



electric heating systems



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Headquarters



ELEKTRA Leading Brand

ELEKTRA specializes in electric heating systems for both residential and commercial buildings, as well as for industrial facilities. Established in 1985, the company is currently the largest and most reputable producer of floor heating systems in Central Europe. From the beginning product quality has been the first priority for the company. This is the only way to satisfy all customers and achieve and maintain leadership in the market.

ELEKTRA Stock Availability

Throughout the EU and around the world, ELEKTRA products are readily available through a network of approved and authorized distributors, installers and even dedicated websites.



Distribution in dozens of countries across Europe, Asia, North America and Australia



1

Know-how & Experience

Many years of continuous operation combined with the latest technology ensures the expert ELEKTRA engineers constantly develop new and innovative solutions. ELEKTRA products remain at the forefront, providing the highest level of quality and customer satisfaction.



2

Raw Material Control

The rigorous selection, approval and use of an established and qualitative raw material supply chain including: Isabellenhütte, Sandvik, 3M & Borealis, ensures the quality and integrity of ELEKTRA products.

Multi-wire Construction



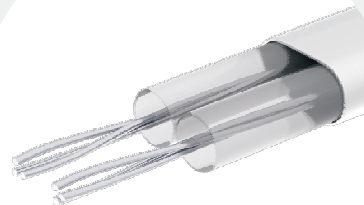
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Dual Heating Cores

Both cores are heating, allowing equal power distribution of 50% to each core. This significantly lowers the actual operating temperatures of the heating cores which prolongs the life span of the products.

3

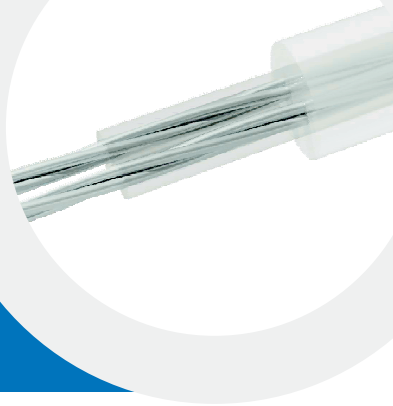
The heightened mechanical durability and flexibility of ELEKTRA heating cables is achieved through the use of multi-stranded wire construction of the cores.



Double-layer Insulation

5

The use of double-layer insulation in products especially designed for extremely demanding operating conditions ensures superior thermal and electric features, thus significantly enhancing durability of the products.



6

Precise Extrusion

Precise parameter settings are achieved with computer controlled extrusion processes, ensuring correct structure and necessary quality of the extruded insulation and outer sheath.



7

Laser Measurement

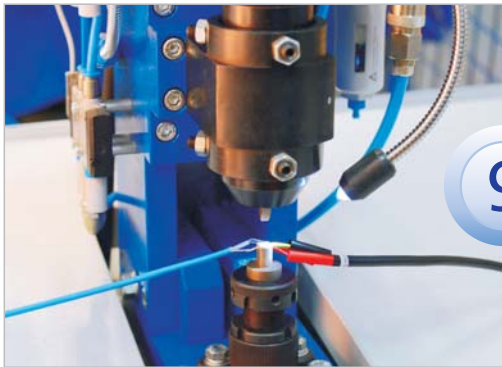
Laser measurement equipment in extrusion lines guarantees insulation and outer sheath thickness to within a tolerance of 0.05mm, and maintains uniform cable centricity.



Uniformity of Resistance

The necessary maintenance of uniform cable tension and therefore stability of resistance is achieved through the use of modern production machines at each stage of the production process. This uniformity and stability is confirmed with 6 individual measurements of heating wire resistance during production.

8



9

Faultless Joint

Only modern precision calibrated pneumatic devices guaranteeing adequate uniform force of joint clamping are used. The material and construction of joints to the level of IPX7 minimum, guarantees the protection of connections in products.

High Voltage Control

Production defects are wholly eliminated by rigorous high voltage control monitoring in the production line, and an additional final high voltage test of every single product, not random testing.

10



11

Unique Code

The marking of each product with a unique production code, means the history of the entire production process and materials used in manufacture can be traced.



12

Quality Confirmed

ELEKTRA quality confirmed by the research results and certificates of VDE and EAC, as well as certificates issued by, among others, Predom OBR, BBJ, Bureau Veritas and PZH.

ELEKTRA Heating Mats

ELEKTRA MD Heating Mats are ready-to-install heating elements which are produced in accordance with EN 60335-2-96. Consisting of a thin heating cable attached to a self-adhesive glass fibre mesh, the system is designed for indoor use and direct heating. It should be installed directly under the surface to be heated, in either flexible tile adhesive or self-levelling compound.

Single-side power supply MD



This package contains:

- ELEKTRA heating mat,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor, capped on one end,
- recessed distribution box Ø 60 mm for the temperature controller,
- instruction manual.



> Technical data:

Power output:	100, 160 or 200 W/m ² (200 W/m ² applicable in the UK only)
Power supply:	230 V ~ 50/60 Hz
Mat thickness:	~ 3.9 mm
Min. installation temperature:	-5°C
Max. working temperature:	+105°C
Conduit cables:	1 x 4 m; 3 x 1.0 mm ²
Type of heating cable:	double-core of diameter ~ 3.4 mm, single-side power supply
Screen of heating cables:	100% coverage, tinned copper braiding
Power output of heating cable:	~ 7 W/m (MD100), ~ 10 W/m (MD160), ~ 12 W/m (MD200)
Insulation:	double layer, FEP + XLPE
Outer sheath:	XLPE
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX7
Product certificates:	VDE, EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



100 W/m²

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
MD 100/1.0	0.5 x 2.0	1.00	100
MD 100/1.5	0.5 x 3.0	1.50	150
MD 100/2.0	0.5 x 4.0	2.00	200
MD 100/2.5	0.5 x 5.0	2.50	250
MD 100/3.0	0.5 x 6.0	3.00	300
MD 100/3.5	0.5 x 7.0	3.50	350
MD 100/4.0	0.5 x 8.0	4.00	400
MD 100/4.5	0.5 x 9.0	4.50	450
MD 100/5.0	0.5 x 10.0	5.00	500
MD 100/6.0	0.5 x 12.0	6.00	600
MD 100/8.0	0.5 x 16.0	8.00	800
MD 100/10.0	0.5 x 20.0	10.00	1000
MD 100/12.0	0.5 x 24.0	12.00	1200

