Experts for your systems

Electrical Trace Heating

• Quality • Reliability • Delivery reliability
• Our knowledge for your application

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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:	
Power On:	85°C
Power Off:	85°C
Min. Installation Temperature:	-40°C
Min. Operating Temperature:	-65°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, EAC

Ordering information

Example: ILLw 40 2 C F/Qx

- ILLw: Quintherm tape family (ILLw)
- 40: Nominal output 40W/m at 10°C
- 2: Supply voltage 220-277V AC (2)
  Supply voltage 110-120V AC (1)
- C: Tinned copper braid (C)
- F: Polyolefin outerjacket (T) (blue)
  Fluoropolymer outerjacket (F) (black)

Further Information

Please consult the instalation instructions.

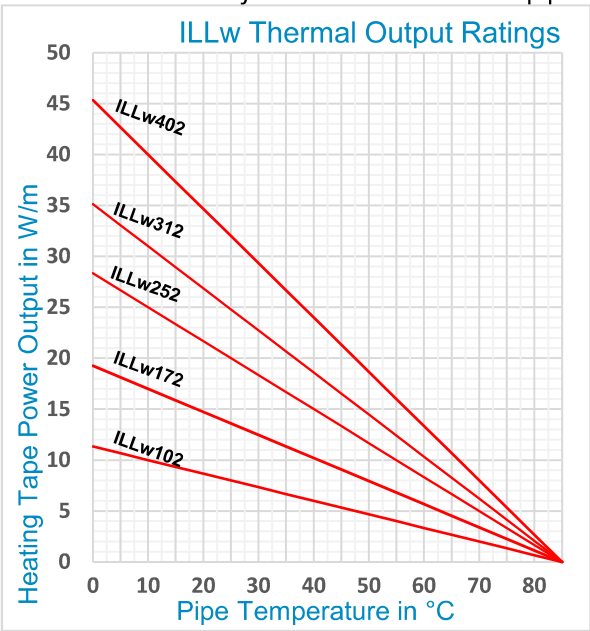
Max. Cct Length (m) vs. MCB Size (A)

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:	-65°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	11.8	35	M20
ILM..CF	12.7 x 5.95	12.6	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	15.7	40	M25
ILMw..CF	15.4 x 6.5	16.6	40	M25

Approval

ATEX, IECEx, EAC

Ordering Information

Example: ILMw 45 2 C F/Qx

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

Further Information

Please consult the installation instructions.

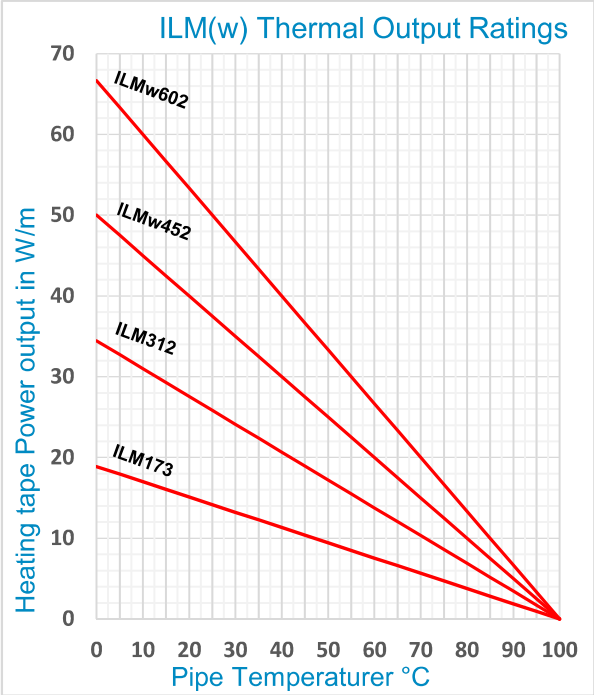
Max. Cct Length (m) vs. MCB Size (A)

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:	-65°C
Power Supply:	220-277VAC
Cross Section:	1.1mm²
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	11.45 x 5.25	13.4	35	M20

Approval

ATEX, IECEx, EAC

Ordering Information

Example: ILH 30 2 C F/Qx

- ILH: Quintherm tape family (ILH)
- 30: Nom. output 30W/m at 10°C
- 2: Supply voltage 220-277V AC (2); Supply voltage 110-120V AC (1)
- C: Tinned copper braid (C)
- F: Fluoropolymer outerjacket (F)

Further Information

Please consult the installation instructions.

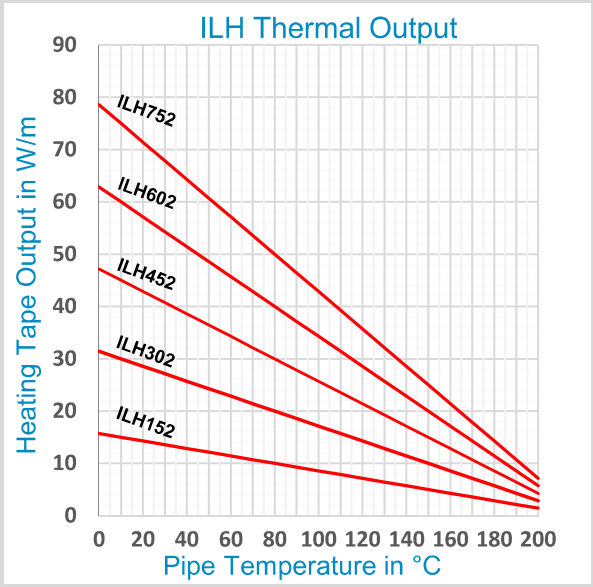
Max. Cct Length (m) vs. MCB size (A)

Type	Start temp.	230V AC			
		10A	16A	20A	32A
ILH152..	+10°C	112	162	162	162
	0°C	106	162	162	162
	-20°C	94	150	162	162
	-40°C	84	134	162	162
ILH302..	+10°C	58	92	114	114
	0°C	56	88	112	114
	-20°C	50	82	102	114
	-40°C	46	74	94	114
ILH452..	+10°C	42	66	84	98
	0°C	40	64	80	98
	-20°C	36	58	72	90
	-40°C	34	52	66	82
ILH602..	+10°C	32	52	64	76
	0°C	30	50	62	64
	-20°C	28	44	56	58
	-40°C	26	40	50	52
ILH752..	+10°C	26	40	52	66
	0°C	22	34	44	48
	-20°C	14	24	28	32
	-40°C	10	14	18	22

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 maintencance 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.

