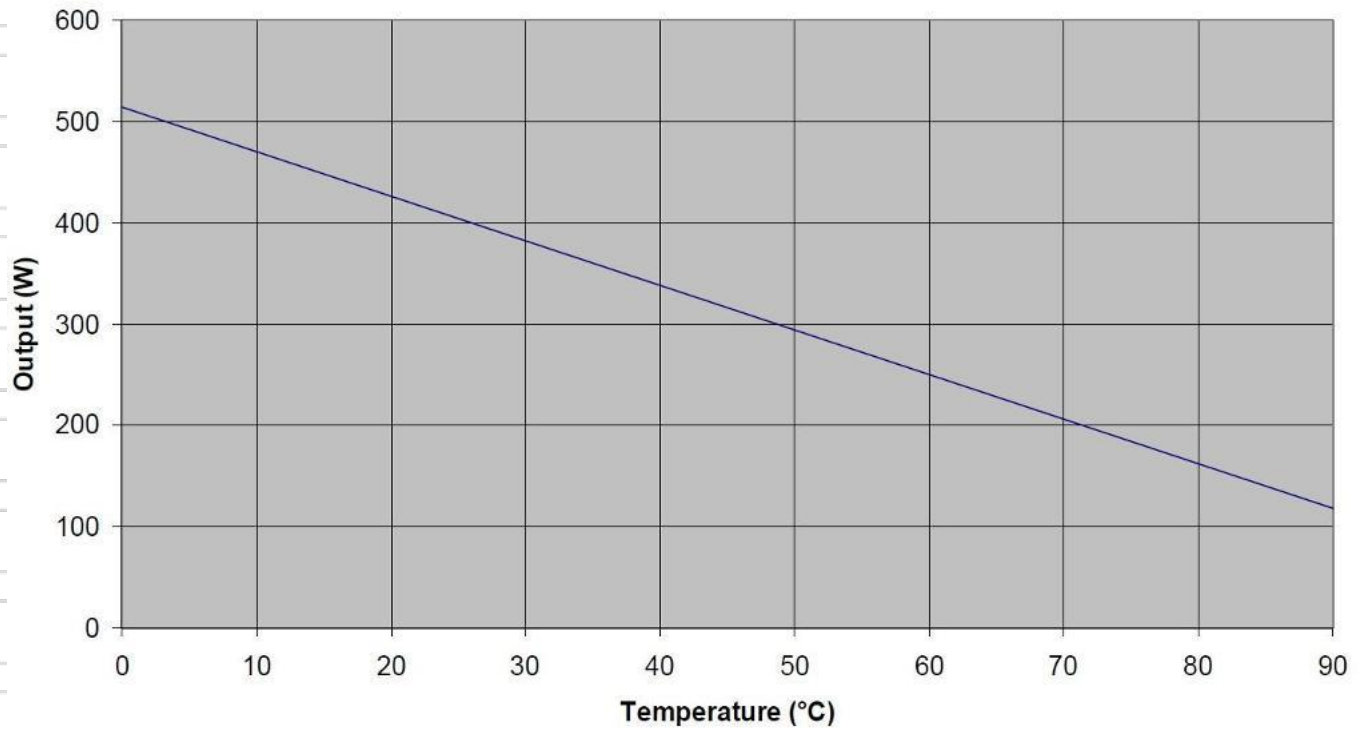
Additional Products

Product number:
IRM2Ex/AG: Frost Guard (see data sheet)



IH2 500 2 200

Output Characteristic Curve



IH2 1000 2 200

Self-limiting heating plate certified for use in hazardous area.



Heating Plate Ex



- Self-limiting characteristic
- Compact design
- Depending on version T3, T4, T5, T6
- Different versions available from 10W up to 1kW
- Uniform heat distribution

Description

The heating plate type "Quintherm IH2" is a self-limiting heating plate. This compact heating plate has a uniform heat distribution over the whole surface.

Due to its infinite mounting positions, the heating plate is suitable very well for small cabinets and narrow rooms. Depending on size and output available for Ex-temperature classes T3 – T6.

Possible Applications

- Heating of cabinets
- Condensation prevention
- Heating of pumps

And other typical heating plate applications.



Technical Data

Nominal Supply Voltage:	U_N 230V AC
Rated Voltage:	U_{max} 277V AC
Power Output	ca. 1000W at +5 C
Protection Class:	IP 65
Ambient Temperatures:	-55°C...+85°C
Temperature Class:	T4
Feeding Cable:	2m 3G1.5mm Radox
Dimensions (LxWxH in mm):	1030 x 420 x 40
Installation Position:	any
Weight:	ca. 31 kg

Marking

- II 2G Ex mb IIC T4 Gb
- II 2D Ex mb IIIC T135 C Db

Approval

ATEX, IECEx, UKEX

Ordering Information

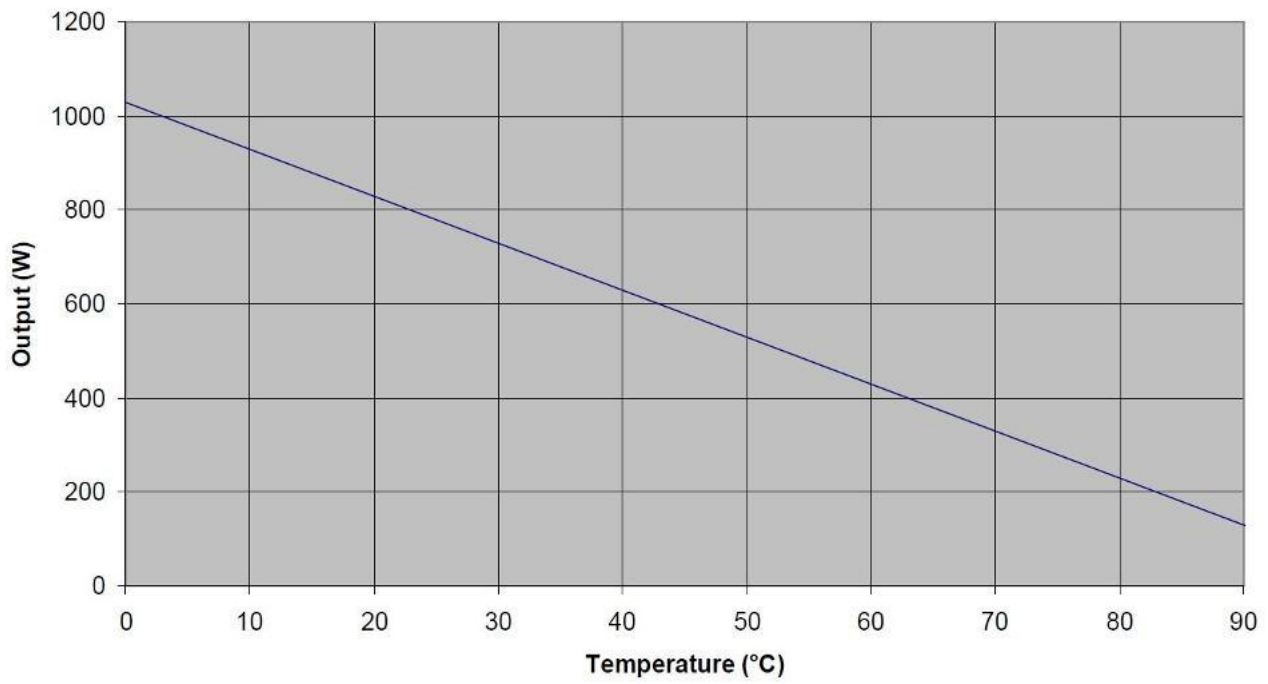
Industrial Heating Plate	IH2 1000 2 200
Power Output at +5 C	
Nominal Supply Voltage (230V)	
Length Feeding Cable (cm)	

Additional Products

Part number:
IRM2Ex/AG: Frost Guard (see data sheet)



Output Characteristic Curve



MH/MS..

Motor stoppage heater to prevent the occurrence of condensate and frost damage, for use in hazardous area.



Motor Stoppage Heater Ex



- Adjusts output power according to ambient temperature
- Customized lengths and versions possible
- Output power up to 60W/m bei 10 C
- No overheating, evne when overlapped
- Available for 220-277V AC (110-120V AC upon request)

Description

The Motor Stoppage Heater Series M. are designed for condensate avoidance and / or temperature maintenance.

The Series M. can be used up to an ambient / workpiece temperature of 155 C.

The Motor Stoppage Heaters Series M. are suitable for use in non-hazardous areas and hazardous areas. The self-limiting characteristic improves safety, reliability and eliminates overheating of the heating tape.

High flexibility and compact dimensions allow the use even in very limited space.



Technical Data

Rated Voltage:	220-277V AC (110-120V AC upon request)
Temperature Range:	-55°C...+155°C (Radox) -55°C...+180 C (FEP)
Temperature Class:	T3
Max. Bending Radius:	20mm
Dimensions WxH (in mm):	ILH 9.55x3.35 ILS 10.2x3.5

Approval

ATEX, IECEx

Ordering Information

Example:	MH - 40 1-1 1-001
H=Heating Tape Series ILH	
S=Heating Tape Series ILS	
Nom. Output Power 40W/m at 10 C	
Rated Voltage:	230V AC(1); 115V AC(2); 24V AC(3)
Connecting Wire:	1=0.75mm ² Radox 155; 2=0.75mm ² FEP
Heating Tape End Seal:	1=Dual Shrinking Sleeve; 2=Silicone Boot HTL
Heating Circuit Length in m, e.g. 001=1m	

Further Information

Please consult the installation instructions!





In addition to our high-quality components for electrical heat tracing systems, we also offer the service of custom-made, factory-assembled heating Circuits.