160 W/m²

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
MD 160/0.5	0.5 x 1.0	0.50	80
MD 160/1.0	0.5 x 2.0	1.00	160
MD 160/1.5	0.5 x 3.0	1.50	240
MD 160/2.0	0.5 x 4.0	2.00	320
MD 160/2.5	0.5 x 5.0	2.50	400
MD 160/3.0	0.5 x 6.0	3.00	480
MD 160/3.5	0.5 x 7.0	3.50	560
MD 160/4.0	0.5 x 8.0	4.00	640
MD 160/5.0	0.5 x 10.0	5.00	800
MD 160/6.0	0.5 x 12.0	6.00	960
MD 160/7.0	0.5 x 14.0	7.00	1120
MD 160/8.0	0.5 x 16.0	8.00	1280
MD 160/9.0	0.5 x 18.0	9.00	1440
MD 160/10.0	0.5 x 20.0	10.00	1600

200 W/m² (applicable in the UK only)

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
MD 200/1.0	0.5 x 2.0	1.00	200
MD 200/1.5	0.5 x 3.0	1.50	300
MD 200/2.0	0.5 x 4.0	2.00	400
MD 200/2.5	0.5 x 5.0	2.50	500
MD 200/3.0	0.5 x 6.0	3.00	600
MD 200/3.5	0.5 x 7.0	3.50	700
MD 200/4.0	0.5 x 8.0	4.00	800
MD 200/4.5	0.5 x 9.0	4.50	900
MD 200/5.0	0.5 x 10.0	5.00	1000
MD 200/6.0	0.5 x 12.0	6.00	1200
MD 200/7.0	0.5 x 14.0	7.00	1400
MD 200/8.0	0.5 x 16.0	8.00	1600
MD 200/10.0	0.5 x 20.0	10.00	2000

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Mats

ELEKTRA MG Heating Mats are ready-to-install heating elements which are produced in accordance with EN 60335-2-96. Consisting of a thin heating cable attached to a self-adhesive glass fibre mesh, the system is designed for indoor use and direct heating. It should be installed directly under the surface to be heated, in either flexible tile adhesive or self-levelling compound.

Double-side power supply MG



This package contains:

- ELEKTRA heating mat,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor, capped on one end,
- recessed distribution box Ø 60 mm for the temperature controller,
- instruction manual.



> Technical data:

Power output:	100 or 160 W/m ²
Power supply:	230 V ~ 50/60 Hz
Mat thickness:	~ 3 mm
Min. installation temperature:	-5°C
Max. working temperature:	+105°C
Conduit cables:	2 x 4 m; 2 x 1.0 mm ²
Type of heating cable:	one-core of diameter ~ 2.5 mm, double-side power supply
Screen of heating cables:	100% coverage, tinned copper braiding
Power output of heating cable:	~ 7 W/m (MG100), ~ 10 W/m (MG160)
Insulation:	double layer, FEP + HDPE
Outer sheath:	XLPE
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX7
Product certificates:	VDE, EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



100 W/m²*

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
MG 100/3.0	0.5 x 6.0	3.00	300
MG 100/3.5	0.5 x 7.0	3.50	350
MG 100/4.5	0.5 x 9.0	4.50	450
MG 100/9.0	0.5 x 18.0	9.00	900

160 W/m²*

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
MG 160/1.0	0.5 x 2.0	1.00	160
MG 160/1.5	0.5 x 3.0	1.50	240
MG 160/2.0	0.5 x 4.0	2.00	320
MG 160/2.5	0.5 x 5.0	2.50	400
MG 160/3.0	0.5 x 6.0	3.00	480
MG 160/3.5	0.5 x 7.0	3.50	560
MG 160/4.0	0.5 x 8.0	4.00	640
MG 160/5.0	0.5 x 10.0	5.00	800
MG 160/6.0	0.5 x 12.0	6.00	960
MG 160/7.0	0.5 x 14.0	7.00	1120
MG 160/8.0	0.5 x 16.0	8.00	1280
MG 160/9.0	0.5 x 18.0	9.00	1440
MG 160/10.0	0.5 x 20.0	10.00	1600

* Available while stock lasts.

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Mats

ELEKTRA SnowTec® Heating Mats are ready-to-install heating elements, composed of an ELEKTRA VCD heating cable produced in accordance with EN 60335-1. The cable is secured with unique tape in the mat shape. This system is designed for outdoor use to protect against snow and ice on driveways, walkways, ramps, etc.

Single-side power supply SnowTec®



This package contains:

- ELEKTRA SnowTec® heating mat,
- instruction manual.

> Technical data:

Power output:	300 W/m ²
Power supply:	230 V, 400 V ~ 50/60 Hz
Mat thickness:	~ 7.5 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	1 x 4 m; 3 x 1.5 mm ² or 3 x 2.5 mm ²
Type of heating cable:	double-core of diameter ~ 5 x 7 mm, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, hybrid copper/monofilament fiber braiding
Power output of heating cable:	30 W/m
Insulation:	XLPE
Outer sheath:	heat resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



230V

TYPE	DIMENSIONS	POWER
-	m x m	W
SnowTec® 300/2	0.6 x 2.00	400
SnowTec® 300/3	0.6 x 3.00	520
SnowTec® 300/4	0.6 x 4.00	670
SnowTec® 300/5	0.6 x 5.00	930
SnowTec® 300/7	0.6 x 7.00	1140
SnowTec® 300/10	0.6 x 10.00	1860
SnowTec® 300/13	0.6 x 13.00	2560
SnowTec® 300/16	0.6 x 16.00	2890
SnowTec® 300/21	0.6 x 21.00	3730

TYPE	DIMENSIONS	POWER
-	m x m	W
SnowTec® 300/3.1/0.4	0.4 x 3.10	370
SnowTec® 300/4.3/0.4	0.4 x 4.30	520
SnowTec® 300/5.0/0.4	0.4 x 5.00	590
SnowTec® 300/7.7/0.4	0.4 x 7.70	930
SnowTec® 300/9.6/0.4	0.4 x 9.60	1150
SnowTec® 300/12.5/0.4	0.4 x 12.50	1500
SnowTec® 300/15.0/0.4	0.4 x 15.00	1830
SnowTec® 300/16.5/0.4	0.4 x 16.50	2000
SnowTec® 300/20.0/0.4	0.4 x 20.00	2360
SnowTec® 300/24.0/0.4	0.4 x 24.00	2840

