



industrial heating systems



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Headquarters

For more than 30 years ELEKTRA has been specialising in the development and manufacturing of electric heating systems. This experience let us solidify our market position in the areas of industrial and commercial applications. The company was established in 1985 and has been the largest and most renown manufacturer of heating cable systems in Central Europe.



ELEKTRA
leading brand





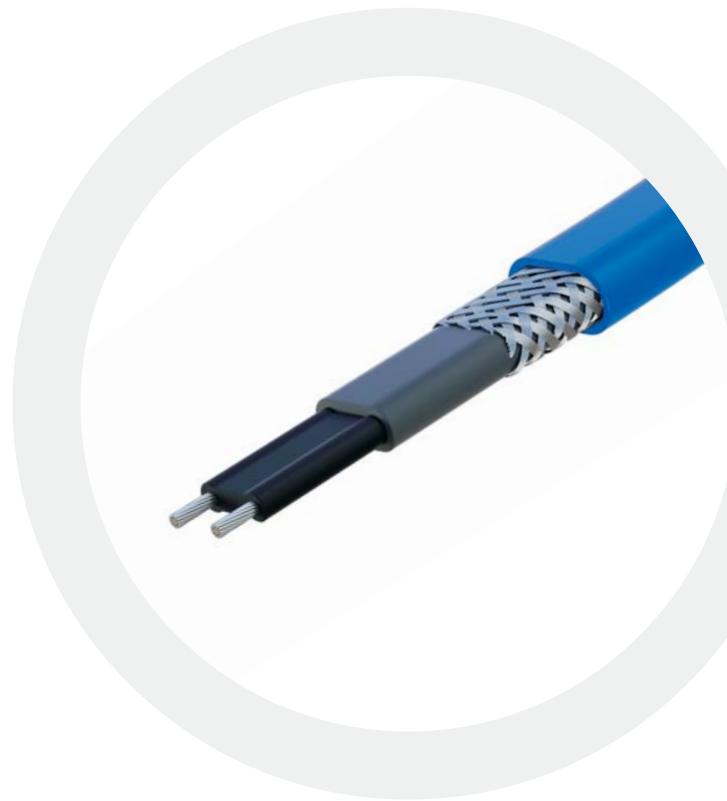
Quality guaranteed

Since the very start, ELEKTRA has taken on the product quality as the key mark of its business activities. According to company policy, well known and trusted cable industry suppliers provide ELEKTRA with highest quality raw materials confirmed by the profound and multi-stage in-company control. The team of engineers has been taking care of the thorough monitoring of the cable construction, design and installation standards, as well as the high level of technical documentation. Only in this way it has become possible to achieve full satisfaction of Clients and consequently the leading market position.



Innovative solutions

Additionally, the cooperation of the entire ELEKTRA team has been focused on the development of new products, introducing innovative solutions and immediate response to market requirements. Such approach allows to continually enrich and widen the range of products, while Clients receive complete system solutions, as well as professional and fast assistance.



ELEKTRA Heating Cables

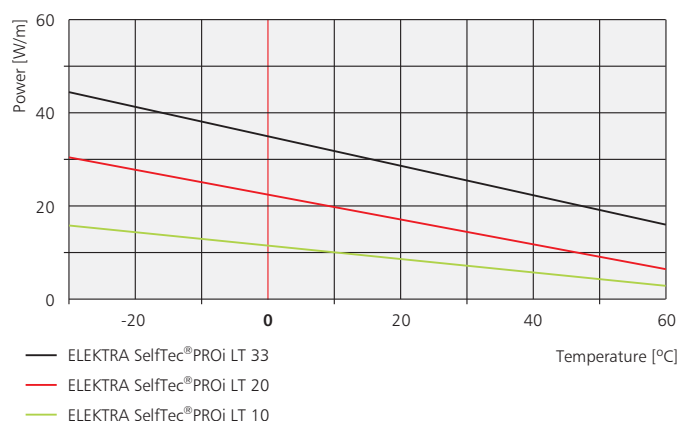
SelfTec®PROi LT 

ELEKTRA SelfTec®PROi LT self-regulating heating cables have been designed for commercial and industrial applications, such as protection of pipes against frost and maintaining required process temperatures up to +65°C. These products are dedicated for both types of installations, in hazardous and non-hazardous areas. Optimal chemical properties and high UV resistance of HFFR outer sheath allow a wide range of applications.



ELEKTRA SelfTec®PROi LT

Function of the heating power vs. insulated steel pipe temperature



This package contains:

- ELEKTRA SelfTec®PROi LT heating cable on a spool.

ELEKTRA SelfTec®PROi LT



- ① Tin-coated multi-wire copper conductor
- ② Self-regulating conductive core
- ③ Modified polyolefin insulation
- ④ Tinned copper braiding
- ⑤ HFFR outer sheath



> Technical data:

Heating cable construction:

- tin-coated multi-wire copper conductor:
1.11 mm² (10, 20 W/m)
1.37 mm² (33 W/m)
- self-regulating conductive core
- modified polyolefin insulation
- tinned copper braiding
- HFFR outer sheath

Shape:

flat

Dimensions:

11.3 ±0.2 – 6.7 ±0.2 mm (10, 20 W/m)
13.4 ±0.2 – 6.7 ±0.2 mm (33 W/m)

Resistance range:

variable, temperature depending

Power output (nominal):

10, 20, 33 W/m (+10°C)

Max. working temperature:

+65°C

Max. exposure temperature:

+85°C (power supply off)

Min. installation temperature:

-40°C

Min. cable bending radius:

25 mm

Power supply:

230 V AC

Insulation test voltage:

2500 V

Standards:

EN 62395-1, EN 60079-30-1, EN 60079-0

Approvals:

ATEX KDB 18ATEX0014U

Ⓜ II 2G Ex 60079-30-1 IIC T6 Gb

Ⓜ II 2D Ex 60079-30-1 IIIC T85°C Db

IECEX KDB 18.0001U

Ex 60079-30-1 IIC T6 Gb

Ex 60079-30-1 IIIC T85°C Db

Product marking:

Ex, CE

Temperature class:

T6



TWIN
CONDUCTOR



MULTI
WIRE
CONDUCTOR



LARGE
CROSS
SECTION



PVC
FREE

START-UP TEMPERATURE	SelfTec®PROi LT 10 W/m			SelfTec®PROi LT 20 W/m				SelfTec®PROi LT 33 W/m			
	CIRCUIT-BREAKER, C-TYPE										
	10A	16A	20A	10A	16A	20A	32A	16A	20A	32A	40A
	MAX. CABLE LENGTH PER CIRCUIT [m]										
-20°C	85	125	180	45	65	90	120	50	65	85	100
0°C	115	170	205	60	90	120	135	60	75	95	110
+10°C	130	205	205	80	110	135	135	70	70	110	120