These can be manufactured in both Ex and non-Ex versions and can be optimally customized to your individual requirements.

For planning and calculation, simply use the convenient online calculators available on our website.

We are also happy to provide you with advice via our free online support chat or directly by email at Begleitheizung@Quintex.info.

www.quintex.eu



Commercial Heating

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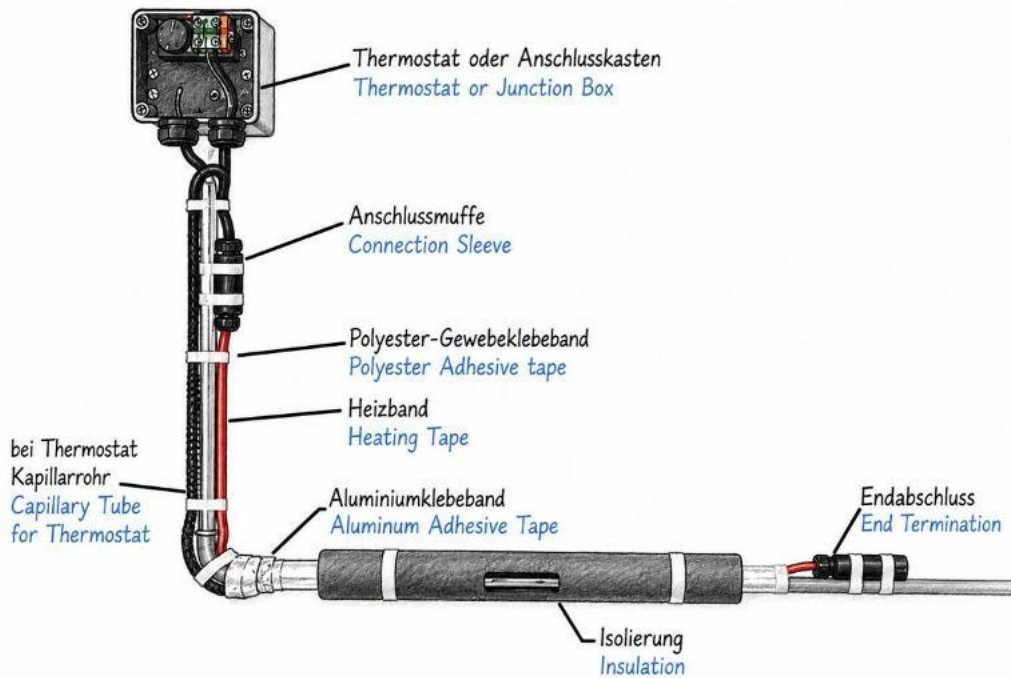
Proviso

We reserve the right to make technical changes. Changes, errors and literal errors do not justify any claim for damage compensation. For security components and systems, the relevant standards as well as the relevant operating and assembly instructions have to be followed.

This price list is replacing all former price lists. All prices ex works, exclusive package and VAT.



Freeze protection and temperature maintenance



Freeze protection systems provide reliable protection for pipelines and prevent freezing as well as the resulting damage to water-bearing systems.

Electric heating cables ensure, through continuous or temperature-controlled heating, that the medium temperature along the pipeline does not fall below the critical freezing point of 0 °C.

In combination with coordinated thermal insulation, heat loss is minimized and energy-efficient freeze protection is ensured.

The heating circuit is assembled from modular individual components (heating cable, connection kit, temperature control, and insulation) and, thanks to its system flexibility, can be individually adapted to project-specific requirements and structural conditions.

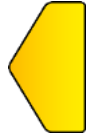
ILLw... /Qx

Electrical heating tape for frost protection or temperature maintenance of instrument lines, pipework or vessels in safe or hazardous area



Self-Regulating Heating Tape Ex

85°C



- Automatically adjusts heat output in response to heated surface temperature.
- Can be cut to length with minimal wastage.
- Suitable for light industrial and commercial applications up to 85°C.
- Full range of terminations, controls. Accessories and approvals available.
- Will not overheat, even when overlapped.
- Available for 220...277V AC (110V...120V AC upon request)

Description

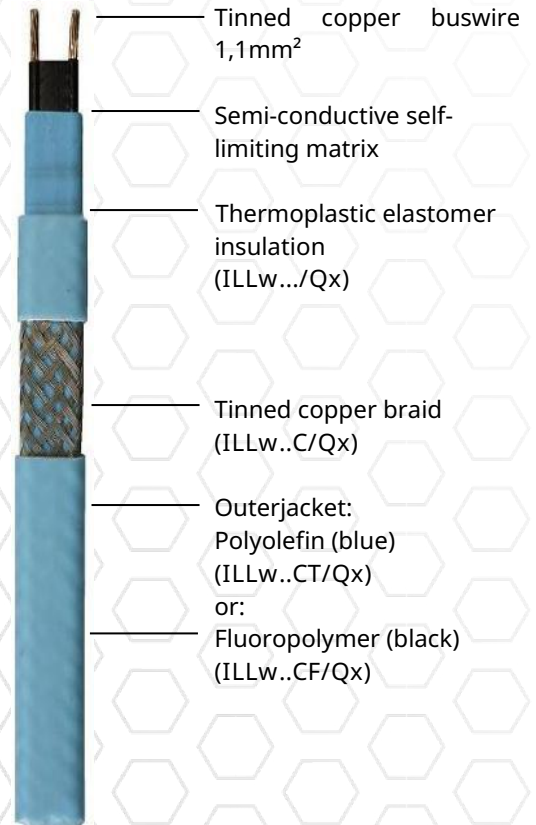
Quintherm ILLw is a light industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework or vessels in the construction and refrigeration industries up to and including 85°C which are not subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILLw is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

Its self-regulating characteristics improve safety and reliability. ILLw will not overheat or burnout, even when overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heated surface temperature.

Installation of Quintherm ILLw is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient kits.



Options

- ILLw.../Qx Base heating tape without any braiding or outerjacket. (only for non-Ex applications) *(available upon special request)*
- ILLw..C/Qx Base heating tape with tinned copper braid providing mechanical protection or where Traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces. *(available upon special request)*
- ILLw..CT/Qx Base heating tape with tinned copper braid and thermoplastic outerjacket for added mechanical and light chemical protection.
- ILLw..CF/Qx Base heating tape with tinned copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection.





ILLw... /Qx

Technical Data

Max. Exposure Temperature: 85°C
 Power On: 85°C
 Power Off: 85°C
 Min. Installation Temperature: -40°C
 Min. Operating Temperature: -40°C

Power Supply: 220-277VAC
 Cross-Section: 1.1mm²

Max. Resistance of Protective Braiding: ≤ 18.2 Ω/km
 Temperature Class: T6 up to ILLw31...
 T4 from ILLw40...

Weights and Dimensions:

Typ	Dimensions Nominal (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland size
ILLw..	10.75 x 3.75	5.6	25	M20
ILLw..C	11.75 x 4.75	9.5	30	M20
ILLw..CT	12.95 x 5.95	11.8	35	M20
ILLw..CF	12.95 x 5.95	12.6	35	M20

Approval

ATEX, IECEx

Ordering information

Example:

ILLw 40 2 C F/Qx

Quintherm tape family (ILLw)

Nominal output 40W/m at 10°C

Supply voltage 220-277V AC (2)

Supply voltage 110-120V AC (1)

Tinned copper braid (C)

Polyolefin outerjacket (T) (blue)

Fluoropolymer outerjacket (F) (black)

Further Information

Please consult the installation instructions.

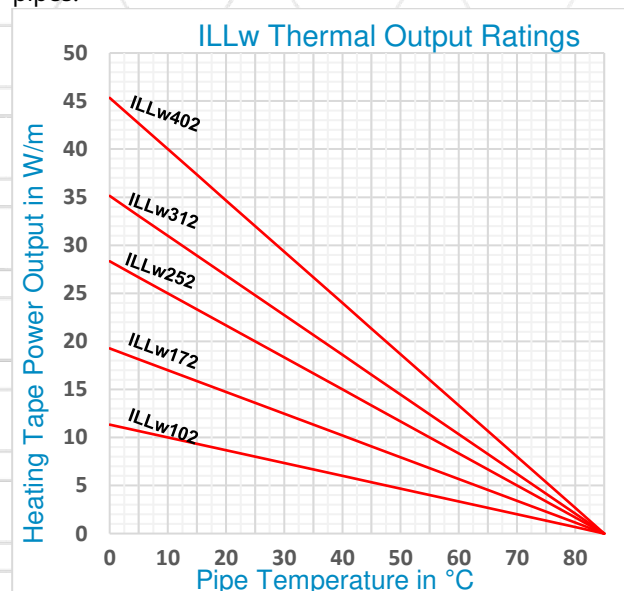
Max. Cct Length (m) vs. MCB Size (A)

Type	Start Temp.	230V AC			
		10A	16A	20A	25A
ILLw102..	+10°C	136	198	198	198
	0°C	122	188	188	188
	-20°C	108	174	176	176
	-40°C	96	154	166	166
ILLw172..	+10°C	92	148	152	152
	0°C	84	134	144	144
	-20°C	74	118	136	136
	-40°C	66	106	128	128
ILLw252..	+10°C	74	118	124	124
	0°C	68	108	120	120
	-20°C	60	94	112	112
	-40°C	52	84	106	106
ILLw312..	+10°C	58	92	112	112
	0°C	52	84	104	104
	-20°C	46	74	92	92
	-40°C	42	66	82	82
ILLw402..	+10°C	46	74	92	92
	0°C	42	66	84	84
	-20°C	36	58	74	74
	-40°C	32	52	66	66

For use with type "C" MCB in accordance with EN60898-2:2006

Thermal Ratings

Nominal power output at 230V AC when ILLw is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.