400V

TYPE	DIMENSIONS	POWER
-	m x m	W
SnowTec® 300/2 400V	0.6 x 2.00	400
SnowTec® 300/3 400V	0.6 x 3.00	600
SnowTec® 300/4 400V	0.6 x 4.00	820
SnowTec® 300/5 400V	0.6 x 5.00	950
SnowTec® 300/7 400V	0.6 x 7.00	1360
SnowTec® 300/9 400V	0.6 x 9.00	1680
SnowTec® 300/11 400V	0.6 x 11.00	2100
SnowTec® 300/13 400V	0.6 x 13.00	2360
SnowTec® 300/15 400V	0.6 x 15.00	2650
SnowTec® 300/20 400V	0.6 x 20.00	3550
SnowTec® 300/25 400V	0.6 x 25.00	4600

> Accessories:

Temperature controllers: ETOG2, ETR2G

ELEKTRA Heating Mats

ELEKTRA SnowTec®_{Tuff} Heating Mats are ready-to-install heating elements, dedicated to special applications, composed of an ELEKTRA TuffTec™ heating cable produced in accordance with EN 60335-1. The cable is secured with unique tape in the mat shape. This system is designed for outdoor use to protect against snow and ice on driveways, walkways, ramps, etc.

Exceptional mechanical and thermal resistance allows for the application in spots especially exposed to harsh installation and operation conditions. Very high temporary exposure temperature (240°C) will make it possible to install the SnowTec®_{Tuff} heating mats even directly in asphalt.

Single-side power supply SnowTec®_{Tuff}



This package contains:

- ELEKTRA SnowTec®_{Tuff} heating mat,
- instruction manual.

> Technical data:

Power output:	400 W/m ²
Power supply:	230 V, 400 V ~ 50/60 Hz
Mat thickness:	~ 7.5 mm
Min. installation temperature:	-25°C
Max. working temperature:	+110°C
Max. exposure temperature (10 min.):	+240°C
Conduit cables:	1 x 4 m; 3 x 1.5 mm ² or 3 x 2.5 mm ²
Type of heating cable:	double-core of diameter ~ 6.8 mm, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Power output of heating cable:	~ 40 W/m
Insulation:	double layer, FEP + HDPE
Outer sheath:	HFFR
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



230V

TYPE	DIMENSIONS	POWER
-	m x m	W
SnowTec [®] _{Tuff} 400/1.5	0.6 x 1.50	310
SnowTec [®] _{Tuff} 400/3.0	0.6 x 3.00	730
SnowTec [®] _{Tuff} 400/4.5	0.6 x 4.50	1100
SnowTec [®] _{Tuff} 400/6.0	0.6 x 6.00	1350
SnowTec [®] _{Tuff} 400/7.5	0.6 x 7.50	1800
SnowTec [®] _{Tuff} 400/9.0	0.6 x 9.00	2150
SnowTec [®] _{Tuff} 400/10.0	0.6 x 10.00	2350
SnowTec [®] _{Tuff} 400/12.0	0.6 x 12.00	2800
SnowTec [®] _{Tuff} 400/14.0	0.6 x 14.00	3400
SnowTec [®] _{Tuff} 400/16.0	0.6 x 16.00	3650
SnowTec [®] _{Tuff} 400/18.0	0.6 x 18.00	4400

400V

TYPE	DIMENSIONS	POWER
-	m x m	W
SnowTec [®] _{Tuff} 400/2.5 400V	0.6 x 2.50	560
SnowTec [®] _{Tuff} 400/5.0 400V	0.6 x 5.00	1260
SnowTec [®] _{Tuff} 400/8.0 400V	0.6 x 8.00	1940
SnowTec [®] _{Tuff} 400/10.0 400V	0.6 x 10.00	2350
SnowTec [®] _{Tuff} 400/13.0 400V	0.6 x 13.00	3100
SnowTec [®] _{Tuff} 400/15.0 400V	0.6 x 15.00	3870
SnowTec [®] _{Tuff} 400/17.0 400V	0.6 x 17.00	4150
SnowTec [®] _{Tuff} 400/20.0 400V	0.6 x 20.00	4910
SnowTec [®] _{Tuff} 400/22.0 400V	0.6 x 22.00	5310
SnowTec [®] _{Tuff} 400/25.0 400V	0.6 x 25.00	5800
SnowTec [®] _{Tuff} 400/27.0 400V	0.6 x 27.00	6480

> Accessories:

Temperature controllers: ETOG2, ETR2G

ELEKTRA Heating Foils

ELEKTRA WoodTec2™ Heating Foils are ready-to-install heating elements which are produced in accordance with EN 60335-2-96. Consisting of a very thin heating cable attached to a glass fibre mesh and aluminum foil, the system is designed for indoor use and direct heating. It should be installed directly under laminate flooring and/or engineered wood.

Single-side power supply WoodTec2™



This package contains:

- ELEKTRA WoodTec2™ heating foil,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor,
- recessed distribution box Ø 60 mm for the temperature controller,
- aluminum adhesive tape,
- instruction manual.



> Technical data:

Power output:	70 or 140 W/m ²
Power supply:	230 V ~ 50/60 Hz
Mat thickness:	~ 2.8 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	1 x 4 m; 3 x 1.0 mm ²
Type of heating cable:	double-core of diameter ~ 2.3 mm, single-side power supply
Power output of heating cable:	~ 3 W/m (WoodTec2™ 70), ~ 6 W/m (WoodTec2™ 140)
Insulation:	double layer, FEP + XLPE
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Screen of heating foils:	PET covered aluminum foil
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX1
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



70 W/m²

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
WoodTec2™ 70/2.0	0.5 x 4.0	2.00	140
WoodTec2™ 70/3.0	0.5 x 6.0	3.00	210
WoodTec2™ 70/4.0	0.5 x 8.0	4.00	280
WoodTec2™ 70/6.0	0.5 x 12.0	6.00	420
WoodTec2™ 70/8.0	0.5 x 16.0	8.00	560
WoodTec2™ 70/11.0	0.5 x 22.0	11.00	770
WoodTec2™ 70/13.0	0.5 x 26.0	13.00	910

140 W/m²

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
WoodTec2™ 140/3.0	0.5 x 6.0	3.00	420
WoodTec2™ 140/4.0	0.5 x 8.0	4.00	560
WoodTec2™ 140/5.0	0.5 x 10.0	5.00	700
WoodTec2™ 140/6.0	0.5 x 12.0	6.00	840
WoodTec2™ 140/8.0	0.5 x 16.0	8.00	1120
WoodTec2™ 140/10.0	0.5 x 20.0	10.00	1400

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Foils

ELEKTRA WoodTec₁[™] Heating Foils are ready-to-install heating elements which are produced in accordance with EN 60335-2-96. Consisting of a very thin heating cable attached to a glass fibre mesh and aluminum foil, the system is designed for indoor use and direct heating. It should be installed directly under laminate flooring and/or engineered wood.