Options

ILS.../Qx Base heating tape without any braiding or outerjacket (for non-Ex applications only) *(available upon special request)*

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. *(available upon special request)*

ILS..NF/Qx Base heating tape with nickel-plated copper braid and fluoropolymer outerjacket for added mechanical and aggressive chemical protection.

Technical Data

Max. Exposure Temperature:
Power On: 220°C
Power Off: 250°C

Min. Installation Temperature: -40°C

Min. Operating Temperature: -65°C

Power Supply: 220-277VAC
Cross-Section: 1.1mm²
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	12.1 x 5.4	14.6	35	M20
ILSw..	12.5 x 3.7	11.4	25	M25
ILSw..N	13.5 x 4.7	15.8	30	M25
ILSw..NF	14.4 x 5.6	19.5	35	M25

Approval

ATEX, IECEx, EAC

Ordering Information

Example: ILS 30 2 N F/Qx

- ILS – Quintherm tape family (ILS)
- 30 – Nominal output 30W/m at 10°C
- 2 – Supply voltage 220-277V AC (2); Supply voltage 110-120V AC (1)
- N – Nickel-plated copper braid (N)
- F – Fluoropolymer outerjacket (F)

Further Information

Please consult the installation instructions.

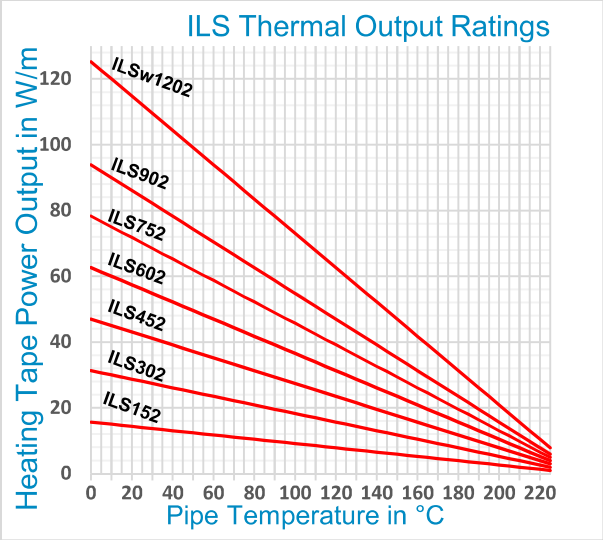
Max. Cct Length (m) vs. MCB Size (A)

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.

IAL4SS/BS

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 IRM..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.

Technische Daten

Temperature Resistant:	-60°C…200°C
Material:	Silicone
Length Connection Sleeve:	125 mm
Length End Seal:	66 mm

Approval

ATEX, IECEx, EAC

Further Information

Please consult the installation instructions!

Ordering Information

Part number:

IAL4SS:	Termination set suitable for ILL..S..CT/CF,
IAL4BS:	Termination set suitable for ILLw..CT/CF, ILM..CT/CF, ILH..CF, ILS..NF
IAL4SA:	like IAL4SS, but only power supply
IAL4BA:	like IAL4BS, but only power supply
IAL4SE:	like IAL4SS, 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

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
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:	2.5mm²
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, EAC

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:

Example: IAL8EX H K S S

- IAL8EX: Quintherm IAL8EX
- H: Operation temperature range: -60..+190°C
- K: Terminal block (K)
- S: Narrow heating tapes (see clamping range)
- S: 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)

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:	2.5mm²
Protection Class:	IP65
Length:	110 mm
Diameter:	31mm (SW29)
Weight Supply/ End/ T:	202g
Material:	Brass nickel Plated

Approval

ATEX, IECEx, EAC

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:

Example: IAL8wEX H K W S

- IAL8wEX: Quintherm IAL8wEX
- H: Operation temperature range: -60..+190°C
- K: Terminal block (K)
- W: Wide heating tapes (see clamping range)
- S: Connection and termination set (S)
  Connection set, supply - heating cable (A)
  End-Termination set (E)
  Connection set, heating cable – heating cable (V)

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: 6x12mm Type B: 7x14mm
Max. Current Rating:	16A AC
Switching Points:	4°C On / 11°C Off
Supply Voltage:	250V AC
Terminal Diameter:	2,5mm²
Protection Class:	IP65
Total Length/ Width	125 mm / 60 mm
Diameter:	25mm (SW24)
Weight:	ca. 350g
Material:	Brass Nickel Plated

Approval

ATEX, IECEx, EAC

Marking

II 2G Ex e IIC T6/T5/T4/T3 Gb
II 2D Ex tb IIIC T195°C Db IP65
II 2G Ex mb IIC T6/T5/T4/T3

Ordering Information

Part number:

Example: IAL8EX H K S **C**

- IAL8EX – Quintherm IAL8EX
- H – Temperature range -55°C…+110°C
- K – Terminal block (K)
- S – Small heating cables 6x12mm - ILL..s ,ILH, ILS(S); Wide heating cables 7x14mm - ILLW, ILMw (B)
- **C – Thermostat mechanical (C)**

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.

Further Information

Please consult the installation instructions.

Quintex GmbH – i_Park Tauberfranken 13 – 97922 Lauda-Königshofen – Germany
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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: -55°C (-60°C upon request)

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

Marking

II 2G Ex e IIC T6
II 2D Ex tD A21 IP65 T80°C

Approval

ATEX, IECEx, EAC

Ordering Information

For part numbers and technical data please see page 2.