ILM(w)... /Qx

Electrical heating tape for frost protection or temperature maintenance of instrument line, pipework, or vessels in safe or hazardous area.



Self-Regulating Heating Tape Ex

100°C



- Automatically adjusts heat output in response to heated surface temperature.
- Can be cut to length with minimal wastage.
- Suitable for light industrial and commercial applications up to 100°C.
- Full range of terminations, controls, accessories and approvals available.
- Will not overheat, even when overlapped.
- Available for 220...277V AC (110V...120V AC upon request)

Description

Quintherm ILM & ILMw is a medium industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework or vessels in the construction and heavy industries up to and including 100°C which are not subject to steam cleaning.

It can be cut-to-length on site to match exact pipe lengths without any complicated design considerations.

ILM & ILMw is approved for use in non-hazardous, hazardous or corrosive environments to world-wide standards.

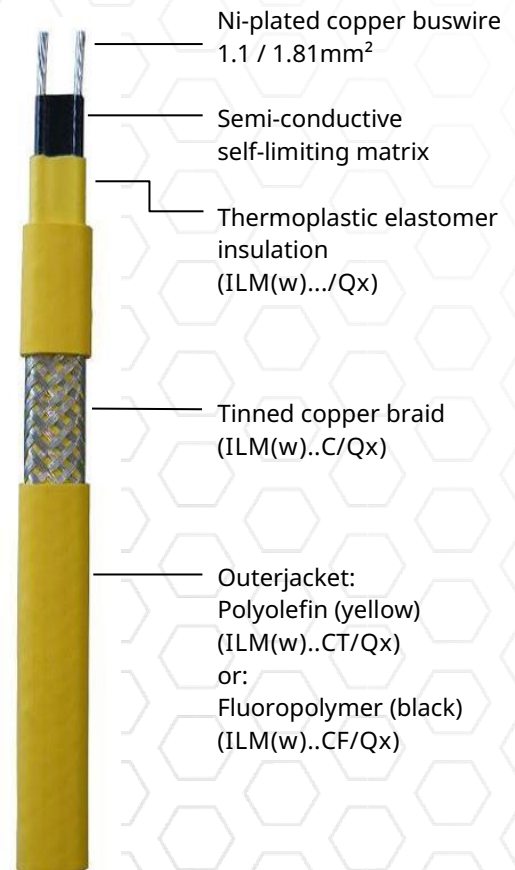
Its self-regulating characteristics improve safety and reliability. ILM & ILMw will not overheat or burnout, even if overlapped upon itself. Its power output is automatically self-regulated in response to pipe or heated surface temperature.

Installation of Quintherm ILM & ILMw is quick and easy, requiring no special tools or skills. Terminations, in-line splicing and power connection components are all available in convenient kits.

Options

(available upon special request)

- | | |
|---------------|---|
| ILM(w).../Qx | Base heating tape without any braiding or outerjacket. (only for non-Ex applications) |
| ILM(w)..C/Qx | Base heating tape with tinned copper braid providing mechanical protection or where Traced equipment does not provide an effective earth path, e.g. plastic or non-metallic pipework or surfaces. |
| ILM(w)..CT/Qx | Base heating tape with tinned copper braid and thermoplastic outerjacket for added mechanical and light chemical protection. |
| ILM(w)..CF/Qx | Base heating tape with tinned copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection. |



ILM(w)... /Qx

Technical Data

Max. Exposure Temperature:	
Power On:	100°C
Power Off:	100°C
Min. Installation Temperature:	-40°C
Min. Operating Temperature:	-40°C
Power Supply:	220-277VAC
Cross Section:	1.1/1.81mm ²
Max. Resistance of Protective Braiding:	≤ 18.2 Ω/km
Temperature Class:	T4 up to ILM31... T3 from ILMw45...

Weights and Dimensions:

Type	Dimensions Nominal (mm)	Weight kg/100m	Min. Bending radius (mm)	Gland size
ILM..	10.5 x 3.75	5.7	25	M20
ILM..C	11.5 x 4.75	9.5	30	M20
ILM..CT	12.7 x 5.95	12.4	35	M20
ILM..CF	12.4 x 5.65	13.2	35	M20
ILMw..	13.2 x 4.3	8.7	25	M20
ILMw..C	14.2 x 5.3	12.9	30	M20
ILMw..CT	15.4 x 6.5	17.0	40	M25
ILMw..CF	15.1 x 6.2	17.7	40	M25

Approval

ATEX, IECEx

Ordering Information

Example:	ILMw 45 2 C F/Qx
Quintherm tape family (ILM(w))	
Nominal output 45W/m at 10°C	
Supply voltage 220-277V AC (2)	
Supply voltage 110-120V AC (1)	
Tinned copper braid (C)	
Polyolefin outerjacket (T) (yellow)	
Fluoropolymer outerjacket (F) (black)	

Further Information

Please consult the installation instructions.

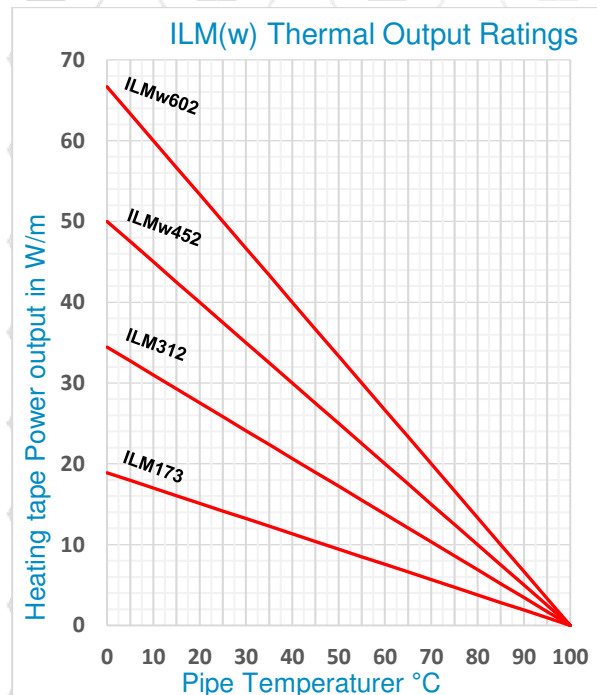
Max. Cct Length (m) vs. MCB Size (A)

Type	Start Temp.	230V AC			
		10A	16A	20A	25A
ILM172..	+10°C	76	120	148	148
	0°C	62	98	122	148
	-20°C	42	66	82	102
	-40°C	28	44	56	68
ILM312..	+10°C	52	82	104	110
	0°C	42	68	84	106
	-20°C	28	46	56	70
	-40°C	18	30	38	48
ILMw452..	+10°C	38	62	76	96
	0°C	32	50	64	80
	-20°C	22	34	42	52
	-40°C	14	22	28	34
ILMw602..	+10°C	35	52	66	82
	0°C	28	44	56	70
	-20°C	20	32	40	50
	-40°C	14	22	28	34

For use with type "C" CB in accordance with EN60898-2:2006

Thermal Ratings

Nominal power output at 230V AC, when ILM(w) is installed on thermally insulated carbon steel pipes.



Accessories

A full range of accessories are available to complement our heating tapes, such as terminations, end seals, junction boxes and thermostats. Most items carry separate approvals where required for use in hazardous areas.

ILL..S../Qx

Electrical heating tape for frost protection or temperature maintenance of pipework and vessels in hazardous area.



Self-Limiting Heating Tape Ex

85°C



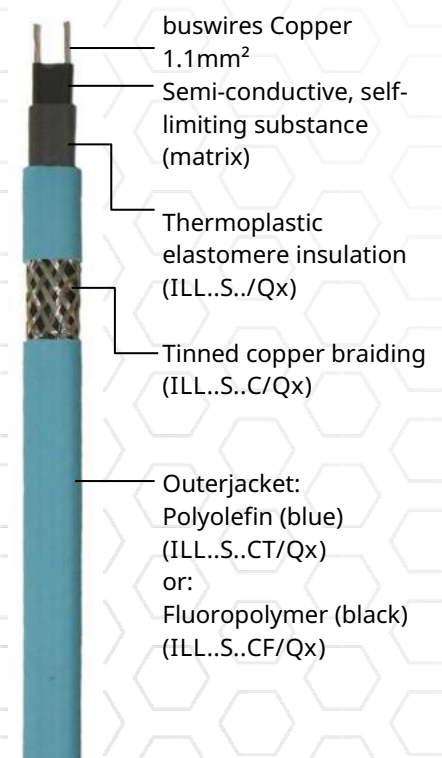
- Can be cut to length with minimal wastage
- Broad variety of termination sets, controllers and accessories available
- Will not overheat, even when overlapped
- Ideal for battery powered applications
- For 24V AC/DC (12V upon request)
- Automatically adjusts power output in response to pipe/ workpiece temperature

Description

Quintherm ILL..S.. is a light industrial/commercial grade self-regulating heating tape that can be used for freeze protection or temperature maintenance of pipework and vessels in the construction and refrigeration industries. It can be cut-to-length at site and exact piping lengths can be matched without any complicated design considerations.

Its self-regulating characteristics improve safety and reliability. ILL..S.. will not overheat or burnout, even when overlapped upon itself. Its power output is self-regulated in response to the pipe temperature.

The installation of Quintherm ILL..S.. is quick and simple and requires no special skills or tools. Termination, splicing and power connection components are all provided in convenient kits.