Double-side power supply WoodTec₁[™]



This package contains:

- ELEKTRA WoodTec₁[™] heating foil,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor,
- recessed distribution box Ø 60 mm for the temperature controller,
- 2 electrical connectors,
- aluminum adhesive tape,
- instruction manual.



> Technical data:

Power output:	60 W/m ²
Power supply:	230 V ~ 50/60 Hz
Mat thickness:	~ 1.9 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	2 x 4 m; 2 x 1.0 mm ²
Type of heating cable:	one-core of diameter ~ 1.3 mm, double-side power supply
Power output of heating cable:	~ 3 W/m
Insulation:	double layer, FEP + HDPE
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Screen of heating foils:	PET covered aluminum foil
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX1
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



60 W/m²*

TYPE	DIMENSIONS	SURFACE	POWER
-	m x m	m ²	W
WoodTec1™ 60/2.0	0.5 x 4.0	2.00	120
WoodTec1™ 60/3.0	0.5 x 6.0	3.00	180
WoodTec1™ 60/4.0	0.5 x 8.0	4.00	240
WoodTec1™ 60/10.0	0.5 x 20.0	10.00	600

* Available while stocks lasts.

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Cables

ELEKTRA UltraTec Heating Cables are ready-to-install heating units which are produced in accordance with EN 60335-1. They consist of an ultra-thin, high temperature resistant cable, terminated with a cold tail. This system is designed for indoor use and direct heating. It should be installed directly under the surface to be heated, in either flexible tile adhesive or self-levelling compound.

Single-side power supply UltraTec



This package contains:

- ELEKTRA heating cable (on a spool),
- self-adhesive installation tape,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor, capped on one end,
- recessed distribution box Ø 60 mm for the temperature controller,
- instruction manual.



> Technical data:

Power output:	10 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 2 x 3 mm
Min. installation temperature:	-20°C
Max. working temperature:	+150°C
Conduit cables:	1 x 2.5 m; 2 x 1.0 mm ²
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, tinned copper braiding
Insulation:	FEP
Outer sheath:	FEP
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX8
Product certificates:	B, EAC
Certificate of ISO 9001:	IQNET, PCBC
Produkt mark:	CE



SHIELDED



TWIN
CONDUCTOR



FLUORO
POLYMER
OUTER SHEATH



MULTI
WIRE
CONDUCTOR



FLUORO
POLYMER
INSULATION



PVC
FREE



ULTRA
THIN



TYPE	LENGTH	POWER
-	m	W
UltraTec 10/90	8.50	90
UltraTec 10/135	13.50	135
UltraTec 10/145	15.00	145
UltraTec 10/220	22.50	220
UltraTec 10/285	28.50	285
UltraTec 10/320	32.00	320
UltraTec 10/400	40.00	400
UltraTec 10/450	45.00	450
UltraTec 10/555	55.00	555
UltraTec 10/690	70.00	690
UltraTec 10/780	78.00	780
UltraTec 10/980	98.00	980
UltraTec 10/1100	110.00	1100
UltraTec 10/1320	132.00	1320
UltraTec 10/1650	165.00	1650
UltraTec 10/2050	203.00	2050

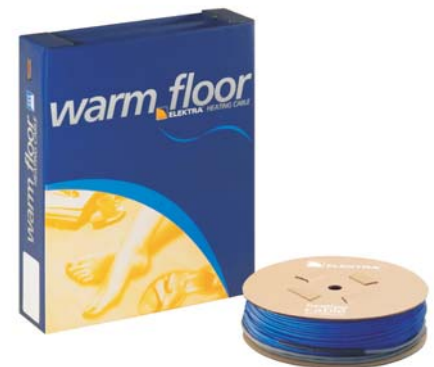
> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Cables

ELEKTRA DM Heating Cables are ready-to-install heating units which are produced in accordance with EN 60335-1. A thin heating cable of the length depending on the model, has factory connected cold tail cable. This system is designed for indoor use and direct heating. It should be installed directly under the surface to be heated, in either flexible tile adhesive or self-levelling compound.

Single-side power supply DM



This package contains:

- ELEKTRA heating cable (on a spool),
- self-adhesive installation tape,
- 'cold tails' flexible conduit,
- flexible conduit for the temperature sensor, capped on one end,
- recessed distribution box Ø 60 mm for the temperature controller,
- instruction manual.



> Technical data:

Power output:	10 W/m
Power supply:	230 V ~ 50/60 Hz
Diameter of cable:	~ 4.3 mm
Min. installation temperature:	-5°C
Max. working temperature:	+105°C
Conduit cables:	1 x 2.5 m; 2 x 1.0 mm ²
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, tinned copper braiding
Insulation:	double layer, FEP + XLPE
Outer sheath:	heat resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Produkt mark:	CE



SHIELDED



TWIN CONDUCTOR



MULTI WIRE CONDUCTOR



TWIN INSULATION



FLUORO POLYMER INSULATION



TYPE	LENGTH	POWER
-	m	W
DM 10/90	8.50	90
DM 10/135	13.50	135
DM 10/145	15.00	145
DM 10/220	22.50	220
DM 10/285	28.50	285
DM 10/320	32.00	320
DM 10/400	40.00	400
DM 10/450	45.00	450
DM 10/555	55.00	555
DM 10/690	70.00	690
DM 10/780	78.00	780
DM 10/980	98.00	980
DM 10/1100	110.00	1100
DM 10/1320	132.00	1320
DM 10/1650	165.00	1650
DM 10/2050	203.00	2050

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi, ETN4

ELEKTRA Heating Cables

Single-side power supply VCD

ELEKTRA VCD Heating Cables are ready-to-install heating units which are produced in accordance with EN 60335-1. Heating cable of the length depending on the model, has factory connected cold tail cable.