ELEKTRA Heating Cables

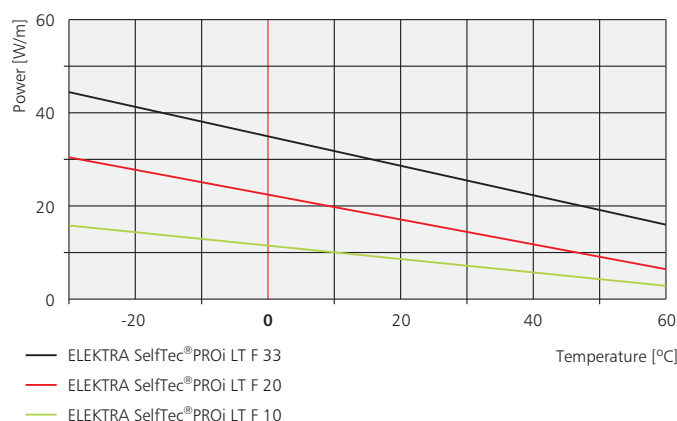
SelfTec®PROi LT F 

ELEKTRA SelfTec®PROi LT F self-regulating heating cables have been designed for commercial and industrial applications, such as protection of pipes against frost and maintaining required process temperatures up to +65°C. These products are dedicated for both types of installations, in hazardous and non-hazardous areas. High chemical properties of fluoropolymer outer sheath allow a wide range of applications.



ELEKTRA SelfTec®PROi LT F

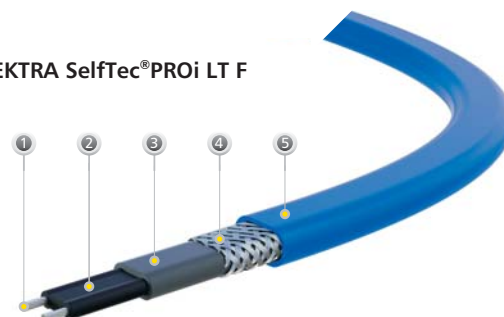
Function of the heating power vs. insulated steel pipe temperature



This package contains:

- ELEKTRA SelfTec®PROi LT F heating cable on a spool.

ELEKTRA SelfTec®PROi LT F



- ① Tin-coated multi-wire copper conductor
- ② Self-regulating conductive core
- ③ Modified polyolefin insulation
- ④ Tinned copper braiding
- ⑤ Fluoropolymer outer sheath



> Technical data:

Heating cable construction:

- tin-coated multi-wire copper conductor:
1.11 mm² (10, 20 W/m)
1.37 mm² (33 W/m)
- self-regulating conductive core
- modified polyolefin insulation
- tinned copper braiding
- fluoropolymer outer sheath

Shape:

flat

Dimensions:

10.7 ±0.2 – 6.1 ±0.2 mm (10, 20 W/m)
12.8 ±0.2 – 6.1 ±0.2 mm (33 W/m)

Resistance range:

variable, temperature depending

Power output (nominal):

10, 20, 33 W/m (+10°C)

Max. working temperature:

+65°C

Max. exposure temperature:

+85°C (power supply off)

Min. installation temperature:

-40°C

Min. cable bending radius:

25 mm

Power supply:

230 V AC

Insulation test voltage:

2500 V

Standards:

EN 62395-1, EN 60079-30-1, EN 60079-0

Approvals:

ATEX KDB 18ATEX0014U

Ⓔ II 2G Ex 60079-30-1 IIC T6 Gb

Ⓔ II 2D Ex 60079-30-1 IIIC T85°C Db

IECEX KDB 18.0001U

Ex 60079-30-1 IIC T6 Gb

Ex 60079-30-1 IIIC T85°C Db

Product marking:

Ex, CE

Temperature class:

T6



TWIN
CONDUCTOR



MULTI
WIRE
CONDUCTOR



LARGE
CROSS
SECTION



FLUORO
POLYMER
OUTER SHEATH

START-UP TEMPERATURE	SelfTec®PROi LT F 10 W/m			SelfTec®PROi LT F 20 W/m				SelfTec®PROi LT F 33 W/m			
	CIRCUIT-BREAKER, C-TYPE										
	10A	16A	20A	10A	16A	20A	32A	16A	20A	32A	40A
	MAX. CABLE LENGTH PER CIRCUIT [m]										
-20°C	85	125	180	45	65	90	120	50	65	85	100
0°C	115	170	205	60	90	120	135	60	75	95	110
+10°C	130	205	205	80	110	135	135	70	70	110	120

ELEKTRA Heating Cables

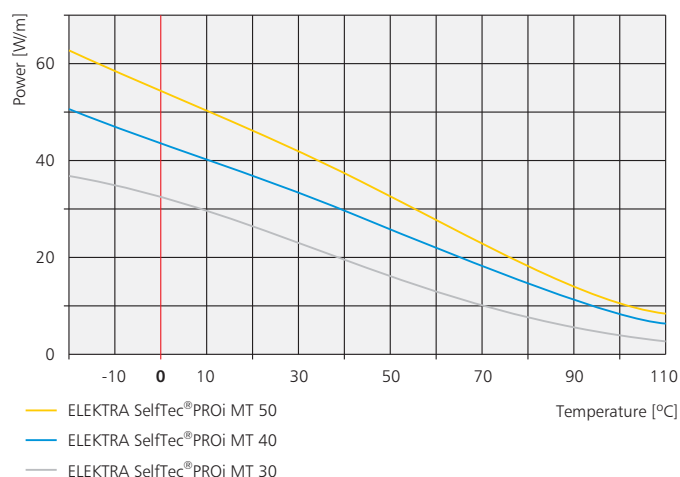
SelfTec®PROi MT 

ELEKTRA SelfTec®PROi MT self-regulating heating cables have been designed for commercial and industrial applications, such as protection of pipes against frost and maintaining required process temperatures up to +110°C. These products are dedicated for both types of installations, in hazardous and non-hazardous areas. HFFR outer sheath provides high UV resistance and optimal chemical and temperature properties.



ELEKTRA SelfTec®PROi MT

Function of the heating power vs. insulated steel pipe temperature



This package contains:

- ELEKTRA SelfTec®PROi MT heating cable on a spool.

ELEKTRA SelfTec®PROi MT



- ① Nickel-coated multi-wire copper conductor
- ② Self-regulating conductive core
- ③ XLEVA insulation
- ④ Tinned copper braiding
- ⑤ HFFR outer sheath



> Technical data:

Heating cable construction:

- nickel-coated multi-wire copper conductor:
1.11 mm² (30, 40 W/m)
1.21 mm² (50 W/m)
- self-regulating conductive core
- XLEVA insulation
- tinned copper braiding
- HFFR outer sheath

Shape:

flat

Dimensions:

13.9 ±0.2 – 6.3 ±0.2 mm (30, 40 W/m)
15.1 ±0.2 – 6.3 ±0.2 mm (50 W/m)

Resistance range:

variable, temperature depending

Power output (nominal):

30, 40, 50 W/m (+10°C)

Max. working temperature:

+110°C

Max. exposure temperature:

+135°C (power supply off)

Min. installation temperature:

-50°C

Min. cable bending radius:

25 mm

Power supply:

230 V AC

Insulation test voltage:

2500 V

Standards:

EN 62395-1, EN 60079-30-1, EN 60079-0

Approvals:

ATEX KDB 18ATEX0014U

Ⓔ II 2G Ex 60079-30-1 IIC T4 Gb

Ⓔ II 2D Ex 60079-30-1 IIIC T135°C Db

IECEx KDB 18.0001U

Ex 60079-30-1 IIC T4 Gb

Ex 60079-30-1 IIIC T135°C Db

Product marking:

Ex, CE

Temperature class:

T4



TWIN
CONDUCTOR



MULTI
WIRE
CONDUCTOR



LARGE
CROSS
SECTION



PVC
FREE



START-UP TEMPERATURE	SelfTec®PROi MT 30 W/m					SelfTec®PROi MT 40 W/m					SelfTec®PROi MT 50 W/m				
	CIRCUIT-BREAKER, C-TYPE														
	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A
	MAX. CABLE LENGTH PER CIRCUIT [m]														
-20°C	130	130	130	130	130	71	94	118	118	118	40	54	81	108	114
0°C	135	135	135	135	135	78	104	122	122	122	44	58	88	114	116
+10°C	138	138	138	138	138	83	110	126	126	126	46	61	92	117	117

ELEKTRA Heating Cables

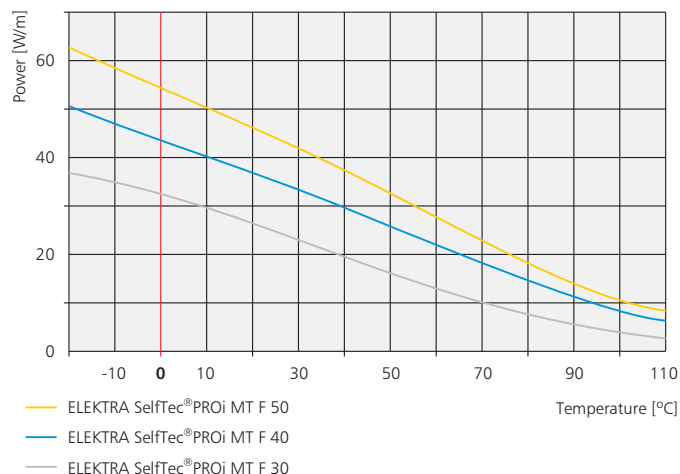
SelfTec®PROi MT F 

ELEKTRA SelfTec®PROi MT F self-regulating heating cables have been designed for commercial and industrial applications, such as protection of pipes against frost and maintaining required process temperatures up to +110°C. These products are dedicated for both types of installations, in hazardous and non-hazardous areas. High chemical properties of fluoropolymer outer sheath allow a wide range of applications.



ELEKTRA SelfTec®PROi MT F

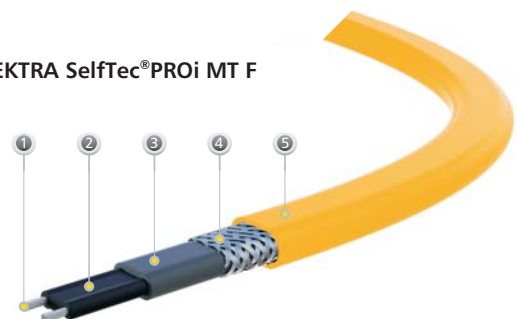
Function of the heating power vs. insulated steel pipe temperature



This package contains:

- ELEKTRA SelfTec®PROi MT F heating cable on a spool.

ELEKTRA SelfTec®PROi MT F



- ① Nickel-coated multi-wire copper conductor
- ② Self-regulating conductive core
- ③ XLEVA insulation
- ④ Tinned copper braiding
- ⑤ Fluoropolymer outer sheath



> Technical data:

Heating cable construction:

- nickel-coated multi-wire copper conductor:
1.11 mm² (30, 40 W/m)
1.21 mm² (50 W/m)
- self-regulating conductive core
- XLEVA insulation
- tinned copper braiding
- fluoropolymer outer sheath

Shape:

flat

Dimensions:

13.3 ±0.2 – 5.7 ±0.2 mm (30, 40 W/m)
14.5 ±0.2 – 5.7 ±0.2 mm (50 W/m)

Resistance range:

variable, temperature depending

Power output (nominal):

30, 40, 50 W/m (+10°C)

Max. working temperature:

+110°C

Max. exposure temperature:

+135°C (power supply off)

Min. installation temperature:

-50°C

Min. cable bending radius:

25 mm

Power supply:

230 V AC

Insulation test voltage:

2500 V

Standards:

EN 62395-1, EN 60079-30-1, EN 60079-0

Approvals:

ATEX KDB 18ATEX0014U

Ⓔ II 2G Ex 60079-30-1 IIC T4 Gb

Ⓔ II 2D Ex 60079-30-1 IIIC T135°C Db

IECEx KDB 18.0001U

Ex 60079-30-1 IIC T4 Gb

Ex 60079-30-1 IIIC T135°C Db

Product marking:

Ex, CE

Temperature class:

T4



TWIN
CONDUCTOR



MULTI
WIRE
CONDUCTOR



LARGE
CROSS
SECTION



FLUORO
POLYMER
OUTER SHEATH



START-UP TEMPERATURE	SelfTec®PROi MT F 30 W/m					SelfTec®PROi MT F 40 W/m					SelfTec®PROi MT F 50 W/m				
	CIRCUIT-BREAKER, C-TYPE														
	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A
	MAX. CABLE LENGTH PER CIRCUIT [m]														
-20°C	130	130	130	130	130	71	94	118	118	118	40	54	81	108	114
0°C	135	135	135	135	135	78	104	122	122	122	44	58	88	114	116
+10°C	138	138	138	138	138	83	110	126	126	126	46	61	92	117	117

ELEKTRA Heating Cables

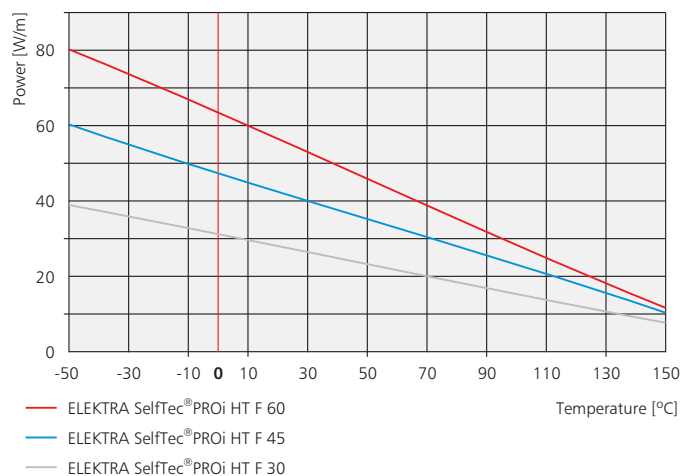
SelfTec®PROi HT F 

ELEKTRA SelfTec®PROi HT F self-regulating heating cables have been designed for industrial applications, such as protection of pipes against frost and maintaining required process temperatures up to +150°C. These products are dedicated for both types of installations, in hazardous and non-hazardous areas. Fluoropolymer outer sheath provides a high chemical and temperature resistance.