Additional Products

Part number IRM0120Ex: 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	2.5mm²	1x M20 2x M12	Sensor-box for up to 2 Sensoren
AG 99 HK Ex	110x75x55	2.5mm²	2x M20	Junction box 1 phase for 1 heating circuit
AG 101 Ex	122x120x90	6mm²	1x M25 3x M20	Junction box 1 phase for up to 3 heating circuits
AG 101 3P Ex	122x120x90	6mm²	1x M25 3x M20	Junction box 3 phase for up to 3 heating circuits
AG 101 S Ex	122x120x90	6mm²	1x M20 3x M20	Junction box equipped for star connection
AG 102 Ex	160x160x90	6mm²	1x M32 4x M20	Junction box 1 phase for up to 4 heating circuits
AG 102 3P Ex	160x160x90	6mm²	1x M32 4x M20	Junction box 3 phase for up to 4 heating circuits
AG 103 Ex	260x160x90	6mm²	1x M32 6x M20	Junction box 1 phase for up to 6 heating circuits
AG 103 D Ex	260x160x90	6mm²	1xM32 6xM20	Junction box 3 phase equipped for delta connection

Customized versions available upon request!

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 ed IIC T6 Gb
II 2D Ex tb IIIC T80°C Db IP66

Approval

ATEX, IECEx, EAC

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

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 / 250V AC	
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 3G1.5mm²	
Cable Glands:	1x M20	

Marking

II 2G Ex mb IIC T4 Gb
II 2D Ex tb IIIC T100°C Db IP68

Approval

ATEX, IECEx, EAC

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 hystesis
- 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, EAC

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 ruggedglass 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 / 250V AC
Switching Points:	4°C On/ 11°C Off
Switching Tolerance:	±3K
Protection Class:	IP66
Min. Ambient Temperature:	-55°C…+50°C
Dimensions (LxWxH in mm):	110 x 75 x 55
Enclosure Material:	Glas fiber enhanced polyester
Cable Glands:	1x M20 for heating circuit 1x M20 for supply cable

Marking

Enclosure:
- II 2G Ex e IIC T6 Gb
- II 2D Ex tb IIIC T80°C IP66

Thermostat:
- II 2G Ex mb IIC T4 Gb
- II 2D Ex tb IIIC T100°C Db IP68

Approval

ATEX, IECEx, EAC

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: Mini-thermostat without enclosure, moulded in M20 metal cable gland with 400mm supply cable

Further Information

Please consult the installation instructions!

Quintex GmbH – i_Park Tauberfranken 13 – 97922 Lauda-Königshofen – Germany
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IR2M…Ex

Mechanical capillary temperature controller for use in hazardous area.

Mechanical Controller Ex

- Compact design
- 16A/230V switching capacity
- Cross section 4/6mm²
- 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 16A directly.

When exceeding the adjusted temperature, the controller switches off.

Technical Data

Min. Ambient Temp.:	-55°C
Switching Capacity:	16A/230V (16A/400V and 25A/230V upon request)
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +50°C

Marking

II 2G Ex ed IIC T6
II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

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 temperature ranges upon request.

Further Information

Please consult the installation instructions!

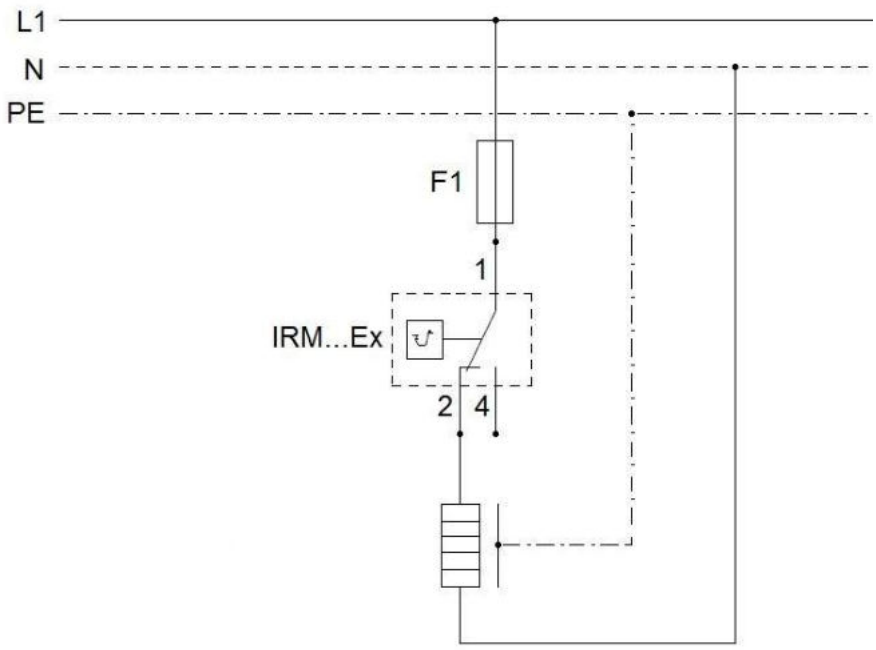
IR2M…Ex

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	16	16	16	16
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 (mm²)	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-save protection temperature limiter for use in hazardous area.

Mechanical Controller Ex

- Compact design
- 16A/230V switching capacity
- Cross section 4/6mm²
- Sensor diameter 4/6mm
- Resistant to chemicals

Description

The Ex-fail-save 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 16A 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 (16A/400V and 25A/230V upon request)
Material:	Glass Fiber Reinforced Polyester
Protection Class:	IP66
Temperature Class:	T6 at +50°C

Marking

II 2G Ex ed IIC T6
II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

Ordering Information

Part number:

IB2M0719Ex	Teperature Range: +70°C..+190°C
IB2M1319Ex:	Temperature Range: +130°C..+190°C
IB2M0630Ex:	Temperatue Range: +60°C..+300°C
IB2M1450Ex:	Temperature Range: +140°C..+500°C

Further temperature ranges upon request.