Options

- ILL..S../Qx Basic heating tape without copper braiding and without outerjacket (only for non-Ex applications) *(no stock, only available upon request)*
- ILL..S..C/Qx Tinned copper braid provides effective grounding (where not already provided by e.g. pipework).
- ILL..S..CT/Qx Standard heating cable with tinned copper braid and polyolefin outerjacket for enhanced mechanical and chemical protection.
- ILL..S..CF/Qx Standard heating cable with tinned copper braid and fluoropolymer outerjacket to withstand corrosive chemicals or vapours.



Technical Data

Max. Permitted Temperature:
 Power On: 85°C
 Power Off: 85°C
 Min. Installation Temperature: -40°C
 Power Supply: 22-24V
 (11-12V) AC/DC
 Max. Resistance of Protective Braid: 18,2 Ohm/km
 Temperature Class: T6 12W/m,
 17W/m;
 T4 30W/m

Weights and Dimensions:

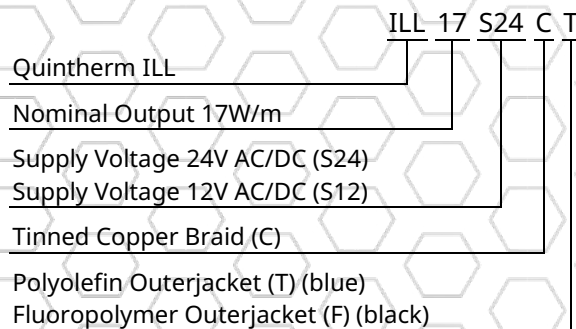
Type	Dimensions Nominal (mm)	Weight Kg/100m	Min. Bending Radius (mm)	Gland Size
ILL..S..	10.8 x 3.8	4.8	25	M20
ILL..S..C	11.8 x 4.8	9.5	30	M20
ILL..S..CT	13 x 6	11.8	35	M20
ILL..S..CF	12.7 x 5.7	12.6	35	M20

Approval

ATEX, IECEx

Ordering Information

Example:



Further Information

Please consult the installation instructions.

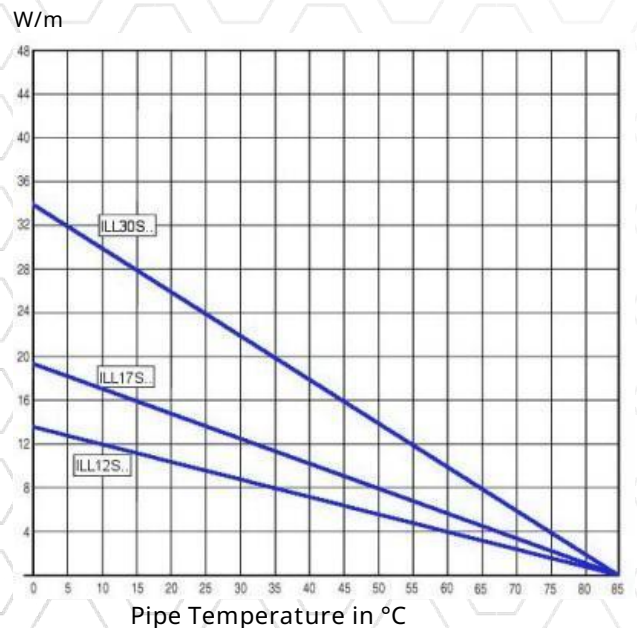
Max. Length (m) vs. Circuit Braker Si

Type	Start Temp.	6A	10A	16A	20A
ILL12S24..	5°C	8	14	18	-
	0°C	8	12	18	
	-20°C	6	12	16	
	-40°C	6	10	14	
ILL17S24..	5°C	6	8	14	16
	0°C	4	8	12	14
	-20°C	4	6	10	14
	-40°C	4	6	10	12
ILL30S24...	5°C	4	6	1	12
	0°C	4	6	8	10
	-20°C	2	4	8	10
	-40°C	2	4	6	8

For use with Type C circuit breakers to EN60898

Thermal Ratings

Nominal output at 12V or 24V when the heating tape is installed on insulated metal pipes.



Accessories

Quintex offers a complete range of accessories including termination/splice kits, end seals, junction boxes and controls. Such items carry separate approvals from the heating tapes. When used in hazardous areas, only use approved components.

IAL3SK1 (F)

Termination set in shrinking technology for use in non-hazardous area.



Termination Set non-Ex



- Compact design
- Temperature resistant up to 130°C (IAL3SK1 F 120°C)
- Quick and easy to assemble
- Applicable for different heating tapes CLD; ILL..S; ILLw; ILM, ILMw; ILH (up to 120°C);
- Different sets separately available

Description

The IAL3SK1 is a termination set which is easy and fast to assemble.

The heating tape will be connected with the feeding cable by using a ceramic terminal block and afterwards overshrunk with a special shrink tubing.

Because of the illustrated instruction manual the installation is very easy and requires no special tools.



Technical Data

Max. Ambient Temperature:	+130°C
or	+120°C for IAL3SK1 F
Heating Tapes:	CLD, ILL..S, ILLw, ILM, ILMw, ILH
Cross Section:	up to 2.5mm ²
Length Connection Side:	120mm
Length End Seal:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL3SK1:	Power connection and end seal in one kit, for heating tapes with polyolefin outerjacket
IAL3SK1 F:	Power connection and end seal in one kit, for heating tapes with fluoropolymer outerjacket

Alternative Products

Part number:	
IAL5SS:	Non-Ex Termination set in screw technology

Additional Products

Part number:	
IAL3VK1:	Connection set (Heating tape - Heating tape)
IAL3AG1:	Power connection and end seal for direct entry in a special enclosure
AG 101:	Non-Ex glasfiber reinforced Polyester enclosure for 1-3 heating circuits

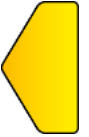


IAL3SAG1 (F)



Termination set in shrinking technology for use in non-hazardous area.

Termination Set non-Ex



- Compact design
- Direct entry in enclosure by using an M20 cable gland
- Quick and easy to assemble
- Different sets separately available
- Applicable for different heating tapes CLD; ILL..S; ILLw; ILM, ILMw; ILH (up to 120°C);

Description

The IAL3SK1 is a termination set which is easy and fast to assemble.

The bus wires of the heating cable will be inserted over an M20 cable gland directly into an enclosure.

Because of the illustrated instruction manual the installation is very easy and requires no special tools.



Technical Data

Max. Ambient Temperature:	+130°C
or	+120°C for IAL3SK1 F
Heating Tapes:	CLD, ILL..S, ILLw, ILM, ILMw, ILH
Cable Gland:	1x M20
Length End Seal:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL3SAG1:	supply & termination kit for direct entry into an enclosure, for heating tapes with polyolefin outerjacket
IAL3SAG1 F:	supply & termination kit for direct entry into an enclosure, for heating tapes with fluoropolymer outerjacket

Alternative Products

Part number:	
IAL5SS:	Non-Ex Termination set in screw technology

Additional Products

Part number:	
IAL3VK1:	Connection set (Heating tape – Heating tape)
IAL3SK1:	Power connection and end seal in one kit,
AG 101:	Non-Ex glasfiber reinforced Polyester enclosure for 1-3 heating circuits



IAL5SS / BS

Termination set in screwing technology for use in non-hazardous area.



Termination Set non-Ex



- Compact design
- Temperature resistant up to 130°C
- Quick and easy to assemble

- Suitable for different types of heating tapes ILL..S, ILLw, ILM, ILMw, ILH, ILS (up to 130°C)
- Power supply and end termination separately available

Description

The Quincon system contains a termination set which is easy and fast to assemble, based on approved screw technology. The compact dimension makes it possible, that this system can be installed even underneath the thermal insulation of the pipe.

The IAL5 product range contains several components such as power supply, end termination, branches and connections.

The installation is very easy to handle and requires no special tools.



Technical Data

Temperature Resistant:	-40°C...130°C
For Heating Tapes:	ILLw, ILL..S, ILM, ILMw, ILH, ILS
Cross Section:	up to 2.5mm ²
Length Power Connection:	125mm
Length End Termination:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL5SS:	Power connection and end termination set
IAL5BS:	Like IAL5SS, but for ILMw
IAL5SA:	Power connection (single)
IAL5SE:	End termination (single)
IAL5ST:	T-Branch (supply cable + 2 heating cables or 3 heating cables)
IAL5SV:	Connection heating cable – heating cable, except for ILMw

Alternative Products

Part number:	
IAL3SK1:	Non-Ex termination set in shrinking technology

Further Products

Part number:	
AG 101:	Junction box made of glasfiber enhanced polyester for up to 3 heating circuits (different versions see datasheet)



IAL5SC

Termination kit with integrated bimetal-temperature switch for use in non-hazardous area.



Termination Kit non-Ex



- Compact design
- Operating temperature up to 125°C
- Quick and easy to assemble
- Suitable for wide range of heating cables
- End termination kit separately available

Description

The Quincon system contains a termination kit, based on approved screw technology, which is quick and easy to assemble. The integrated bimetal-temperature-switch eliminates the use of an additional thermostat. This compact design saves both space and time because no additional enclosure is required.

When the temperature is measured under the thermal insulation, it ensures a more economical solution with reduced operation, unlike conventional systems measuring the ambient temperature outside the thermal insulation.