ELEKTRA SelfTec®PROi HT F

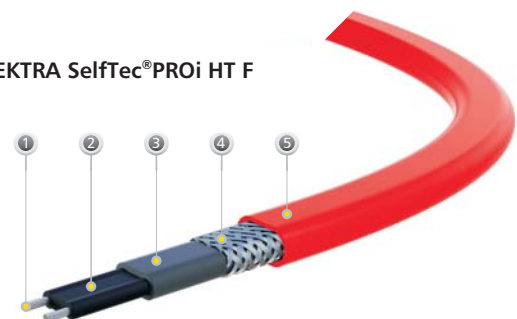
Function of the heating power vs. insulated steel pipe temperature



This package contains:

- ELEKTRA SelfTec®PROi HT F heating cable on a spool.

ELEKTRA SelfTec®PROi HT F



- ① Nickel-coated multi-wire copper conductor
- ② Self-regulating conductive core
- ③ Fluoropolymer insulation
- ④ Tinned copper braiding
- ⑤ Fluoropolymer outer sheath



> Technical data:

Heating cable construction:

- nickel-coated multi-wire copper conductor
1.11 mm² (30, 45 W/m)
1.21 mm² (60 W/m)
- self-regulating conductive core
- fluoropolymer insulation
- tinned copper braiding
- fluoropolymer outer sheath

Shape:

flat

Dimensions:

10.5 ±0.2 – 5.0 ±0.2 mm

Resistance range:

variable, temperature depending

Power output (nominal):

30, 45, 60 W/m (+10°C)

Max. working temperature:

+150°C

Max. exposure temperature:

+190°C (power supply off)

Min. installation temperature:

-50°C

Min. cable bending radius:

20 mm

Power supply:

230 V AC

Insulation test voltage:

2500 V

Standards:

EN 62395-1, EN 60079-30-1, EN 60079-0

Approvals:

ATEX KDB 18ATEX0014U

Ⓔ II 2G Ex 60079-30-1 IIC T3 Gb

Ⓔ II 2D Ex 60079-30-1 IIIC T200°C Db

IECEx KDB 18.0001U

Ex 60079-30-1 IIC T3 Gb

Ex 60079-30-1 IIIC T200°C Db

Product marking:

Ex, CE

Temperature class:

T3



TWIN
CONDUCTOR



MULTI
WIRE
CONDUCTOR



LARGE
CROSS
SECTION



FLUORO
POLYMER
OUTER SHEATH



FLUORO
POLYMER
INSULATION

START-UP TEMPERATURE	SelfTec®PROi HT F 30 W/m					SelfTec®PROi HT F 45 W/m					SelfTec®PROi HT F 60 W/m				
	CIRCUIT-BREAKER, C-TYPE														
	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A	16A	20A	32A	40A	50A
	MAX. CABLE LENGTH PER CIRCUIT [m]														
-20°C	44	70	88	112	112	31	50	63	94	94	25	39	49	79	84
0°C	46	74	92	114	114	33	53	66	97	97	26	42	52	83	86
+10°C	48	77	97	117	117	35	56	69	99	99	27	43	54	87	88

ELEKTRA Joint and Termination Sets

CACM25-PROi 

ELEKTRA CACM25-PROi connection kit is dedicated to connecting ELEKTRA SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables to junction boxes, without compromising the continuity of electrical insulation of the heating cable wires or the heating cables' cores.

The kit is certified for applications in hazardous areas. The components can be mounted without the necessity of applying heat guns or torches, due to this feature no permission for operation with heat sources in hazardous areas is required.

Cable glands are made of polyamide, which ensures high thermal durability and mechanical resistance. Silicone rubber gasket included in the kit helps to execute the optimal sealing of the gland with the heating cable, regardless of the current external conditions.

Application:

Cold-applied connection kit dedicated to SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables.



The kit contains:

- gland,
- gasket,
- locknut,
- insulating jacket for core sealing,
- insulating jacket yellow/green,
- installation manual.

> Technical data:

Area classification:	Hazardous areas: zones 1 and 2 (for gases and vapours) and zones 21 and 22 (for electrically conductive dust) Non-hazardous areas
Approvals:	ATEX KBD 19ATEX0003U Ⓜ II 2G Ex eb IIC Gb Ⓜ II 2D Ex tb IIIC Db IECEX KDB 19.0001X Ex eb IIC Gb Ex tb IIIC Db
Type:	Cold applied installation
Thread type:	M25 x 1.5
Min. ambient temperature:	-40°C
Max. exposure temperature (gland):	+110°C

HAC-PROi 



The kit contains:

- heat-shrink tubes with glue,
- pre-insulated butt terminals,
- mastic,
- installation manual.

ELEKTRA Joint and Termination Sets

ELEKTRA HAC-PROi connection kit is dedicated to connecting power supply to ELEKTRA SelfTec®PROi LT/LT F and SelfTec®PROi MT/MT F without compromising the continuity of electrical insulation of the heating cable wires or the heating cables' cores.

The kit is certified for applications in hazardous areas.

Connection between the heating cable wires and the screen is executed with pre-insulated butt terminals. To seal the connection and protect against moisture penetration, heat-shrink tubes with glue are applied and mastic.

Application:

Connection kit for SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F heating cables.

> Technical data:

Approvals:	ATEX KBD 19ATEX0003U Ⓜ II 2G Ex 60079-30-1 IIC Gb Ⓜ II 2D Ex 60079-30-1 IIIC Db IECEx KDB 19.0001X Ex 60079-30-1 IIC Gb Ex 60079-30-1 IIIC Db
Min. ambient temperature:	-55°C
Max. exposure temperature:	+110°C
Dielectric strength:	18 kV/mm
Resistivity:	10 ¹⁴ Ω·cm
Dimensions:	length approx. 150 mm
Power supply cables:	3 x 1.0 mm ² , 3 x 1.5 mm ² or 3 x 2.5 mm ²

ELEKTRA Joint and Termination Sets

CAE-PROi 

This ELEKTRA CAE-PROi end seal kit is dedicated to terminate ELEKTRA SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables.

The kit is certified for applications in hazardous areas. The unique design of the CAE-PROi suits the demanding requirements of the industrial environment. It can be used in applications with temperature range from -50°C to +240°C. It provides both excellent electrical insulation and ultimate mechanical protection, as it is an ideal combination between molded silicone rubber end seal and stainless steel cover.

The components of the kit can be mounted without the necessity of applying heat guns or torches, due to this feature no permission for operation with heat sources in hazardous areas is required.

Application:

Cold-applied end seal kit dedicated to SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables.



The kit contains:

- stainless steel cover top,
- stainless steel cover bottom,
- end seal,
- silicone rubber,
- plain washers,
- spring washers,
- screws,
- installation manual.