Further Information

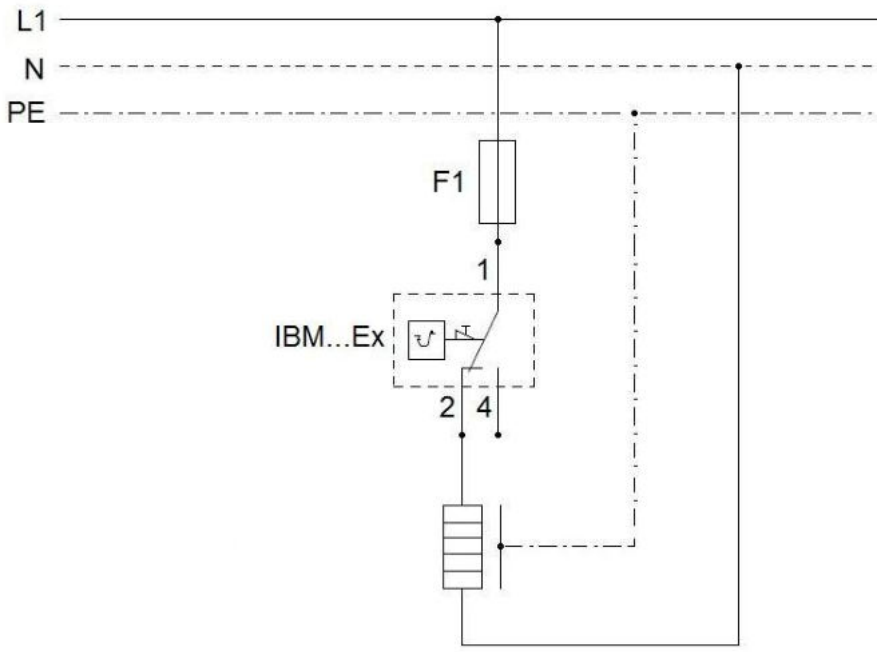
Please consult the installation instructions!

Standard Versions

Technical Data

Temperature Range (°C)	70-190	130-190	60-300	140-500
Rating Voltage (VAC)	230	230	230	230
Switching Cap. (cos φ = 1) (A)	16	16	16	16
Switching Diff. (%) of full scale value approx	-	-	-	-
Max. Sensor Temperature (°C)	225	215	325	525
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 (mm²)	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
- 16A/230V switching capacity
- Cross section 4/6mm²
- 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 (16A/400V and 25A/230V upon request)
Temperature Class:	T6 at +50°C

Marking

II 2G Ex ed IIC T6
II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

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
IRB2M0630/0630Ex:	Controller:	60..300°C
	Limiter:	60..300°C

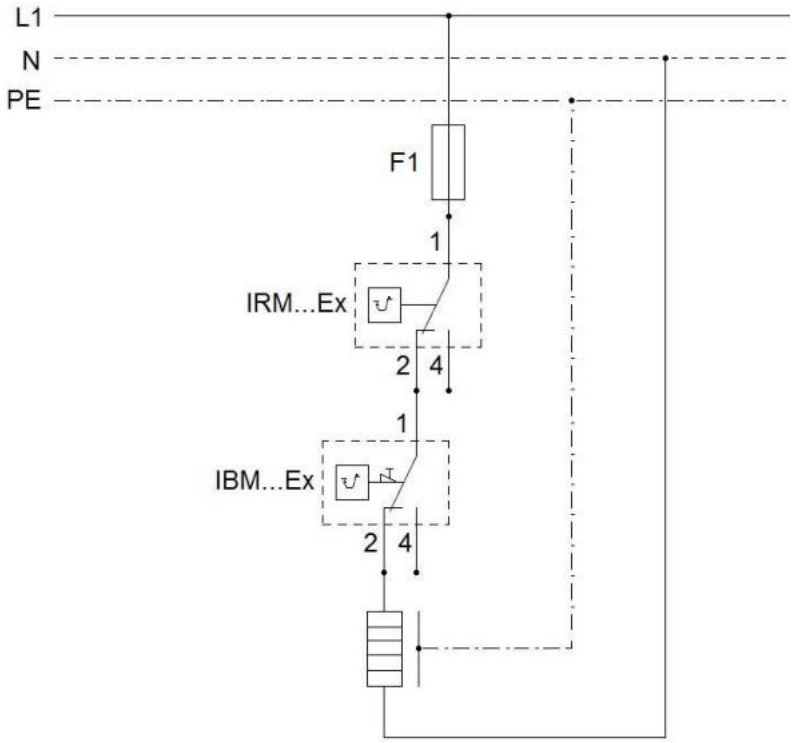
Further temperature ranges available upon request.

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..300/60..300
Rating Voltage (VAC)	230	230	230	230	230	230
Switching Cap. (cos φ = 1) (A)	16	16	16	16	16	16
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
Capillaary 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 (mm²)	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 10mm²
- 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 +50°C

Marking

II 2G Ex ed IIC T6

II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

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

Further temperature ranges upon request.

Further Information

Please consult the installation instructions!