Technical Data

Max. Operating Temperature:	125°C
Suitable Heating Cables:	ILLw, ILL..S, ILM (depending on operating temperature also ILH, ILS)
Terminal Capacity:	up to 2.5mm ²
Max. Current Rating:	16A at 230V AC
Dimensions (LxWxH in mm):	140 x 60 x 30
Protection Class:	IP68
Switching Points:	4°C On, 11°C Off (Further temperature ranges available upon request)

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL5SC:	Power termination with in-line bimetal temperature switch
IAL5SE:	End termination kit

Alternative Products

Part number:	
IAL8Ex HKSC:	Power termination with in-line bimetal temperature switch for hazardous area

Further Products

Article code:	
AG 101:	Fiber glass enhanced junction box for 1-3 heating circuits (for different versions please see junction box data sheet)



Junction Box AD_

Anschlussdose für den Anschluss einer Begleitheizung im nicht-explosionsgefährdeten Bereich



Junction Box Non-Ex



- Compact Design
- Protection Class IP66
- Robust plastic enclosure
- Halogen-free

Description

Junction boxes for connecting electrical trace heating systems
The junction boxes are available in various designs for all common applications.
Use under extreme environmental conditions, aggressive chemical media and heavy mechanical loads are no problem for these robust junction boxes.

Customized versions and other sizes are available on request.



Technical Data

AD3/PRO:

Supply Voltage:	440V AC
Ambient Temperature:	-35°C...+60°C
Protection Class:	IP66
Terminals:	screwless Wago Terminals
Dimensions (LxBxH in mm):	92 x 92 x 60
Material:	Polycarbonat

Terminals:	screwless connection terminal
Dimensions (LxBxH in mm)	104 x 104 x 70
Material:	Polypropylen

Ordering Information

Part number:	
AD/PRO:	Junction Box with screwless Wago Terminals
AD7	Junction Box with screw connection terminals

AD7:

Supply Voltage:	400V AC
Ambient Temperature:	-25°C...+40°C
Protection Class:	IP66

Alternative Products

Part number:	
AG 99 HK:	Junction box in Glass fiber reinforced polyester enclosure

[Further Products](#)

Part number:
IRM1AG/PRO: Minithermostat, installed in
junction- box



IRM1/...



Mechanical mini-thermostat for frost protection or temperature maintenance applications in non-hazardous area.

Mechanical Controller non-Ex



- Robust and compact design
- 16A/230V AC switching capacity
- Protection class IP66/68
- Narrow switching hysteresis
- Various temperature ranges available
- Customized lead length available

Description

This Mini-Thermostat is used to monitor the ambient temperature of heating systems as well as for the control of internal temperatures inside protective transmitter boxes or control and switchgear cabinets.

The switching contact is moulded in a M20x1,5 cable gland. Due to the compact design it is suitable for many applications. It is complete with a nylon locknut for securing in clearance hole.

The IRM1 thermostat is available with different switching points or customised lead lengths.



Technical Data

Rated Voltage:	max. 250V AC
Rated Current:	max. 16A AC
Switching Contacts:	1x NC
Switching Points:	4°C On; 11°C Off
Switching Tolerance:	+/- 3K
Cable Gland:	M20x1,5
Material:	PVDF
Dimensions:	L: 30mm x Ø: 22mm
Across Flats:	24mm
Connection Leads:	2x 1,5mm ²
Material:	Radox 125
Length:	400mm/1000mm (further lengths upon request)
Protection Class:	IP66/68
Ambient Temperature:	-50 / +125°C
Weight:	50g

Ordering Information

Part number:	
IRM1/400:	Mini-Thermostat 4/11°C On/Off with 400mm connection leads
IRM1/1000:	Mini-Thermostat 4/11°C On/Off with 1000m connection leads

Further temperature ranges and lead lengths available upon request.

Alternative Products

Part number:	
IRM1 AG Pro:	...with 92x92x60mm enclosure
IRM2Ex/400:	...Ex Mini-Thermostat
IRM...b:	control thermostat (adjustable)
IR2M...Ex:	Ex control thermostat (adjustable)
IRE168DS:	Electronic temperature controller (see datasheet)

Further Products

Part number:	
MW 3:	L-shaped mounting bracket



IRM1AG/PRO

Mechanical mini-thermostat in enclosure for frost protection applications for use in non-hazardous area.



Mechanical Controller non-Ex



- Compact design
- High switching capacity
- Protection class IP66
- Screwless terminal connection
- Stable polycarbonate enclosure
- Different temperature ranges available

Description

The IRM1AG/PRO mini thermostat is used to monitor the ambient temperature. It can switch heating circuits directly up to a load of 16A.

The thermostat is installed in a robust polycarbonate enclosure. The use of screwless terminals enables quick and tool-free connection.

The housing is equipped with two M20 screw connections, one for the supply line and one for the heating cable.



Technical Data

Supply Voltage:	250V AC
Switching Contact:	1 NC 16A / 250V AC
Switching Points:	4°C On / 11°C Off
Hysteresis:	±3K
Cable Glands:	2xM20
Protection Class:	IP66
Dimensions (LxWxH in mm):	92 x 92 x 60
Material Enclosure:	Polycarbonate
Ambient Temperature:	-35...+60°C

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IRM1AG/PRO: Mini-thermostat for frost protection, installed in enclosure.

Alternative Products

Part number:
IRM1/400: IRM1 mini-thermostat in M20 cable gland with 400mm connection wires.

Further Products

Part number:
ILLw102CT/QX: Self-regulating heating tape for Frost protection. (Various types and wattages available – see datasheet.)



IRM1AG/Poly

Mechanical mini-thermostat in glass fiber reinforced polyester enclosure for frost protection applications in non-hazardous area.

Mechanical Controller non-Ex



- Compact design
- High switching capacity
- Protection class IP66
- Rugged polyester enclosure
- Different temperature ranges available

Description

The Mini-Thermostat IRM1AG/Poly is usually be used for ambient temperature controlling. It switches heating circuits directly up to 16A or alternatively with load contactors.

The thermostat is installed in a rugged glass fiber reinforced polyester enclosure with 2 M20 cable glands for heating circuit and supply cable.

Other temperature ranges are available on request.



Technical Data

Rated Voltage:	250V AC
Switching Pin:	1 NC 16A / 250V AC
Switching Points:	4°C On / 11°C Off
Switching Tolerance:	±3K
Cable Glands:	2xM20
Protection Class:	IP 66
Dimensions (LxWxH in mm):	110 x 75 x 55
Material Enclosure:	Glass fiber reinforced polyester

Further Information

Please consult the installation instructions!

Ordering Information

Part number:
IRM1AG/Poly: Mini-thermostat for frost protection applications, installed in polyester enclosure.

Alternative Products

Part number:
IRM1/400: IRM1 mini-thermostat without enclosure, molded in M20 cable glands with 400mm connection wires.

Further Products

Part number:
ILLw102CT/QX: Self-regulating heating tape for applications. (Various types and wattages available – see datasheet.)



IRM...b

Mechanical capillary tube thermostat for use in non-hazardous area.



Mechanical Controller non-Ex



- Compact Design
- Switching capacity 25A
- Protection class IP66

- Very rugged design
- Stable polycarbonate enclosure

Description

The controllers of the IRM-series are mechanical capillary tube line-sensing thermostats.

The black glass fiber reinforced polyester enclosure is mechanically robust and perfectly designed for the connection of self-limiting heating cables.

The controller can be used for a switching capacity up to 25A. If the set temperature is exceeded, the contact opens automatically and closes again as soon as the temperature falls below the set value.



Technical Data

Typ IRM	040b	0120b	0200b	70320b
Temperature range (°C)	0..40	0..120	0..200	70..320
Rating voltage (V AC)	250	250	250	250
Rating current (A)	25	25	25	25
Switching difference (K)	2 ±1	3 ±1,5	12 ±6	30 ±5
Max. sensor temperature (°C)	45	144	230	350
Protection class	IP66	IP66	IP66	IP66
Capillary tube length (mm)	1600	1600	1500	1500
Sensor dimensions (in mm)	5,8/126	5,0/106	3,0/179	3,0/135
Dimensions LxBxH (mm)	122x120x90	122x120x90	122x120x90	122x120x90
Glands M25 / M20	1 / 2	1 / 2	1 / 2	1 / 2
Cross section (mm²)	4	4	4	4
Weight (kg)	1,2	1,2	1,2	1,2

Ordering Information

Part number:
 IRM040b: 0°C..+40°C
 IRM0120b: 0°C..+120°C
 IRM0200b: 0°C..+200°C
 IRM70320b: +70°C..+320°C

Alternative Products

Mechanical Ex-capillary thermostat.

Part number:
 IR2M-0205Ex: -20°C..+50°C
 IR2M0012Ex: 0°C..+120°C
 IR2M0019Ex: 0°C..+190°C
 IR2M0630Ex: +60°C..+300°C
 IR2M1450Ex: +140°C..+500°C

Further Products

Please consult the installation instructions!



CRE16 DS

Electronic temperature controller for use in non-hazardous area.



Electronic Controller non-Ex



- Electronic 2-point controller with potential-free fault contact
- Easy to program
- LED Display for actual value
- Compact dimensions, installation on TS35 DIN-rail
- Compatible with different temperature sensor types

Beschreibung

The control unit operates as a 2-point controller, has a bright, easy-to-read LED display and is equipped with all setting options for the economical and safe operation of an electric trace heating system. The display shows the actual value and, in the case of alarms, also the alarm. In addition to various sensor types (PTC; NTC; PT100; PT1000), a second relay is optionally available for a second setpoint or to signal an alarm (e.g. undertemperature). Both relays are potential-free. An NTC sensor with 4m sensor cable length is included. The controller is characterized by simple operation. A direct switching option for loads up to 16 A is possible.



Technical Data

Rating:	230V~ ± 10% 115 V on request
Relay (Out 1)	1 NO/NC 16A/250V
Relay (Out 2)	1 NO/NC 8A/230V
Switching-Accuracy:	0,5%
Operation- /Storage-Temperature:	0 ... +55°C -20 ... +85°C
Measuring range NTC:	-40°C ... 110°C
Dimensions (LxBxH):	90x53x61mm
Wattage:	appr. 4W

Further Information

Please consult the operation instructions!