Typical use:

- VCD7** - floor heating (installation in mortar).
- VCD10** - floor heating (installation in mortar),
antifrost protection of pipes.
- VCD17** - floor heating (installation in mortar).
- VCD25** - protection against snow and ice
of external surfaces e.g. driveways,
walkways, ramps, etc.



This package contains:

- ELEKTRA heating cable (on a spool),
- instruction manual.

> Technical data:

Power output:	7, 10, 17 or 25 W/m
Power supply:	230 V and 400 V (VCD25 only) ~ 50/60 Hz
External dimension of cable:	~ 5 x 7 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	1 x 2.5 m; 3 x 1.0 mm ² , 3 x 1.5 mm ² or 3 x 2.5 mm ²
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, hybrid copper/monofilament fiber braiding
Insulation:	XLPE
Outer sheath:	heat resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



7 W/m*

TYPE	LENGTH	POWER
-	m	W
VCD 7/75	11,0	75
VCD 7/115	16,0	115
VCD 7/140	20,0	140
VCD 7/195	28,0	195
VCD 7/265	38,0	265
VCD 7/305	44,0	305
VCD 7/350	50,0	350
VCD 7/475	68,0	475
VCD 7/590	84,0	590
VCD 7/770	109,0	770
VCD 7/925	132,0	925
VCD 7/1020	145,0	1020
VCD 7/1210	173,0	1210
VCD 7/1320	186,0	1320
VCD 7/1460	208,0	1460
VCD 7/1610	228,0	1610
VCD 7/1700	243,0	1700

* Non-stock items.

10 W/m

TYPE	LENGTH	POWER
-	m	W
VCD 10/70	7.50	70
VCD 10/90	9.00	90
VCD 10/110	11.00	110
VCD 10/135	13.50	135
VCD 10/170	16.50	170
VCD 10/200	20.00	200
VCD 10/235	23.50	235
VCD 10/265	27.00	265
VCD 10/315	32.00	315
VCD 10/370	36.50	370
VCD 10/415	42.00	415
VCD 10/460	46.00	460
VCD 10/570	57.00	570
VCD 10/700	70.00	700
VCD 10/910	92.00	910
VCD 10/1100	111.00	1100
VCD 10/1220	122.00	1220
VCD 10/1450	144.00	1450
VCD 10/1560	156.00	1560
VCD 10/1740	174.00	1740
VCD 10/1920	191.00	1920
VCD 10/2030	203.00	2030
VCD 10/2260	225.00	2260

17 W/m

TYPE	LENGTH	POWER
-	m	W
VCD 17/100	5.50	100
VCD 17/140	8.50	140
VCD 17/180	10.00	180
VCD 17/215	13.00	215
VCD 17/260	15.50	260
VCD 17/305	18.00	305
VCD 17/350	20.50	350
VCD 17/410	24.50	410
VCD 17/480	28.00	480
VCD 17/545	32.00	545
VCD 17/610	35.00	610
VCD 17/745	43.00	745
VCD 17/910	54.00	910
VCD 17/1200	70.00	1200
VCD 17/1430	85.00	1430
VCD 17/1590	93.00	1590
VCD 17/1900	110.00	1900
VCD 17/2030	120.00	2030
VCD 17/2280	133.00	2280
VCD 17/2490	147.00	2490
VCD 17/2660	155.00	2660
VCD 17/2950	172.00	2950

25 W/m

TYPE	LENGTH	POWER
-	m	W
VCD 25/120	4.50	120
VCD 25/170	7.00	170
VCD 25/265	10.50	265
VCD 25/320	12.50	320
VCD 25/365	15.00	365
VCD 25/420	17.00	420
VCD 25/505	20.00	505
VCD 25/585	23.00	585
VCD 25/655	26.50	655
VCD 25/725	29.50	725
VCD 25/890	36.00	890
VCD 25/1120	44.00	1120
VCD 25/1450	58.00	1450
VCD 25/1740	70.00	1740
VCD 25/1910	77.00	1910
VCD 25/2270	92.00	2270
VCD 25/2480	98.00	2480
VCD 25/2730	110.00	2730
VCD 25/3030	120.00	3030
VCD 25/3300	130.00	3300
VCD 25/3550	142.00	3550

25 W/m 400V

TYPE	LENGTH	POWER
-	m	W
VCD 25/200 400V	8.00	200
VCD 25/300 400V	12.00	300
VCD 25/470 400V	18.00	470
VCD 25/550 400V	22.00	550
VCD 25/635 400V	26.00	635
VCD 25/720 400V	30.00	720
VCD 25/870 400V	35.00	870
VCD 25/1020 400V	40.00	1020
VCD 25/1170 400V	45.00	1170
VCD 25/1280 400V	50.00	1280
VCD 25/1570 400V	62.00	1570
VCD 25/1930 400V	77.00	1930
VCD 25/2530 400V	100.00	2530
VCD 25/3070 400V	120.00	3070
VCD 25/3350 400V	135.00	3350
VCD 25/3970 400V	160.00	3970
VCD 25/4280 400V	172.00	4280
VCD 25/4820 400V	190.00	4820
VCD 25/5260 400V	210.00	5260
VCD 25/5600 400V	225.00	5600
VCD 25/6150 400V	250.00	6150

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi,
ETOG2, ETR2G, ETV, ETN4, ETI

Installation accessories: page 51 and 52

ELEKTRA Heating Cables

Single-side power supply TuffTec™

ELEKTRA TuffTec™ Heating Cables are ready-to-install heating units, dedicated to special applications, which are produced in accordance with EN 60335-1. Heating cable of the length depending on the model, has factory connected cold tail cable. The major use is the snow and ice protection of external surfaces e.g. garage drives, pavements, also roofs, gutters and down pipes.

Exceptional mechanical and thermal resistance allows for the application in spots especially exposed to harsh installation and operation conditions. Very high temporary exposure temperature (240°C) will make it possible to install the TuffTec™ cables even directly in asphalt.



This package contains:

- ELEKTRA TuffTec™ heating cable (on a spool),
- instruction manual.