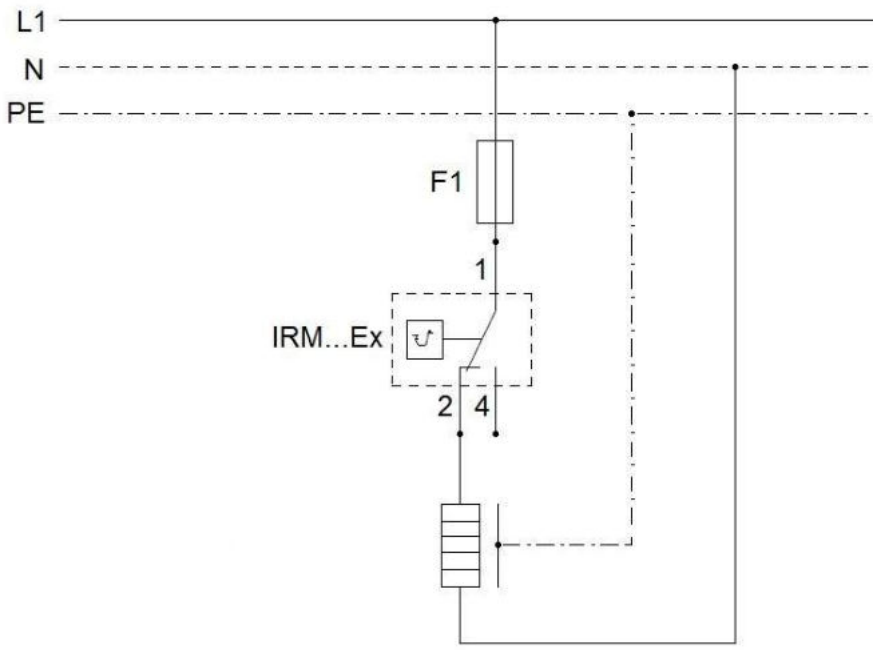
IR2M…Ex/g

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 (mm²)	10	10	10	10	10
Weight (kg)	1.9	1.9	1.9	1.9	1.9

Wiring Diagram



IB2M…Ex/g

Mechanical fail-save protection temperature limiter for use in hazardous area.

Mechanical Controller Ex

- Compact design
- 25A/230V switching capacity
- Cross section 10mm²
- Sensor diameter 4/6mm
- Resistant to chemicals

Description

The Ex-fail-save 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

Marking

II 2G Ex ed IIC T6

II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

Ordering Information

Part number:

IB2M0719Ex/g	Teperature Range: +70°C..+190°C
IB2M1319Ex/g	Temperature Range: +130°C..+190°C
IB2M0630Ex/g	Temperatue Range: +60°C..+300°C
IB2M1450Ex/g	Temperature Range: +140°C..+500°C

Further temperature ranges upon request.

Further Information

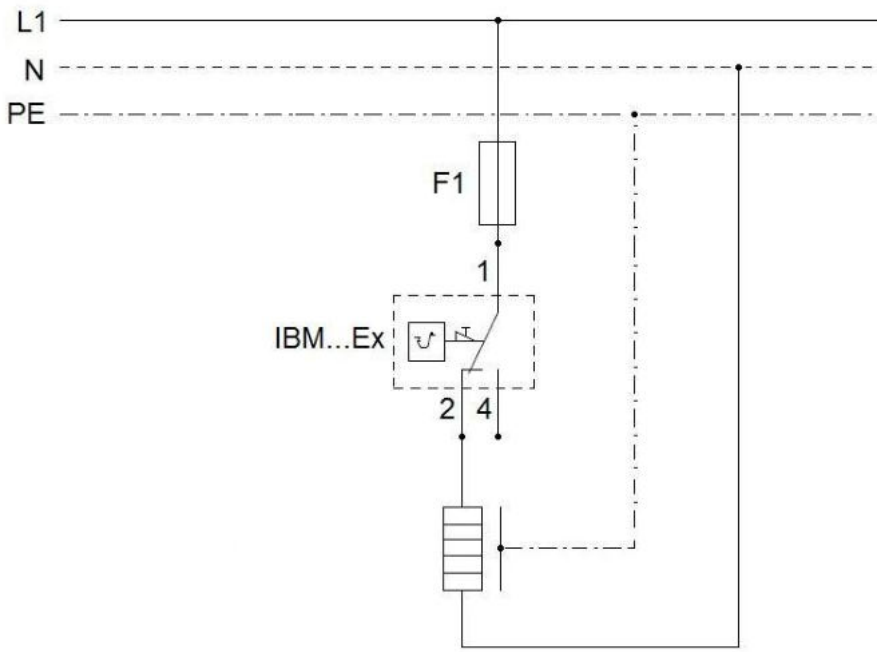
Please consult the installation instructions!

Standard Versions

Technical Data

Temperature Range (°C)	70-190	130-190	60-300	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 (mm²)	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 10mm²
- 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 +50°C

Marking

II 2G Ex ed IIC T6
II 2D Ex tb IIIC T80°C IP66

Approval

ATEX, IECEx, EAC

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..120°C
	Limiter:	70..190°C
IRB2M0019/1319Ex:	Controller:	0..190°C
	Limiter:	130..190°C
IRB2M0630/0630Ex:	Controller:	60..300°C
	Limiter:	60..300°C

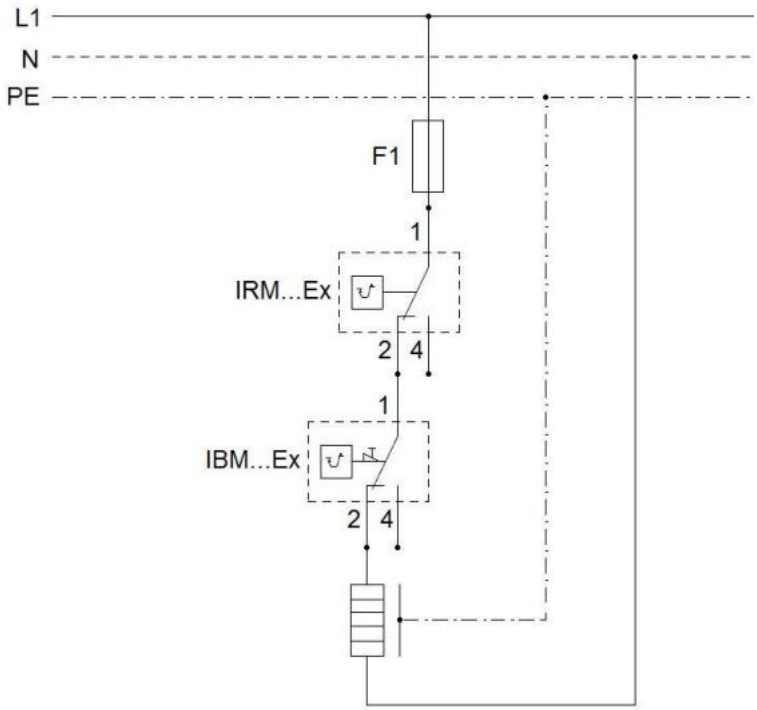
Further temperature ranges available upon request.