> Technical data:

Area classification:	Hazardous areas: zones 1 and 2 (for gases and vapours) and zones 21 and 22 (for electrically conductive dust) Non-hazardous areas
Approvals:	ATEX KBD 19ATEX0003U Ⓢ II 2G Ex 60079-30-1 IIC Gb Ⓢ II 2D Ex 60079-30-1 IIIC Db IECEX KDB 19.0001X Ex 60079-30-1 IIC Gb Ex 60079-30-1 IIIC Db
Type:	cold applied installation
Material:	stainless steel, silicone rubber
Protection:	IP 66
Min. ambient temperature:	-50°C
Max. exposure temperature:	+240°C

HAE-PROi **The kit contains:**

- heat-shrink tubes with glue,
- installation manual.

ELEKTRA Joint and Termination Sets

ELEKTRA HAE-PROi end seal kit is dedicated to the purposes of terminating ELEKTRA SelfTec®PROi LT/LT F and SelfTec®PROi MT/MT F heating cables without compromising the continuity of electrical insulation of the heating cable wires or the heating cables' cores.

The kit is certified for applications in hazardous areas. The kit contains heat-shrink tubes with glue, which efficiently seals the cables against moisture penetration, after installation.

Application:

End seal kit for ELEKTRA SelfTec®PROi LT/LT F and SelfTec®PROi MT/MT F heating cables.

**Technical data:**

Approvals:	ATEX KBD 19ATEX0003U Ⓜ II 2G Ex 60079-30-1 IIC Gb Ⓜ II 2D Ex 60079-30-1 IIIC Db IECEx KDB 19.0001X Ex 60079-30-1 IIC Gb Ex 60079-30-1 IIIC Db
Min. ambient temperature:	-55°C
Max. exposure temperature:	+110°C
Dielectric strength:	18 kV/mm
Resistivity:	10 ¹⁴ Ω·cm
Dimensions:	length approx. 130 mm

ELEKTRA

Junction Boxes

MBP 161609



ELEKTRA MBP 161609 junction box is dedicated to power supply, cable extension and branching of ELEKTRA SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables. The box enables power supply of max. 3 heating circuits or branching of a single heating circuit in max. 3 directions.

The box's enclosure is designed for operation in hazardous areas and fulfills all requirements valid for zones 1 and 2, as well as 21 and 22.

Glass reinforced polyester enclosure is durable and UV-resistant, therefore allows applications in uncovered outdoor systems, is highly mechanically resistant and allows operation in chemically aggressive environment. Spring-cage terminals facilitate installation of single-wire cables, as well as the crimp-terminated cables, with no necessity of application of tools, and later safe and reliable operation. The box has got four sealed M25 entries and can host one, two or three heating circuits. Due to the dimensions and number of entries, the box enables easy branching of heating systems. To lead in the heating cables, additional connection sets CACM25-PROi with the M25 gland are recommended. The box can be mounted on pipelines using ELEKTRA BM16-PROi support brackets, on mounting components of cable trays or on-surface.



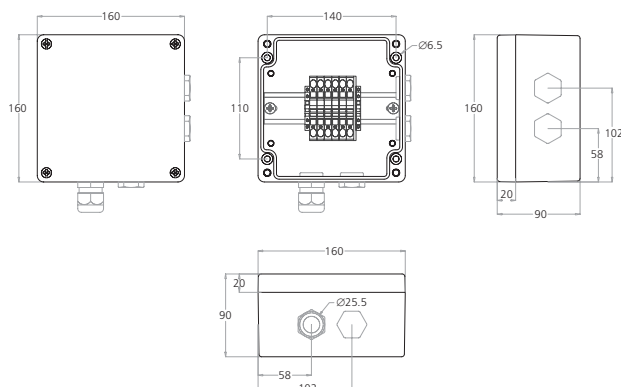
This package contains:

- ELEKTRA MBP 161609 junction box,
- instruction manual.

> Technical data:

Dimensions:

width: 160 mm
length: 160 mm
depth: 90 mm



Operating temperature: max. +85°C
min. -55°C
Protection: IP 66

Entries: 4 x M25
Cable cross-section: 1-6 mm²
Max. operation voltage: 690 V
Max. current rating: 50 A

Construction materials:

enclosure: glass reinforced polyester, halogen-free
cover: glass reinforced polyester, halogen-free
cover seal: silicone rubber
cover screws: stainless steel V2

Approvals:

IBExU 12 ATEX 1181
⊗ II 2G Ex e IIC T* Gb
⊗ II 2D Ex tb IIIC T* Db
IECEX IBE 14.0019
Ex e IIC T* Gb
Ex tb IIIC T* Db

* For T-rating, see heating cable

> Accessories:

Connection set for cold applied installation: CACM25-PROi
Insulation entry kit: EK-PRO
Cable gland: Ex e M16x1.5
Reducer: Ex e M25/M16
Support bracket: BM16-PROi

ELEKTRA

Junction Boxes

MBP 121209



ELEKTRA MBP 121209 junction box is dedicated to power supply and cable extension of ELEKTRA SelfTec®PROi LT/LT F, SelfTec®PROi MT/MT F and SelfTec®PROi HT F heating cables. The box enables power supply of one heating circuit or extension of a single heating circuit.

The box's enclosure is designed for operation in hazardous areas and fulfils all requirements valid for zones 1 and 2, as well as 21 and 22.

Glass reinforced polyester enclosure is durable and UV-resistant, therefore allows applications in uncovered outdoor systems, is highly mechanically resistant and allows operation in chemically aggressive environment. Spring-cage terminals facilitate installation of single-wire cables, as well as the crimp-terminated cables, with no necessity of application of tools, and later safe and reliable operation. The box has got two sealed M25 entries and can host one heating circuits. To lead in the heating cables, additional connection kits CACM25-PROi with the M25 gland are recommended. The box can be mounted on pipelines using ELEKTRA BM12-PROi support brackets, on mounting components of cable trays or on-surface.



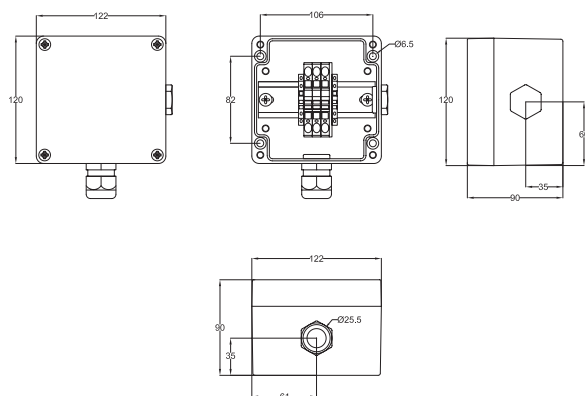
This package contains:

- ELEKTRA MBP 121209 junction box,
- instruction manual.