> Technical data:

Power output:	30 W/m
Power supply:	230 V, 400 V ~ 50/60 Hz
Cable diameter:	~ 6.8 mm
Min. installation temperature:	-25°C
Max. working temperature:	+110°C
Max. exposure temperature (10 min.):	+240°C
Conduit cables:	1 x 4 m; 3 x 1.5 mm ² or 3 x 2.5 mm ² , rubber outer jacket
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, tinned copper braiding
Insulation:	double layer, FEP + HDPE
Outer sheath:	HFFR, UV resistant
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Deformation strength:	> 2000 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



230V

TYPE	LENGTH	POWER
-	m	W
TuffTec™ 30/290	9.5	290
TuffTec™ 30/465	15.5	465
TuffTec™ 30/640	21.0	640
TuffTec™ 30/980	33.0	980
TuffTec™ 30/1230	40.0	1230
TuffTec™ 30/1580	53.0	1580
TuffTec™ 30/1920	64.0	1920
TuffTec™ 30/2110	70.0	2110
TuffTec™ 30/2520	83.0	2520
TuffTec™ 30/2710	90.0	2710
TuffTec™ 30/3030	100.0	3030
TuffTec™ 30/3320	110.0	3320
TuffTec™ 30/3650	122.0	3650
TuffTec™ 30/3900	130.0	3900
TuffTec™ 30/4260	142.0	4260

400V

TYPE	LENGTH	POWER
-	m	W
TuffTec™ 30/500 400 V	17.0	500
TuffTec™ 30/1100 400 V	37.0	1100
TuffTec™ 30/1710 400 V	57.0	1710
TuffTec™ 30/2120 400 V	70.0	2120
TuffTec™ 30/2760 400 V	92.0	2760
TuffTec™ 30/3350 400 V	110.0	3350
TuffTec™ 30/3660 400 V	122.0	3660
TuffTec™ 30/4360 400 V	145.0	4360
TuffTec™ 30/4700 400 V	157.0	4700
TuffTec™ 30/5230 400 V	175.0	5230
TuffTec™ 30/5760 400 V	192.0	5760
TuffTec™ 30/6800 400 V	226.0	6800

> Accessories:

Temperature controllers: ETOG2, ETOR2, ETR2G, ETR2R

Installation accessories: page 51 and 52

ELEKTRA Heating Cables

Single-side power supply VCDR

ELEKTRA VCDR Heating Cables are ready-to-install heating units which are produced in accordance with EN 60335-2-83. Heating cable of the length depending on the model, has factory connected cold tail cable. A system designed for outdoor use to protect roofs, gutters and downpipes against snow and ice.

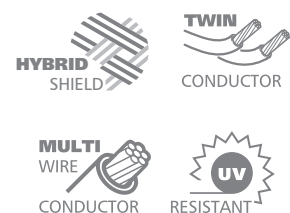


This package contains:

- ELEKTRA heating cable (on a spool),
- instruction manual.

> Technical data:

Power output:	20 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 5 x 7 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	1 x 4 m; 3 x 1.5 mm ² or 3 x 2.5 mm ² , rubber outer jacket
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, hybrid copper/monofilament fiber braiding
Insulation:	XLPE
Outer sheath:	heat and UV resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TYPE	LENGTH	POWER
-	m	W
VCDR 20/190	9.50	190
VCDR 20/235	12.00	235
VCDR 20/330	16.50	330
VCDR 20/380	19.00	380
VCDR 20/520	26.00	520
VCDR 20/600	29.00	600
VCDR 20/800	40.00	800
VCDR 20/1000	50.00	1000
VCDR 20/1140	57.00	1140
VCDR 20/1300	65.00	1300
VCDR 20/1560	78.00	1560
VCDR 20/1720	86.00	1720
VCDR 20/2050	102.00	2050
VCDR 20/2360	118.00	2360
VCDR 20/2710	135.00	2710
VCDR 20/3000	150.00	3000
VCDR 20/3450	175.00	3450

Other types available on special order.

> Accessories:

Temperature controllers: ETOR2, ETR2R

Installation accessories: [page 51](#)

ELEKTRA Heating Cables

Double-side power supply VC

ELEKTRA VC Heating Cables are ready-to-install heating units which are produced in accordance with EN 60335-1. Heating cable of the length depending on the model, has factory connected cold tail cable.

Typical use:

- VC10** - floor heating (installation in mortar), antifrost protection of pipes.
- VC15** - floor heating (installation in mortar).
- VC20** - floor heating (installation in mortar), protection against snow and ice of external surfaces e.g. driveways, walkways, ramps, etc.



This package contains:

- ELEKTRA heating cable (on a spool),
- instruction manual.

> Technical data:

Power output:	10, 15 or 20 W/m
Power supply:	230 V ~ 50/60 Hz
Diameter of cable:	~ 5 mm
Min. installation temperature:	-5°C
Max. working temperature:	+95°C
Conduit cables:	2 x 2.5 m; 2 x 1.0 mm ² , 2 x 1.5 mm ² or 2 x 2.5 mm ²
Type of heating cable:	one-core, double-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Insulation:	XLPE
Outer sheath:	heat resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



SHIELDED



MULTI
WIRE
CONDUCTOR



10 W/m*

TYPE	LENGTH	POWER
-	m	W
VC 10/80	7.50	80
VC 10/105	10.00	105
VC 10/130	13.00	130
VC 10/155	15.50	155
VC 10/190	19.50	190
VC 10/240	23.50	240
VC 10/285	28.50	285
VC 10/330	33.00	330
VC 10/375	38.00	375
VC 10/450	45.00	450
VC 10/515	52.00	515
VC 10/590	59.00	590
VC 10/655	65.00	655
VC 10/805	80.00	805
VC 10/990	100.00	990
VC 10/1290	130.00	1290
VC 10/1720	172.00	1720
VC 10/2040	205.00	2040
VC 10/2210	220.00	2210
VC 10/2460	246.00	2460
VC 10/2710	270.00	2710
VC 10/2850	290.00	2850
VC 10/3170	320.00	3170

15 W/m*

TYPE	LENGTH	POWER
-	m	W
VC 15/90	6.50	90
VC 15/125	8.50	125
VC 15/160	10.50	160
VC 15/190	12.50	190
VC 15/230	15.50	230
VC 15/285	19.50	285
VC 15/350	23.00	350
VC 15/405	27.00	405
VC 15/460	31.00	460
VC 15/545	37.00	545
VC 15/640	42.00	640
VC 15/725	48.00	725
VC 15/800	53.00	800
VC 15/985	65.00	985
VC 15/1230	80.00	1230
VC 15/1590	105.00	1590
VC 15/2100	140.00	2100
VC 15/2500	167.00	2500
VC 15/2700	180.00	2700
VC 15/3030	200.00	3030
VC 15/3320	220.00	3320
VC 15/3510	235.00	3510
VC 15/3900	260.00	3900