Standard Versions

Additional Technical Data

Temperature Range (°C)	-20..50/70..190	0..120/70..190	0..120/130..190	0..190/70..190	0..190/130..190	60..300/60..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
Capillaary 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)	7-12/16-21	7-12/16-21	7-12/16-21	7-12/16-21	7-12/16-21	7-12/16-21
Cross Section (mm²)	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 ... +50°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 ed IIC T6
II 2D Ex tb IIIC T80°C IP65

Approval

ATEX, IECEx, EAC

Further Information

Operation instruction must be consulted before use.

Ordering Information

IR2M .... VAEx

- IR2M: Fail-safe temperature controller
- ....: Code temperature range (see code below)
- VAEx: Stainless steel and Ex version

Available Temperature Ranges

Controller (safety temperature monitor):

Code: -205	=	-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)

Other temperature ranges available upon special request.

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)

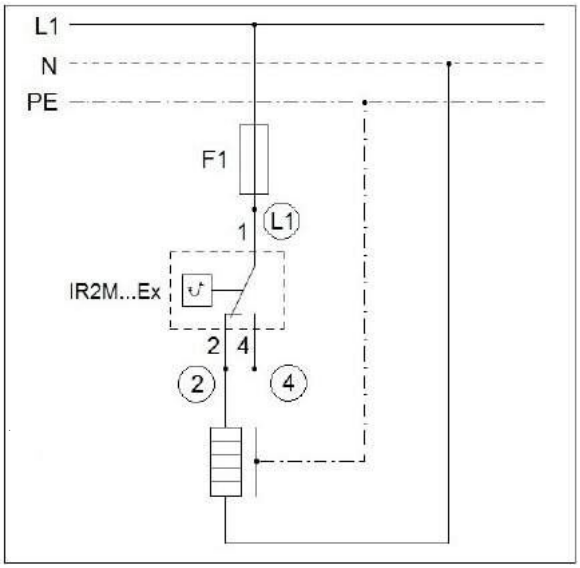
Bulb Diameter: 4mm

Cable Glands: 1x M25 Ni-plated brass
1x M20 Ni-plated brass

Terminal Cross Section (Cage Clamp Type): 0.5 – 6mm² (solid or stranded cable)

Weight: ca. 3.5kg

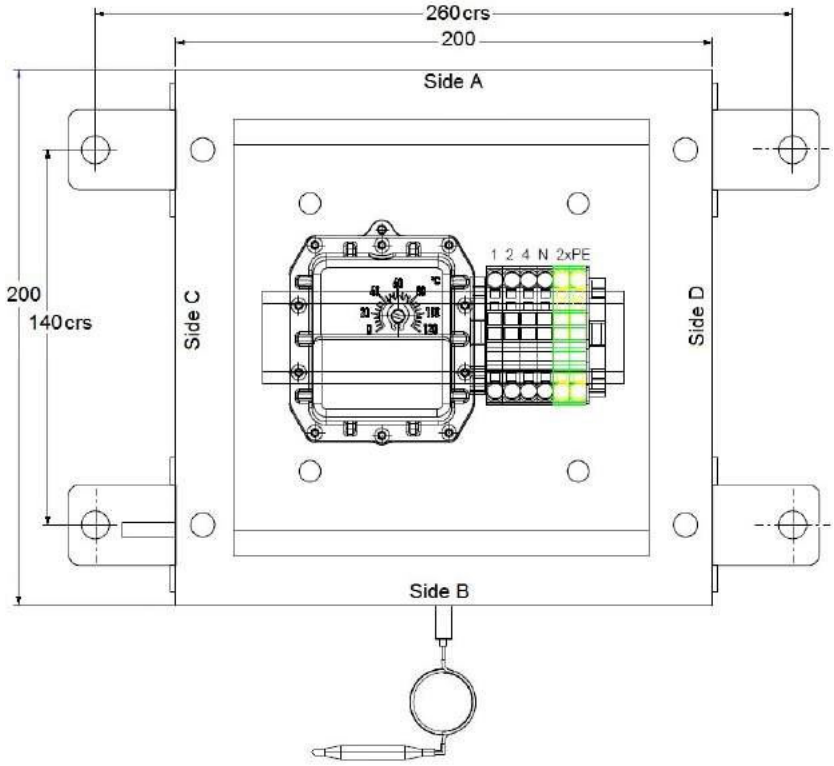
Typical Schematic



L1 2 4 = Terminal idents

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 … +50°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 ed IIC T6
II 2D Ex tb IIIC T80°C IP65

Certificates

ATEX, IECEx, EAC

Further Information

Please consult the installation instructions

Ordering Information

IB2M …. VAEx

- IB2M: Fail-safe temperature limiter
- ….: Code temperature range (see code below)
- VAEx: Stainless steel and Ex version

Available Temperature Ranges

Limiter (Safety temperature limiter):

Code: 1319	=	+130…+190°C
Code: 0719	=	+70…+190°C
Code: 0630	=	+60…+300°C
Code: 1450	=	+140…+500°C

Example

IB2M0630VAEx
(Limiter with temperature range: +60…+300°C)

Other temperature ranges available upon special request.