Ordering Information

Part number:
CRE16 DS: Controller for rail mounting

Alternative Products

Part number:
CRE16 AG: Electronic Controller 16+8A in an enclosure
IRM040b: Mechanical line-sensing capillary temperature controller

Further Products

Part number:
IRPT100: PT100 temperature sensor 3-wire



CRE16 AG

Electronic Controller for none Ex applications, mounted in an enclosure



Electronic controller none Ex



- Electronic ON - OFF controller with alarm relays
- Easy to program
- LED for indication of actual temperature value

Mounted in a rugged Polyester enclosure with front screen

- Compatible with different probes

Description

The controller will be delivered pre-assembled in a rugged polyester enclosure.

The front screen allows to monitor the actual temperature value.

The bright LED display guarantees good readability. The On - Off controller is compatible with different kinds of probes (e.g. PTC; NTC; PT100; PT1000).

Standard NTC probe with 4 m length is included. CRE16 AG meets all necessary adjustments for electrical trace heating and is very easy to handle.

Max. switching load of OUT1 is up to 16A.

Second relais OUT2 can be used either as alarm indication (potential free) or for a second setting point.



Technical Data

Rated voltage:	230V AC \pm 10%
Relais (OUT1)	16A/250V changeover
Relais (OUT2)	8A/250V changeover
Switching accurateness:	0,5%
Cable glands:	2 x M20, 1 x M12
Operation- /storage temperature::	0°C to +55°C -20°C to +85°C
Meas.-range NTC:	-40°C to 110°C
Meas.-range PT100:	-200°C to 650°C
Dimensions (LxWxH):	160x160x90mm
Weight:	1,16 Kg

Power consumption: appr. 4W

Order Information

CRE16 AG: Elektronik controller 16+8A in an enclosure

Alternative Products

CRE16 DS: Rail mounting, without enclosure

IRM040b: Capillary thermostat

Additional products

IRPT100: PT100 probe, 3-wire design

MW 1 S: mounting bracket set for polyester enclosures



Mounting Accessories

Mounting accessories for electrical trace heating.



Mounting Accessories



Labels



Part number: KZ..

Dimensions: 175x80mm
Adhesive: permanent, acryl basis
UV-resistant

Available languages:

German → KZD
English → KZE
French → KZFR
Russian → KZR
Spanish → KZS
Finnish → KZF
Polish → KZP

Further languages available upon request.

Insulation Bushing



Part number: ID1 S/B

Insulation bushing for supply cable/ heating cable/ sensor cable protection.

Content:

Mounting plate,
M20x1.5 cable gland incl. counter nut,
round gasket + reduction inset
(clamping zone: 4-12mm),
as well as flat gaskets for ILL..S, ILLw, ILM, ILH
and ILS heating cables. (up to 100°C)

Cable Ties



Part number: PKB..

Cable ties for mounting heating tapes to e.g. pipes or wire mat.

Temperature resistant up to 80°C.
UV-resistat. Packing unit = 100 pcs.

Options:

PKB1: Length: 100mm, Width: 2.5mm
PKB2: Length: 200mm, Width: 4.5mm
PKB3: Length: 280mm, Width: 4.5mm
PKB4: Length: 360mm, Width: 4.5mm
PKB5: Length: 450mm, Width: 7.5mm
PKB6: Length: 540mm, Width: 7.5mm
PKB7: Length: 780mm, Width: 9.0mm



Adhesive Tapes

Adhesive tapes for fixing heating cables and for a better heat transfer.



Aluminium tape



- Part number: ALK150
- Length: 50m
 - Width: 50mm
 - Temp. resistant: up to 150°C
 - Thickness: 300µm

- Part number: ALK1 150m
- Length: 100m
 - Width: 75mm
 - Temp. resistant: up to 150°C
 - Thickness: 300µm

Polyester tape



- Part number: PEK100
- Length: 50m
 - Width: 19mm
 - Temp. resistant: up to 100°C
 - Thickness: 160µm

Cloth adhesive tape



- Part number: GEK130
- Length: 50m
 - Width: 12mm
 - Temp. resistant: up to 130°C
 - Thickness: 120µm

Glass fiber Tape



- Part number: GSK180 / GSK180B
- Length: 50m
 - Width: GSK180: 12mm
GSK180B: 19mm
 - Temp. resistant: up to 260°C
(Bandaging)
 - Therman Class: H 180°C
 - Thickness: 180µm



ILLw...2CTK...

Factory assembled heating circuits with self-limiting heating cable for frost protection of pipelines and vessels.



Factory assembled heating circuits

85°C



- Factory assembled heating circuits for frost protection
- No Overheat in case of overlap.
- Complete with thermostat (+4°C On/ +11°C Off) and Schuko plug.
- Adjusts the output power to the pipe/workpiece temperature.
- Suitable for temperatures up to 85°C

Description

Assembled heating circuit with self-limiting heating cable for frost protection applications of e.g. pipelines and vessels up to an operating temperature of +85°C.

The heating cable is completely pre-assembled including frost protection thermostat and Schuko plug. Due to the self-limiting characteristic, the heating cable cannot overheat, even if it is laid overlapping. The output power limits itself depending on the workpiece temperature. This ensures safety and reliability.

The installation of ILLw...2CTK... heating circuits is quick, easy and can be mounted without special knowledge or special tools. Insulation can be placed directly over the heating cable.



Technical Data

Max. permitted temperature:	
Switched on/ Switched off:	85°C
Voltage:	230V AC
Output power:	10W/m at 10°C
Switching point thermostat:	+4°C ON/ +11°C OFF
Connection cable length:	3m including Schuko plug
Fuse protection:	16A C- Characteristic 30mA RCD

Ordering Information

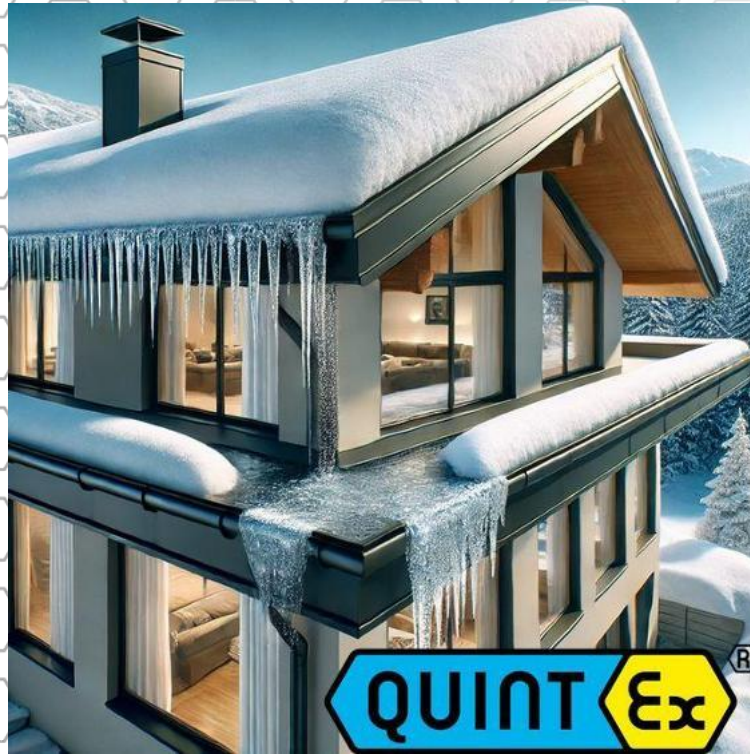
Example:	ILLw	10	2	C	T	K3
Heating cable type Quintherm ILLw						
Power Output 10W/m at 10°C						
Operation voltage 220-277V AC (2)						
Tinned copper braid						
Polyolefin outer jacket (blue)						
Factory assembled heating circuits						
Heating circuit length (m)						

Accessories

Adhesive tapes and insulating entry kit available separately.



Roof- and Gutter Heating System



Gutter heating systems ensure that gutters, roof surfaces, and downpipes remain free of ice and provide reliable drainage of meltwater.

Due to ice formation in gutters and downpipes, meltwater may not drain properly, which can lead to water backup, moisture penetration, and potential damage to the building structure. In addition, the formation of icicles poses a significant hazard to people and property due to falling ice and ice loads.

The Quinterm gutter heating cable is a self-regulating heating cable designed to prevent ice formation and the associated risks in gutter and downpipe systems. Thanks to its UV-resistant construction, it is specifically designed for permanent outdoor use under harsh weather conditions. Due to its increased heat output in icy or wet areas, the heating cable provides reliable de-icing performance and ensures the unobstructed drainage of meltwater and rainwater through gutters and downpipes.

CLD.../Qx

Electrical heating tape for roof and gutter protection from snow and ice buildup.

Self-Regulating Heating Tape non-Ex

85°C



- High UV-resistance
- Will not overheat, even when overlapped
- Can be cut to length with minimal wastage
- Available for different voltages
- Temperature resistant up to 85°C
- Available with fluoro-polymer outerjacket

Description

Quintherm CLD is a special self-limiting heating cable for gutter heating and to prevent formation of snow slab on roofs areas.

Thanks to the UV resistance, these heating tapes are well suitable to the requirements of this particular application. By the temperature resistance of 85°C this heating tape resists even hot surfaces caused by sun exposure.

Its self-regulating characteristics improve safety and reliability. Quintherm CLD will not overheat or burnout, even when overlapped. The power output is self-regulated in response to the ambient temperature. On the characteristics can be seen that the heating tape can reach a power output of 36W/m in ice water to ensure the required defrost ability.