20 W/m*

TYPE	LENGTH	POWER
-	m	W
VC 20/110	5.50	110
VC 20/140	7.50	140
VC 20/185	9.00	185
VC 20/215	11.00	215
VC 20/265	13.50	265
VC 20/330	17.00	330
VC 20/400	20.00	400
VC 20/465	23.50	465
VC 20/530	27.00	530
VC 20/630	32.00	630
VC 20/730	37.00	730
VC 20/830	42.00	830
VC 20/930	46.00	930
VC 20/1130	57.00	1130
VC 20/1410	70.00	1410
VC 20/1820	92.00	1820
VC 20/2460	120.00	2460
VC 20/2880	145.00	2880
VC 20/3140	155.00	3140
VC 20/3440	175.00	3440
VC 20/3830	190.00	3830
VC 20/4130	207.00	4130
VC 20/4480	225.00	4480

* Available while stocks lasts.

> Accessories:

Temperature controllers: MWD5 WiFi, MCD5, ELR20, ELR30 WiFi,
ETOG2, ETR2G, ETV, ETN4, ETI

Installation accessories: page 51 and 52

ELEKTRA Heating Cables

ELEKTRA FreezeTec® Heating Cables are ready-to-install heating units. They consist of the ELEKTRA VCD heating cable with integrated thermostat ending in conduit cable with hermetic plug. An antifrost protection system for pipes and other objects which may be damaged by low temperatures.

Single-side power supply FreezeTec®



This package contains:

- ELEKTRA FreezeTec® heating cable,
- 5, 10 or 20 m of self-adhesive installation tape,
- instruction manual.

> Technical data:

Power output:	12 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 5 x 7 mm
Min. installation temperature:	-5°C
Max. working temperature:	+70°C
Conduit cables:	1 x 1.5 m; 3 x 0.75 mm²; with the plug
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, hybrid copper/monofilament fiber braiding
Insulation:	XLPE
Outer sheath:	heat resistant PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	3.5 D
Control:	built-in bimetallic thermostat
ON:	+3°C
OFF:	+10°C
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EZU, EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TYPE	LENGTH	POWER
-	m	W
FreezeTec® 12/2	2.00	24
FreezeTec® 12/3	3.00	36
FreezeTec® 12/5	5.00	60
FreezeTec® 12/7	7.00	84
FreezeTec® 12/10	10.00	120
FreezeTec® 12/15	15.00	180
FreezeTec® 12/21	21.00	252
FreezeTec® 12/30	30.00	360
FreezeTec® 12/42	42.00	504

ELEKTRA Heating Cables

Single-side power supply BET

ELEKTRA BET Heating Cables are ready-to-install heating units. They consist of a heating cable terminated at one end with a power supply conductor with a hermetic plug. This system is designed for direct installation on reinforcement, and they are dedicated to construction concrete curing in low temperatures.



This package contains:

- ELEKTRA BET heating cable (when longer on a spool),
- instruction manual.

> Technical data:

Power output:	32, 40 W/m
Power supply:	230 V ~50/60 Hz
Diameter of cable:	~ 5.0 mm
Min. installation temperature:	-5°C
Max. working temperature:	+80°C
Conduit cables:	1 x 2.0 m; 3 x 1.0 mm ² or 3 x 1.5 mm ² ; with 16A hermetic plug
Type of heating cable:	double-core, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, two tinned copper wires
Insulation:	XLPE
Outer sheath:	PVC
Rated power output tolerance:	+5%, -10%
Min. radius of bending cable:	5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



SHIELDED



TWIN

CONDUCTOR



TYPE	LENGTH	POWER
-	m	W
BET 32/105	3.30	105
BET 40/540	13.50	540
BET 40/1360	34.00	1360
BET 40/3320	83.00	3320

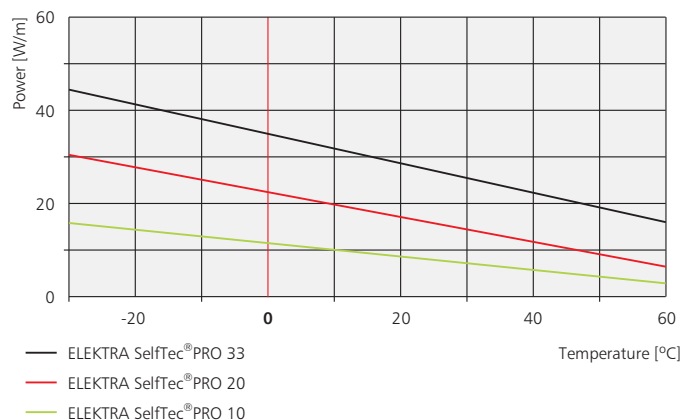
ELEKTRA Heating Cables

Self-regulating SelfTec®PRO

ELEKTRA SelfTec®PRO Self-regulating Heating Cables on a spool. An advanced antifrost protection system for pipes, gutters, downpipes, valves and other objects which may be damaged by low temperatures.



ELEKTRA SelfTec®PRO



This package contains:

- ELEKTRA SelfTec®PRO heating cable on a spool.