Quintex GmbH – i_Park Tauberfranken 13 – 97922 Lauda-Königshofen – Germany
Tel: +49 9343 6130 -0 – Fax: +49 9343 6130-105 – E-Mail: info@quintex.info – www.quintex.eu

Additional Technical Data

Rated Voltage: 230V AC
(400V upon request)

Rated current (cos φ = 1): 25A

Switching point devation:

Temperature Range in °C	Deviation approx (% of full scale)	Sensor Diameter (mm)
+130…+190°C	+0/-7	4
+70…+190°C	+0/-7	4
+60…+300°C	+0/-7	6
+140…+500°C	+0/-7	6

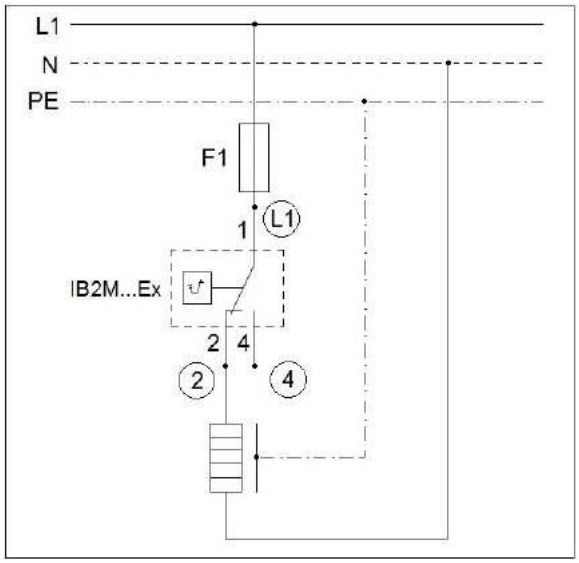
Max. permitted sensor temp.: +15% of full scale
or max. +25K

Capillary length: 1,000mm
(3,000mm upon request)

Bulb diameter: 4mm
Cable glands: 1x M25 Ni-plated brass
1x M20 Ni-plated brass

Terminal cross section: 0.5 – 6mm²
(Cage clamp type) (solid or stranded cable)
Weight: ca. 3.5kg

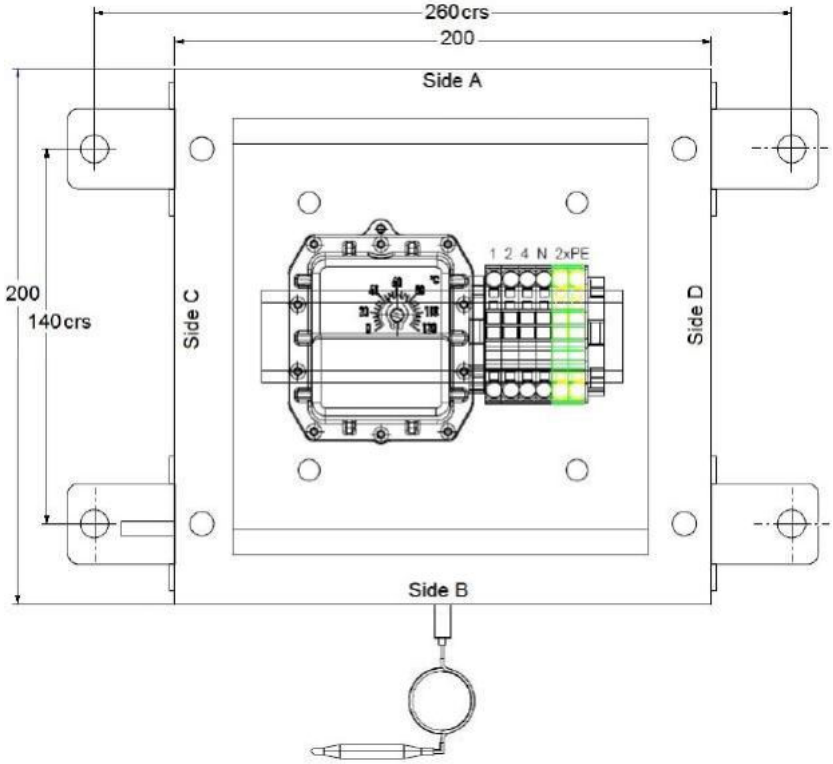
Typical Schematic



L1 2 4 = Terminal idents

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 … +50°C in T6
Material:	Stainless Steel 1.4404 / 316L
Protection Class:	IP66
Dimensions (LxWxH in mm):	300 x 200 x 120

Marking

- II 2G Ex ed IIC T6
- II 2D Ex tb IIIC T80°C IP65

Approval

ATEX, IECEx, EAC

Further Information

Please consult the installation instructions.

Ordering Information

IRB2M .... / .... VAEx

- Fail-safe controller-limiter combination
- Temp. Range controller (see code below)
- Temp. Range limiter (see code below)
- Stainless steel and Ex version

Available Temperature Ranges

Controller and limiter:

Code: -205	=	-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-205/0719VAEx
(controller: -20…+50°C, limiter: +70…+190°C)

Further temperature ranges available upon request.

Quintex GmbH – i_Park Tauberfranken 13 – 97922 Lauda-Königshofen – Germany
Tel: +49 9343 6130 -0 – Fax: +49 9343 6130-105 – E-Mail: info@quintex.info – www.quintex.eu

Additional Technical Data

Rated Voltage: 230V AC
(400V upon request)

Rated Current (cos φ = 1): 25A

Switching Point Deviation:

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)

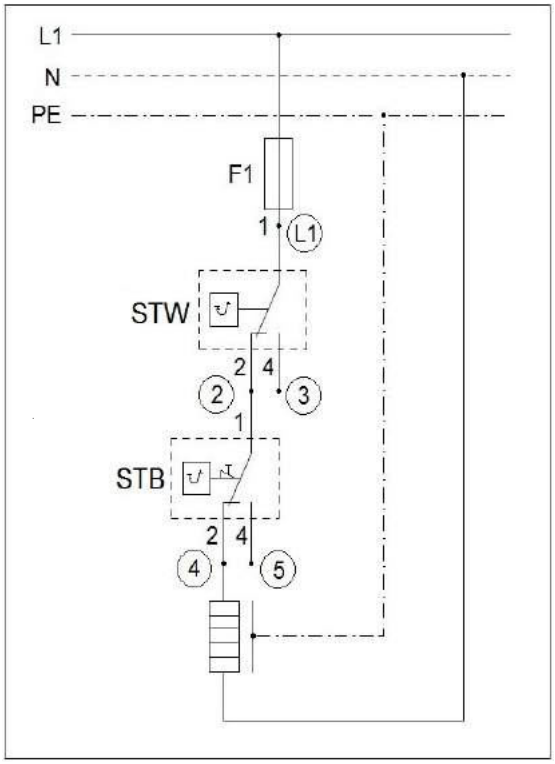
Sensordurchmesser: 4mm/ 6mm

Cable Glands: 1x M25 Ni-plated brass
2x M20 blind plug

Terminal Cross Section: 0.5 - 6mm²
(single- or fine-wired)