Possible Applications

- Gutter heating
- Roof valley heating
- Downspout heating
- Roof area heating
- Roof draining heating
- Facade heating



CLD.../Qx

Technical Data

Max. Allowed Temperature:
 Power On: 85°C
 Power Off: 85°C

Min. Installation Temperature: -40°C

Power Supply: 208 - 277V AC
 Cross Section: 1.1mm²
 Maximum Resistance of Protective Braid: ≤ 18.20hm/km

Type	Nominal Dimensions (mm)	Weight Kg/100m	Min. Bending Radius (mm)
CLD	10.5 x 5.9	10.0	35

Power Output

at 0°C

In air: 18W/m

In ice water: 36W/m

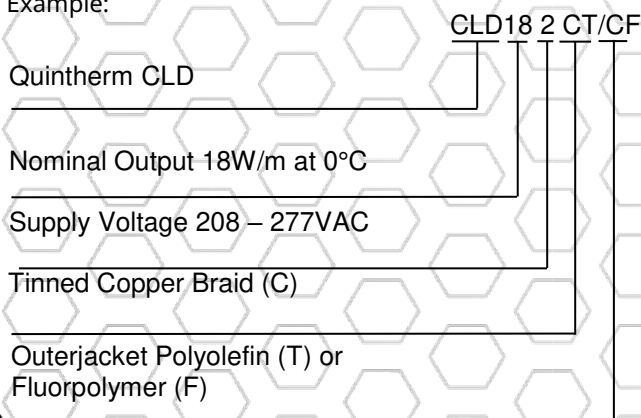
Cold Start Data

Values for 300 seconds

Starting Temperature	Current (A/m) at 230V AC
-15°C	0.295
0°C	0.259
+15°C	0.236

Ordering Information

Example:



Max. Length of Heating Circuit (m)

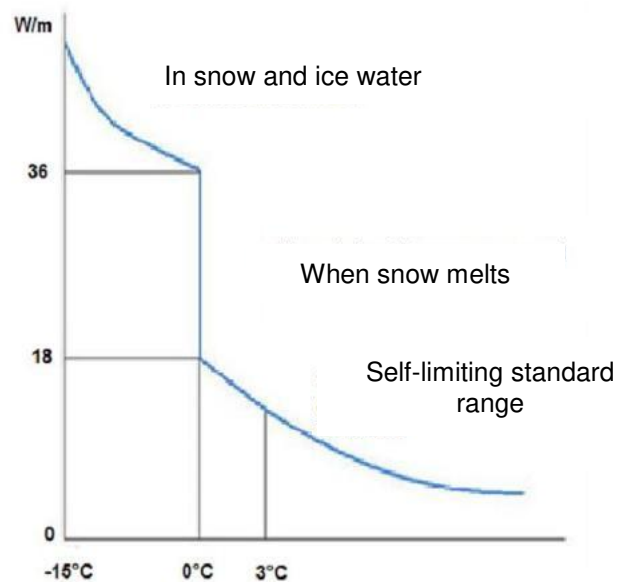
In relationship to used circuit breaker.

Start Temp.	10A	16A	20A	32A
+10°C	56	88	92	-
0°C	48	76	92	-
-15°C	36	58	74	92

Circuit breaker Type C to IEC 60898

Thermal Ratings

Nominal output at 230V AC



Power Output Multiplying Factors

Supply Voltage	Multiplying Factors
208VAC	0.93
220VAC	0.97
230VAC	1.00
240VAC	1.03
250VAC	1.06
277VAC	1.15

IAL3SK1 (F)

Termination set in shrinking technology for use in non-hazardous area.



Termination Set non-Ex



- Compact design
- Temperature resistant up to 130°C (IAL3SK1 F 120°C)
- Quick and easy to assemble
- Applicable for different heating tapes CLD; ILL..S; ILLw; ILM, ILMw; ILH (up to 120°C);
- Different sets separately available

Description

The IAL3SK1 is a termination set which is easy and fast to assemble.

The heating tape will be connected with the feeding cable by using a ceramic terminal block and afterwards overshrunk with a special shrink tubing.

Because of the illustrated instruction manual the installation is very easy and requires no special tools.



Technical Data

Max. Ambient Temperature:	+130°C
or	+120°C for IAL3SK1 F
Heating Tapes:	CLD, ILL..S, ILLw, ILM, ILMw, ILH
Cross Section:	up to 2.5mm ²
Length Connection Side:	120mm
Length End Seal:	58mm

Further Information

Please consult the installation instructions!

Ordering Information

Part number:	
IAL3SK1:	Power connection and end seal in one kit, for heating tapes with polyolefin outerjacket
IAL3SK1 F:	Power connection and end seal in one kit, for heating tapes with fluoropolymer outerjacket

Alternative Products

Part number:	
IAL5SS:	Non-Ex Termination set in screw technology

Additional Products

Part number:	
IAL3VK1:	Connection set (Heating tape - Heating tape)
IAL3AG1:	Power connection and end seal for direct entry in a special enclosure
AG 101:	Non-Ex glasfiber reinforced Polyester enclosure for 1-3 heating circuits



Junction Box AD_

Anschlussdose für den Anschluss einer Begleitheizung im nicht-explosionsgefährdeten Bereich



Junction Box Non-Ex



- Compact Design
- Protection Class IP66
- Robust plastic enclosure
- Halogen-free

Description

Junction boxes for connecting electrical trace heating systems
The junction boxes are available in various designs for all common applications.
Use under extreme environmental conditions, aggressive chemical media and heavy mechanical loads are no problem for these robust junction boxes.

Customized versions and other sizes are available on request.



Technical Data

AD3/PRO:

Supply Voltage:	440V AC
Ambient Temperature:	-35°C...+60°C
Protection Class:	IP66
Terminals:	screwless Wago Terminals
Dimensions (LxBxH in mm):	92 x 92 x 60
Material:	Polycarbonat

Terminals:	screwless connection terminal
Dimensions (LxBxH in mm)	104 x 104 x 70
Material:	Polypropylen

Ordering Information

Part number:	
AD/PRO:	Junction Box with screwless Wago Terminals
AD7	Junction Box with screw connection terminals

AD7:

Supply Voltage:	400V AC
Ambient Temperature:	-25°C...+40°C
Protection Class:	IP66

Alternative Products

Part number:	
AG 99 HK:	Junction box in Glass fiber reinforced polyester enclosure

[Further Products](#)

Part number:
IRM1AG/PRO: Minithermostat, installed in
junction- box



CREM DRM

Electronic ice and snow detector
for installation in switch cabinets or control stations



Electronic Controller non-Ex



- Simple entry-level controller
- Switching capacity up to 16A
- Input for Combi Sensor

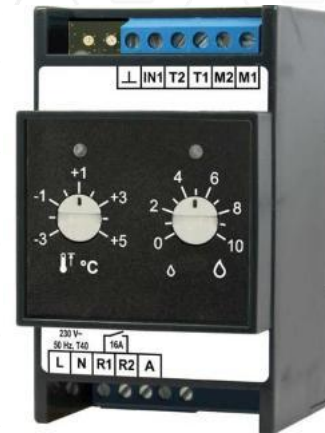
- Operation via manual rotary control
- Operating indicator via three-color LEDs

Description

The CREM DRM ice and snow detector is an entry-level model that is ideal for controlling smaller systems.

The temperature and humidity parameters can be set quickly and easily using two rotary controls. This allows commissioning within a few minutes.

The operating status is clearly indicated by two three-color LEDs.



Technical Data

Rating:	230V AC, 50Hz
Switching-Capacity Load Relay:	1 NO Contact, 16A
Operating-/ Storage-Temperature:	-15..+40°C -20..+70°C
Temperature Range:	-30...+80°C
Dimensions	3 TE built-in housing (according to DIN 43880) for TH-35 mounting rail
Wattage:	2W or 10W during moisture measurement

Ordering Information

Part number:
CREM DRT: Electronic ice and snow detector
with manual rotary actuator

Alternative Products

Part number:
CREM DRM: Electronic ice and snow detector
with touch graphic display

Further Products

Part number:
CREM-TFS-D: Temperature and humidity sensor
for gutters, downpipes, and
roof surface
MW-TFS_: Mounting plate for sensor
(Z = Zinc, K = Copper)

Further Information

Please consult the operation instructions!



CREM DRT

Electronic ice and snow detector
for installation in switch cabinets or control stations



Electronic Controller non-Ex



- Lighted touch graphic display
- Switching capacity up to 16A
- Input for Combi Sensor
- Modular expandability
- Multilingual menu

Description

The CREM DRT ice and snow detector is a single-channel basic device that can be used universally for ice and snow detection applications.

It is easy to operate via a lighted touch graphic display with a multilingual menu and integrated password protection.

The integrated alarm system monitors both the internal device functions and the connected sensors. In addition, the device has a heating circuit monitoring system that reliably detects interruptions in the heating circuit and malfunctions in the heating circuit relay.



Technical Data

Rating:	230V AC, 50Hz
Switching-Capacity Load Relay:	1 NO Contact, 16A
Switching-Capacity Alarm Relay:	1 No-contact 2A
Operating-/ Storage-Temperature:	-15..+40°C -20..+70°C
Temperature Range:	-30...+80°C
Dimensions	3 TE built-in housing (according to DIN 43880) for TH-35 mounting rail
Wattage:	3W or 11W during moisture measurement

Ordering Information

Part number:
CREM DRT: Electronic ice and snow detector

Alternative Products

Part number:
CREM DRM: Electronic ice and snow detector
with manual rotary actuator
(see relevant data sheet)

Further Products

Part number:
CREM-TFS-D: Temperature and humidity sensor
for gutters, downpipes, and
roof surface
MW-TFS_: Mounting plate for sensor
(Z = Zinc, K = Copper)

Further Information

Please consult the operation instructions!