> Technical data:

Dimensions:

width:	122 mm
length:	120 mm
depth:	90 mm



Operating temperature: max. +85°C

min. -55°C

Protection:

IP 66

Entries:

2 x M25

Cable cross-section:

1-6 mm²

Max. operation voltage:

690 V

Max. current rating:

50 A

Construction materials:

enclosure:	glass reinforced polyester, halogen-free
cover:	glass reinforced polyester, halogen-free
cover seal:	silicone rubber
cover screws:	stainless steel V2

Approvals:

IBExU 12 ATEX 1181

Ex II 2G Ex e IIC T* Gb

Ex II 2D Ex tb IIIC T* Db

IECEX IBE 14.0019

Ex e IIC T* Gb

Ex tb IIIC T* Db

* For T-rating, see heating cable

> Accessories:

Connection set for cold applied installation: CACM25-PROi

Insulation entry kit:

EK-PRO

Cable gland:

Ex e M16x1.5

Reducer:

Ex e M25/M16

Support bracket:

BM12-PROi

ELEKTRA Temperature Controllers

exTHERM-AT 

exTHERM-AT electromechanical spark-proof controller designed for temperature control and monitoring in hazardous areas. Approved for applications in zones 1 and 2 in gas and vapour atmosphere, also in zones 21 and 22 in the presence of electrically conductive dust. Temperature control range from 0°C to +190°C. Max. connection current: 25A. The controller's principle of operation is based on the phenomenon of the thermal expansion of liquid or gas. The electrical switching element is a pressure-resistant encapsulated thermostat with a snap-action switch. Standard temperature compensation ensures stability of connection at variable ambient temperatures.

Application:

Hazardous area: zones 1 and 2 (for gases and vapours) and zones 21 and 22 (for electrically conductive dust).
Non-hazardous areas.



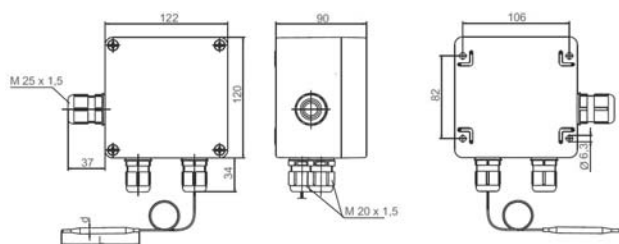
This package contains:

- ELEKTRA exTHERM-AT controller,
- Instruction manual.

> Technical data:

Dimensions:

width:	122 mm
length:	120 mm
depth:	90 mm



Enclosure:

material:	polyester case, glass-fibre reinforced, black
protection:	IP 65
operating temperature:	-40°C ÷ +70°C (referring to T4, at 25A max. +50°C)
cable outlet:	Ex M20 x 1.5 cable gland, sealing range 6...13 mm Ex M25 x 1.5 cable gland, sealing range 7...17 mm

Temperature sensor:

type:	liquid sensor with a capillary
dimensions:	capillary 3 m, sensor Ø 4 x 87 mm
material:	stainless steel (CrNi) 1.4571
operating temperature:	-40°C ÷ +215°C
min. bending radius:	do not bend the sensor, for the capillary: ≥ 5 mm

Switching:

type:	single-pole double-throw changeover contact (SPDT)
rated current:	25A at 250 V AC

Settings:

temperature setting:	0°C ÷ +190°C
hysteresis:	approx. 7%
setting modification:	with a screwdriver (after removing the case cover)

Approvals:

EPS 11 ATEX 1354
 Ⓢ II 2G Ex db eb IIC T4/T5/T6 Gb
 Ⓢ II 2D Ex tb IIIC T85°C/T100°C/T130°C Db
 IECEx EPS 13.0046
 Ex db eb IIC T4/T5/T6 Gb
 Ex tb IIIC T85°C/T100°C/T130°C Db
 EPS 11 ATEX 1354 (SIL 2)
 TC RU C-DE.ME92.B.00443

ELEKTRA Temperature Controllers

exTHERM-DR 

The ELEKTRA exTHERM-DR electronic temperature controller is dedicated to the control of heating systems in hazardous areas, it's especially recommended for frost protection applications and maintenance of the required pipeline temperature. The intrinsically safe Ex[ia] measurement input allows the direct connection of the temperature sensor.

The controller has a control relay output K1 and an alarm relay output K2. The K2 relay output signals when limit values have been exceeded or not achieved. Alternatively, a binary signal of 0/10 V is also available for the controller analog output or the limit value signalling. The current measured value or the setpoint value are available via the standard analog output.

The backlit LCD display shows information about measured value, setpoint value, etc., in an easy-to-read manner. A clearly-structured operation setup enables quick configuration and thereby reduces the startup times. Alternatively, the configuration and parameterization can also take place via a setup program or the standard USB interface.

Application:

Hazardous areas requiring tight temperature control with line sensing control.



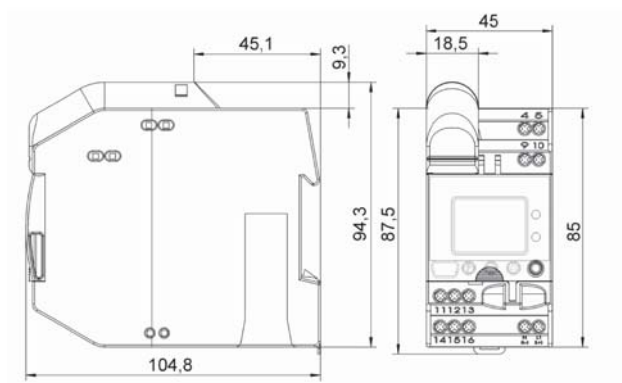
This package contains:

- ELEKTRA exTHERM-DR controller,
- instruction manual.

> Technical data:

Dimensions:

width:	45 mm
length:	85 mm
depth:	104.8 mm



Temperature measurement range:	-200°C ÷ +850°C
Operating temperature:	0°C ÷ +55°C
Storage temperature:	-30°C ÷ +70°C
Climate conditions:	85% rel. humidity without condensation

Power supply voltage:	230 V AC +10%/-15%, 48-63 Hz
Power consumption:	12 VA

Relay outputs:

control relay K1:	single pole double throw relay, rated current 3A
alarm relay K2:	single pole double throw relay, rated current 3A
contact durability K1, K2:	min. 30K operations at the resistive load 3A/250 V AC
analog output:	4 to 20 mA, 0 to 20 mA
logic output:	binary signal 0/10 V

Enclosure:

material:	polycarbonate
protection:	IP 20
installation:	DIN bus
operating position:	vertical
electrical connection	on the front via screw terminals for cables of max. cross-section 2.5 mm ²

Temperature sensor:

type:	PT100 sensor, 2- or 3-wire connection circuit (separately available)
hysteresis:	0.5% / 0.1% (2/3-wire connection)
sampling rate:	210 ms
connection type:	maximum lead wire resistance in 2-wire circuit: 15 Ω ; 3-wire circuit: 30 Ω

diagnosed alarms:

overrange and underrange:	detected and visible in the display
sensor/cable break:	detected and visible in the display, relay output controller K1 is inactive
sensor short circuit:	detected and visible in the display, relay output controller K1 is inactive

Approvals:

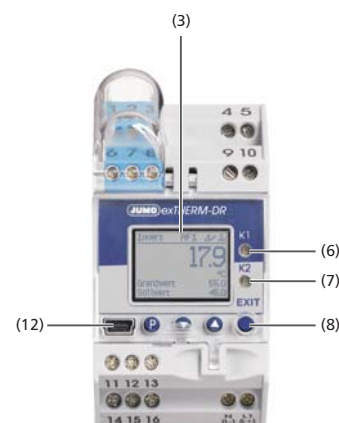
TÜV 15 ATEX 163874 X
 Ⓢ II (1) G [Ex ia Ga] IIC
 Ⓢ II (1) D [Ex ia Da] IIIC
 IECEx TUN 16.0022X
 [Ex ia Ga] IIC
 [Ex ia Da] IIIC

Display and control elements:

Legend: Comment:

3 - LCD display:	black/white with backlight, 96 x 64 pixels
6 - LED K1 (yellow):	lights up when the relay output controller K1 is active.
7 - LED K2 (yellow):	lights up when the relay output limit value K2 is active.
8 - keys:	(can only be operated when the transparent hood is folded upward)
▲	increase value
▼	decrease value
P	programming
●	exit

12 - setup interface



> Accessories:

Temperature sensor dedicated for hazardous areas: RTD Ex 903525/50

iTRON DR100

**This package contains:**

- ELEKTRA iTRON DR100 controller.
- instruction manual.

ELEKTRA Temperature Controllers

iTRON DR 100 electronic temperature controller designed for the control of heating systems, especially recommended for frost protection applications and maintenance of the required pipeline temperature. The temperature values are measured with a surface sensor and displayed on the LCD screen which enables easy readout of the measured and set temperature values, as well as configuration of the device. Entering required operation parameters proceeds in a fast and easy way: the selected values are automatically entered as valid after 2 sec., no additional confirmation is required. The controller is mounted on DIN rails and connected up via screw terminals with a max. conductor cross-section of 2.5 mm². The device can be configured from the level of the front-panel buttons, or optionally from the level of the software.

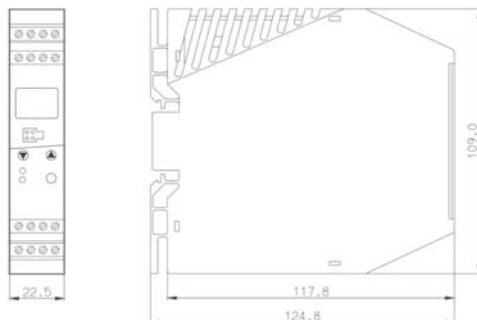
Application:

For DIN-bus installation in electric switchboards in non-hazardous areas.

> Technical data:

Dimensions:

width:	22.5 mm
length:	109 mm
depth:	124.8 mm



Temperature measurement range:	-200°C ÷ +800°C
Operating temperature:	0°C ÷ +55°C
Storage temperature:	-30°C ÷ +70°C
Climate conditions:	75% rel. humidity without condensation
Work indication:	LED

Electric data:

power supply voltage:	230 V AC +10%/-15%, 48-63 Hz
power consumption:	5 VA
relay:	two single-pole single-throw (SPST) NO contacts, rated current 3A
contact durability:	min. 100K operations at the resistive load 3A/250 V AC
logic output:	0/12 V, 0/20 mA (short circuit protected)

Enclosure:

material:	polyamide
protection:	IP 20
installation:	DIN bus
operating position:	vertical
terminals:	screw terminals for cables of max. cross-section 2.5 mm²

Temperature sensor:

type:	PT100 sensor, 2- or 3-wire connection sensor (separately available) circuit break or short circuit detected automatically, setting the output for the user's selected status: ON or OFF
hysteresis:	0.1%

Product marking:	CE, UL
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Approvals:	EN 61326-1 UL 61010-1 CSA C22.2 No. 61010-1
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> Accessories:

Temperature sensor dedicated for non-hazardous areas: RTD 902150/10

TDR 4022-PRO



This package contains:

Type TDR 4022-PRO

- TDR 4022-PRO controller,
- temperature sensor (886030081500),
- installation manual.



886030081500

ELEKTRA Temperature Controllers

The ELEKTRA TDR 4022-PRO Electronic Temperature Controller is designed for pipe heating systems, including anti-frost protection, and maintaining the desired pipeline temperature. The temperature controller has got two freely configurable relays, the digital input, the port for direct RS-485 bus connection, as well as the analog output. The TTL port gives the optional possibility to connect the configuration Unicard with the USB port. The controller cooperates with BMS systems via ModBus or Televis protocols, or in an analog mode via a relay operating in the alarm mode. Produced in accordance with the EN 60730-1 and EN 60730-2-9 standards. It consists of the controller and a temperature sensor to be mounted on a pipesurface.

> Technical data:

TDR 4022-PRO

Power supply:	100-240 V ~ 50/60 Hz
Max. load:	2 x 8A, 230 V ~ 50/60 Hz (potential free relays)
Analog output:	V: 0...1 V, 0...5 V, 0...10 V, I: 0...20 mA, 4...20 mA
Installation:	DIN-rail
Temperature range:	-200°C ÷ +800°C
Hysteresis:	0.1 ... 30 K
Controller protection:	IP 20
Work signalization:	LED
Operating temperature:	-5°C ÷ +55°C
Dimensions (H x W x D):	85 x 70 x 61 mm
Modules:	4
Product marking:	CE

886030081500

Mounting:	on pipe
Sensor protection:	IP 67
Operating temperature:	-50°C ÷ +110°C



ELEKTRA Temperature Controllers

UTR 60-PRO

The ELEKTRA UTR 60-PRO Electronic Temperature Controller is designed for pipe heating systems, including anti-frost protection and maintaining the desired pipeline temperature. Produced in accordance with the EN 60730-1 and EN 60730-2-9 standards. It consists of the controller and a temperature sensor to be mounted on a pipe surface.



This package contains:

UTR 60-PRO

- UTR 60-PRO controller,
- temperature sensor with 1.5 m cable (F 892 002),
- instruction manual.

> Technical data:

UTR 60-PRO

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A, 230 V ~ 50/60 Hz
Installation:	surface mounting / installation board
Temperature range:	0°C ÷ +60°C
Setback temperature:	about 5°C
Hysteresis:	1 ... 10K
Controller protection:	IP 65
Signalization:	LED
Operation temperature:	-20°C ÷ +50°C
Dimensions (H x W x D):	120 x 122 x 56 mm
Approvals:	EAC
Product marking:	CE

F 892 002

Installation:	on pipe
Sensor protection:	IP 67
Operating temperature:	-40°C ÷ +120°C



F 892 002



RTD Ex 903525/50 **This package contains:**

- RTD Ex 903525/50 sensor.

ELEKTRA Temperature Sensors

The push-in RTD Ex 903525/50 sensor connected to the junction box, due to its dedicated design optimally matches the demanding requirements of the industrial operating environment. The sensor is certified for applications in hazardous areas. It is dedicated to perform temperature measurements of pipelines or tanks. A 3-wire Pt100 temperature sensor is used as a measuring element. The RTD Ex 903525/50 sensor can be used for applications in the temperature range from -50°C to +260°C.