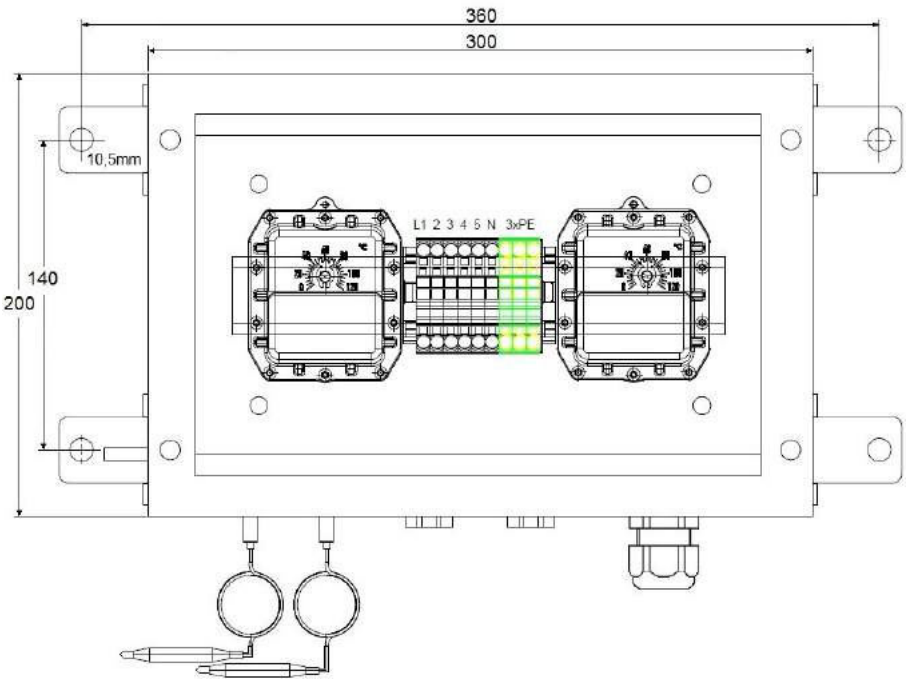
Weight: ca. 6.0kg

Typical Schematic



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
- 4mm² 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, EAC

Further Information

Please consult the installation instructions!

Ordering Information

Part number:

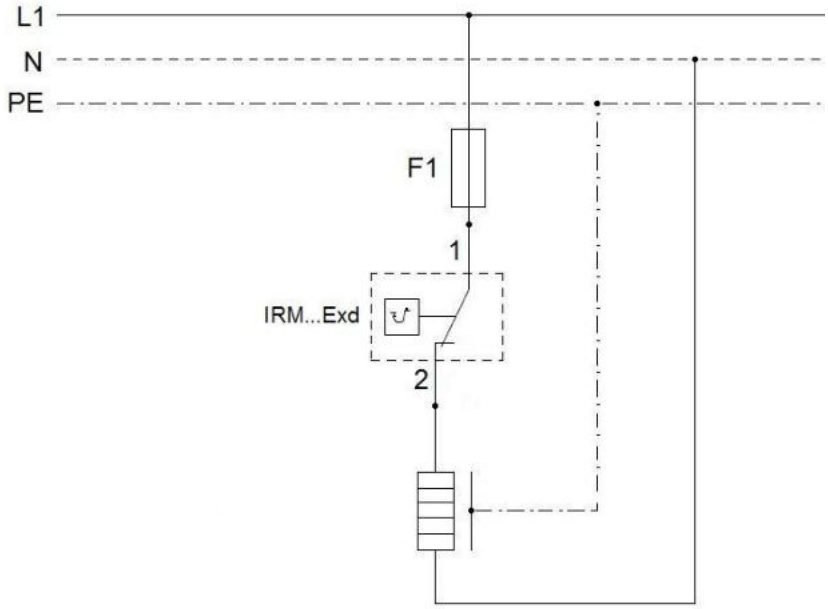
IRM040Exd:	Temperature range: 0…+40°C
IRM0200Exd:	Temperature range: 0…+200°C
IRM50320Exd:	Temperature range: +50…+320°C

Standard Versions

Technical Data

IRM…Exd	040	0200	50320
Voltage Rating (V AC)	250	250	250
Switching cap.: (cos φ = 1) (A)	25	25	25
Switching Difference (K)	Ca.3	Ca.5	Ca.7
Max. Sensor Temperature (°C)	45	230	350
Protection Class	IP66	IP66	IP66
Capillary Tube Length (in mm)	1600	1600	1600
Sensor Bulb Dimensions (in mm)	126 x 5.8ø	179 x 3.0ø	179 x 3.0ø
Enclosure Dimensions overall (LxWxH in mm) (110mm ø)	145x126x108	145x126x108	145x126x108
Fixing crs (in mm)	7.0ø x 126	7.0ø x 126	7.0ø x 126
Blind Plugs M20	2	2	2
Spring Clamp Terminal (in mm²)	4	4	4
Approximate Weight (in kg)	1.3	1.3	1.3

Typical Wiring Diagram



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):	0.22mm²
Cable Length:	2.0 / 5.0 / 10.0m
Measurement System:	3-wire (2- and 4-wire upon request)

Marking

II 2G Ex e IIC T6…T1 Gb
II 2D Ex tb IIIC T85°C…T220°C Db IP68

Approval

ATEX, EAC

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!