CR-TFS-D



Temperature and humidity sensor for use in gutters and roof surfaces

Electronic Controller non-Ex



- Temperature and humidity measurement
- Protection class IP 68
- Microbe and oil resistant
- Compact design

Description

The CR-TFS-D is a rod-shaped sensor for simultaneous measurement of temperature and humidity values in gutters, downpipes, and flat roof areas.

Its compact design, which is also resistant to microbes and oil, enables space-saving and durable installation.

Secure mounting is ensured with the aid of a mounting plate, which is available separately.



Technical Data

Dimensions:	D = 6mm L = 105mm
Connection cable:	LiYw11Y, 4x0,5mm ²
Protection class:	IP 68
Temperature Range:	-30...+80°C
Moisture measurement:	-20...+30°C

Further Information

Please consult the operation instructions!

Ordering Information

Part number:	
CR-TFS-D 6M0:	Temperature and humidity sensor 6m connection cable
CR-TFS-D 10M0:	Temperature and humidity sensor 10m connection cable
CR-TFS-D 20M0:	Temperature and humidity sensor 20m connection cable

Further Products

Part number:	
CREM DRT:	Electronic ice and snow detector with manual rotary actuator
CREM DRT:	Electronic ice and snow detector with manual rotary actuator

Accessories

Mounting plate for sensor with adjustable height of the sensor above the mounting surface. The mounting plate can be bent to fit the mounting location and attached by gluing, soldering, or screwing.

Ordering Information

Part number:	
MW-TFS-_:	Mounting plate for sensor Z = material zinc K = material copper



CRM-20/+30

Electromechanical control unit
or gutter heating

Electronic
Controller non-Ex



- 2-point controller
- Compact dimensions

- Setting an upper and lower limit value
- Energy saving of the gutter heating

Description

The CRM-20/+30 control unit operates as a 2-point control unit

By setting an upper and lower limit value, it offers a simple, efficient and cost-effective solution to optimize the operation of the heating system while ensuring safety and energy savings.

Thanks to its compact dimensions and simple installation, this control unit can be easily integrated into a gutter heating system



Technical Data

Voltage:	230V AC
Relais:	1 NO / 1 NC 16A/250V
Hysteresis:	- 3K
Temperature sensor:	Bimetall
Temperature range:	-20...+25°C
Ambient Temperatur:	-30...+50°C
Protection Class:	IP 65
Dimensions:	122 x 120 x 55mm

Orderinformation

Typenumber:	CRE-20/+30: Electromechanical control unit
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Alternative Products

Typenumber:	CREM_: Electronic Ice detector
IRM040b:	Mechanical temperature controller

Further Informaitons

Please consult the operating instructions



CLD182CTK...

Factory assembled heating circuits with self-limiting heating cable for gutters and roof protection.

Factory assembled heating circuits

85°C



- Factory assembled heating circuits for frost protection
- No Overheat in case of overlap.
- Complete with thermostat (+4°C On/ +11°C Off) and Schuko plug.

- Adjusts the output power to the pipe/workpiece temperature.
- Suitable for temperatures up to 85°C
- UV resistant

Description

Assembled heating circuit with self-limiting heating cable specially designed for use in gutters, downpipes and on roof surfaces.

Due to its high UV resistance, this heating tape is optimally adapted to the requirements of this application. Due to the temperature resistance up to 85°C, the heating tape also withstands high surface temperatures caused by direct sunlight. The self-limiting characteristic ensures that the heating cable can achieve an output power of approx. 36W/m in ice water. This always ensures the required defrosting property.

The heating cable is ready made including frost protection thermostat and connection cable with Schuko plug.



Technical Data

Max. permitted temperature:	85°C
Voltage:	230V AC
Output power:	18W/m in air 36W/m in ice water
Switching point thermostat:	+4°C ON/ +11°C OFF
Connection cable length:	3m including Schuko plug
Fuse protection:	16A C- Characteristic 30mA RCD

Suitable Controller

CREM_	electronic ice detector
CRM-20/+30	Thermostat for gutter

Ordering Information

Example:	CLD 18 2 C T K 3
Heating cable type Quintherm CLD	
Power Output 18W/m at 0°C	
Operation voltage 220-277V AC (2)	
Tinned copper braid	
Polyolefin outer jacket (black)	
Factory assembled heating circuits	
Heating circuit length (m)	

Accessories

Additional spacers and cable ties available separately.



Pond Heating System



A pond heater protects frost-sensitive ornamental fish such as koi carp and goldfish. During hibernation, these fish retreat to deep, frost-free areas of the pond. However, due to the shallow depth of these areas, they can freeze over.

The pond heater is installed at the bottom of the pond and ensures a frost-free environment.

With Quintex's self-limiting heating cables, you get efficient heating for your pond. The advantage of a self-limiting heating cable over, for example, heating cartridges or heating rods lies in the even heat distribution across the entire bottom surface.

The KTS systems are pre-assembled, wired and ready for electrical connection, and factory-preset to a control temperature of +10 °C.

KTS03...KTS60

Pond heating with self-limiting heating tapes



Commercial



- Pond heater pre-assembled and wired ready for connection
- No overheating by overlapping the heating tapes
- Electronic 2-point controller with LED display of the actual value
- Built into a robust polyester housing with viewing window
- Simple programming

Description

Quintex self-limiting heating tapes provide you with an efficient and inexpensive heating system for your pond.

The advantage of the self-limiting heating tape over cartridge heaters or heating rods, for example, is the even heat distribution over the entire bottom surface.

The KTS systems are already pre-assembled, wired and preset to a control temperature of 10°C. All you need to do is provide a socket protected by a residual current circuit breaker.

At very low temperatures, in order to reduce heat loss, it is advisable to use a cover such as bubble wrap, air balls or similar to reduce heat loss.



Technical Data

Supply Voltage:	230V AC ± 10%
Relais (Out 1)	16A/250V changeover
Relais (Out 2)	8A/250V changeover
Switching accurateness:	0,5%
Cable glands:	2xM20, 1xM12
Dimensions (LxBxH):	160x160x90mm

Order Information:

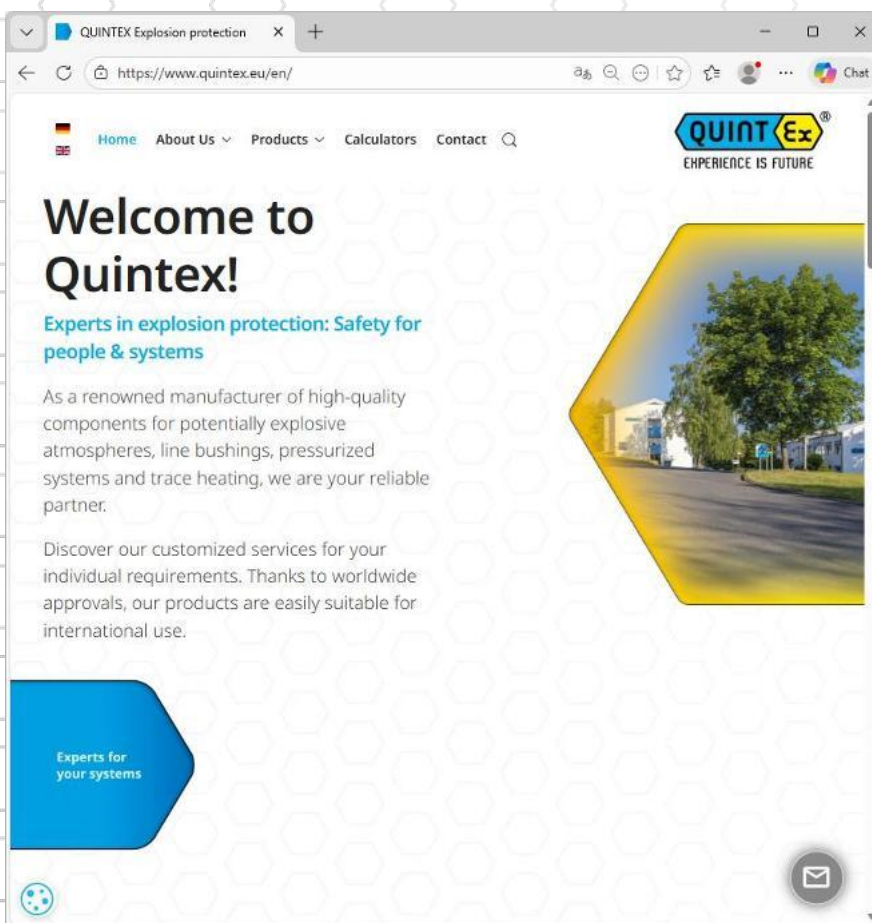
Part Nr.	Size of Pond	Heating Tape length	Max. Power at 10°C
KTS03	up to 3000 Liter	3 Meter	120W
KTS05	3000 - 5000 Liter	5 Meter	200W
KTS10	5000 - 10000 Liter	10 Meter	400W
KTS20	10000 - 20000 Liter	20 Meter	800W
KTS30	20000 - 30000 Liter	30 Meter	1200W
KTS40	30000 - 40000 Liter	40 Meter	1600W
KTS50	40000 - 50000 Liter	50 Meter	2000W





We are looking forward to your online visit on <https://www.quintex.eu/de/>.

We would be glad to support you with our online support chat.
The chat is available on our home page.



Contact

You need more in-depth information? We are looking forward to assisting you!

Further information on our products, systems or services?
Do you need an offer or do you have questions on our company?

Do not hesitate to contact us via phone or email.

We would be glad to helping you!





Notes