Application:

The sensor is dedicated for exTHEMR-DR Hazardous areas: zone 1 (for gases and vapours) and zone 20 (for electrically conductive dust).

Non-hazardous areas.

> Technical data:

Approvals:	LCIE 03 ATEX 6088 X II 2/2 G – II 1/1 D Ex e IIC T1... T6 or xxx °C/T6 Gb/Gb Ex ta IIIC Txxx °C/T85°C Da/Da IECEx LCIE 13.0060 X Ex e IIC T1... T6 or xxx °C/T6 Gb/Gb Ex ta IIIC Txxx °C/T85°C Da/Da
Sensor:	
type:	PT100 (3-wire)
tolerance class:	class B
material:	
sensor:	stainless steel (CrNi) 1.4571
connection cable:	PTFE
operating temperature:	-50°C ÷ +260°C
length:	5.0 m
diameter:	
sensor:	6.0 mm
connection cable:	4.2 mm
min. bending radius:	connection cable: Ø5 mm do not bend the sensor tinned cable endings
connection:	
Enclosure:	
material:	polyester case, glass-fibre reinforced
protection:	IP66
dimensions:	
width:	120 mm
length:	120 mm
depth:	91 mm
gland:	M16
operating temperature:	-55°C +55°C
cover screws:	stainless steel

ELEKTRA Temperature Sensors

RTD 902150/10

The push-in RTD 902150/10 sensor can be used in electronic control systems which require accurate temperature measurements.

A 2-wire PT100 temperature sensor is used as a measuring element. The RTD 902150/10 sensor can be used for applications in the temperature range from -50°C to +180°C.

Application:

The sensor is dedicated for iTRON DR100
Non-hazardous areas.



This package contains:

- RTD sensor 902150/10.

> Technical data:

Type:	PT100 (2-wire)
Tolerance class:	class B
Material:	
sensor:	stainless steel (CrNi) 1.4571
connection cable:	silicone
Working temperature:	-50°C ÷ +180°C
Length:	2.5 m
Diameter:	
sensor:	6.0 mm
connection cable:	4.5 mm
Min. bending radius:	connection cable: 5 mm do not bend the sensor
Connection:	ferrules

BM16-PROi



ELEKTRA Installation Accessories

BM16-PROi support bracket for the ELEKTRA MBP 161609 junction box. Support brackets can be used to assist installation of ELEKTRA MBP junction boxes on pipes. Additional pipe stainless steel metal clips are required for installation, to be ordered separately. The brackets include a set of screws, nuts and plain washers required for the installation of one junction box.

This package contains:

- stainless still support bracket,
- plain washers,
- screws,
- nuts.

> Technical data:

Dimensions:	
plate:	160 x 160 mm
distance pipe-plate:	150 mm
Required number of clips for installation of one bracket:	2 pcs
Max. operating temperature:	+230°C
Material:	stainless steel (CrNi) 1.4301

ELEKTRA Installation Accessories

BM12-PROi

BM12-PROi support bracket for the MBP 121209 junction box. Support brackets can be used to assist installation of ELEKTRA MBP junction boxes on pipes. Additional pipe stainless steel metal clips are required for installation, to be ordered separately. The brackets include a set of screws, nuts and plain washers required for the installation of one junction box.



This package contains:

- stainless still plate,
- stainless still leg,
- plain washers,
- screws,
- nuts.

> Technical data:

Dimensions:	
plate:	120 x 120 mm
distance pipe-plate:	150 mm
Required number of clips for installation of one bracket:	2 pcs
Max. operating temperature:	+230°C
Material:	stainless steel (CrNi) 1.4301

EK-PRO

**This package contains:**

- stainless still plate,
- gland,
- gasket,
- locknut.

ELEKTRA Installation Accessories

Under insulation entry kit with M25 gland for self-regulating heating cables. Dedicated to the protection of cables during installation on pipes, when passing through the metal sheet and thermal insulation claddings.

The ELEKTRA EK-PRO optimally matches the installation requirements of the self-regulating heating cables. The kit can be used in both hazardous and non-hazardous areas. The gland and the gasket included in the kit provide efficient protection against moisture penetration as well as ultimate mechanical protection, without compromising the continuity of thermal insulation. The kit contains a stainless steel plate to be screwed to the cladding.

> Technical data:

Dimensions:	plate 60 x 60 mm
Gland:	M25
Max. operating temperature:	+110°C
Material:	stainless steel

ELEKTRA Installation Accessories

BMC-PROi

Stainless steel metal clip assisting the installation of support brackets.



This package contains:

- BMC-PROi clip.

> Technical data:

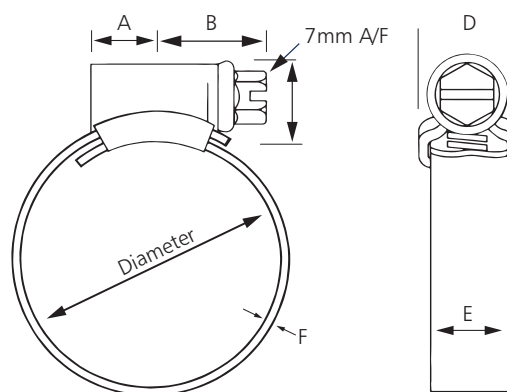
Material: stainless steel

Range:

size	30	22-30 mm	(7/8 - 1 1/2 inch)
	50	35-50 mm	(1 3/8 - 2 inch)
	70	50-70 mm	(2 - 2 3/4 inch)
	90	70-90 mm	(2 3/4 - 3 1/2 inch)
	120	90-120 mm	(3 1/2 - 4 3/4 inch)
	250 *	150-250 mm	(6 - 10 inch)
	450 *	150-450 mm	(6 - 17 3/4 inch)

* Available on request

Dimensions in mm:



Size:	A	B	C	D	E	F
22-45	8	15	12	15	13	0.9
50+	13	20	13	16	13	0.9

Installation tapes

ELEKTRA Installation Accessories



AL-TAPE-PROi

Aluminium tape for assisting the length-wise installation of the heating cables on pipes, and ensuring even heat distribution.

Max. operating temperature: +145°C

Length: 50 m



SG-TAPE-PROi

Fiberglass reinforced tape with a silicone self-adhesive system for assisting the fixing of the heating cables on pipes.

Max. operating temperature: +180°C

Length: 20 m



RG-TAPE-PROi

Fiberglass reinforced tape with a rubber self-adhesive system for assisting the fixing of the heating cables on pipes.

Max. operating temperature: +130°C

Length: 20 m



CL-PRO caution label



The technical specifications and data given in the catalogue are subjects to change without notice. Claims for damages resulting from modifications of catalogue information, incorrect data or printing errors will not be acknowledged.

Please note that all domestically applicable standards and safety regulations should be consulted before actual application of catalogue products or solutions, and relevant manuals and instructions should be applied before installation and operation.

Additionally, ELEKTRA reserves the right to implement alterations into processes or materials applied, which will not disagree with any relevant standards or specifications, without prior notification.

ELEKTRA

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