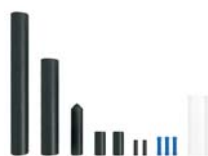
> Technical data:

Power output (+10°C):	10, 20 or 33 W/m
Power output (0°C in ice water):	30 W/m (SelfTec®PRO20) 45 W/m (SelfTec®PRO33)
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 7 x 11 mm (10, 20 W/m), ~ 7 x 13 mm (33 W/m)
Min. installation temperature:	-30°C
Max. working temperature:	+65°C
Max. exposure temperature:	+85°C power-off
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Conductor:	tin-coated copper 2 x 1.1 mm ² (10, 20 W/m), 2 x 1.35 mm ² (33 W/m)
Insulation:	modified polyolefin
Outer sheath:	UV resistant, halogen free polyolefin
Min. radius of bending cable:	3.5 D
Max. cable length per circuit:	see next page
Max. circuit-breaker, C-type:	see next page
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TURN-ON TEMPERATURE	SelfTec®PRO 10			SelfTec®PRO 20				SelfTec®PRO 33			
	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
-15°C	100	145	190	50	75	105	125	55	70	90	105
0°C	115	170	205	60	90	120	135	60	75	95	110
+10°C	130	205	–	80	110	135	–	70	70	110	120
0°C in ice water	–	–	–	40	55	70	85	40	55	70	90

EC-PRO joint set



S-TWIN-PRO twin splice connection



KF 0404-PRO junction box with M25 gland



ECM25-PRO joint set with M25 gland



EK-PRO Insulation entry kit for self-regulating heating cables



BT-PRO mounting bracket for the UTR 60-PRO controller



BKF-PRO mounting bracket for the KF 0404-PRO installation box



CL-PRO caution label



> Accessories:

Temperature controllers: ETOR2, ETR2R, UTR 60-PRO, ETI, TDR 4022-PRO, ETV

Installation accessories: page 51 and 52

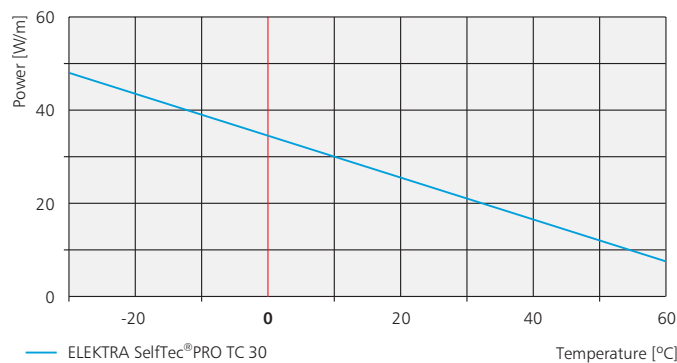
ELEKTRA Heating Cables

Self-regulating SelfTec®PRO TC

Self-regulating ELEKTRA SelfTec®PRO TC Heating Cables. An advanced anti frost protection system for objects which may be damaged by low temperatures: central heating and process heat pipelines, also valves during pauses in operation. The cable is high-temperature resistant during normal operation, as well as when switched off.



ELEKTRA SelfTec®PRO TC



This package contains:

- ELEKTRA SelfTec®PRO TC heating cable on a spool.

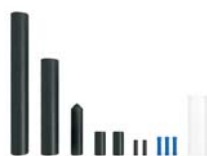
> Technical data:

Power output (+10°C):	30 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 6 x 13.5 mm
Min. installation temperature:	-50°C
Max. working temperature:	+100°C
Max. exposure temperature:	+135°C power-off
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	tinned copper braiding
Conductor:	nickel-coated copper 2 x 1.3 mm ²
Insulation:	XLEVA
Outer sheath:	HFFR
Min. radius of bending cable:	35 mm
Product certificates:	EAC
Max. cable length per circuit:	see next page
Max. circuit-breaker, C-type:	see next page
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TURN-ON TEMPERATURE	SelfTec®PRO TC 30			
	CIRCUIT-BREAKER, C-TYPE			
	16A	20A	32A	40A
	MAX. CABLE LENGTH PER CIRCUIT [m]			
-20°C	69	91	103	103
-15°C	73	94	103	103
0°C	80	100	106	106
+10°C	96	109	109	109
0°C in ice water	—	—	—	—

EC-PRO joint set



S-TWIN-PRO twin splice connection



KF 0404-PRO junction box with M25 gland



ECM25-PRO joint set with M25 gland



EK-PRO Insulation entry kit for self-regulating heating cables



BT-PRO mounting bracket for the UTR 60-PRO controller



BKF-PRO mounting bracket for the KF 0404-PRO installation box



CL-PRO caution label



> Accessories:

Temperature controllers: ETOG2, ETR2G, ETI,
UTR 60-PRO, TDR 4022-PRO
Installation accessories: page 51 and 52

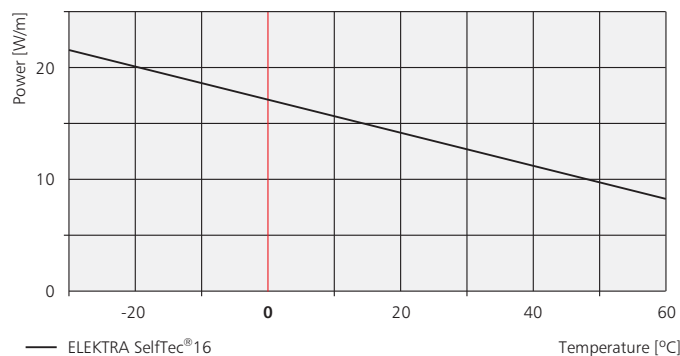
ELEKTRA Heating Cables

Self-regulating SelfTec®16

ELEKTRA SelfTec®16 Self-regulating Heating Cables on a spool. An antifrost protection system for pipes, gutters, down-pipes, valves and other objects which may be damaged by low temperatures.



ELEKTRA SelfTec®16



This package contains:

- ELEKTRA SelfTec®16 heating cable on a spool.

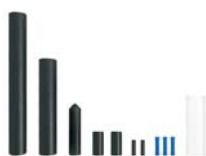
> Technical data:

Power output (+10°C):	16 W/m
Power output (0°C in ice water):	22 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 6 x 9 mm
Min. installation temperature:	-25°C
Max. working temperature:	+65°C
Max. exposure temperature:	+65°C
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Conductor:	tin-coated copper 2 x 0.6 mm ²
Insulation:	modified polyolefin
Outer sheath:	UV resistant, halogen free polyolefin
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TURN-ON TEMPERATURE	SelfTec®16 on a spool	
	CIRCUIT-BREAKER, C-TYPE	
	10A	16A
	MAX. CABLE LENGTH PER CIRCUIT [m]	
-20°C	55	75
-15°C	60	80
0°C	70	90
+10°C	80	100
0°C in ice water	40	55

EC-PRO joint set



S-TWIN-PRO twin splice connection



KF 0404-PRO junction box with M25 gland



ECM25-PRO joint set with M25 gland



EK-PRO Insulation entry kit for self-regulating heating cables



BT-PRO mounting bracket for the UTR 60-PRO controller



BKF-PRO mounting bracket for the KF 0404-PRO installation box



CL-PRO caution label



> Accessories:

EC-PRO joint set

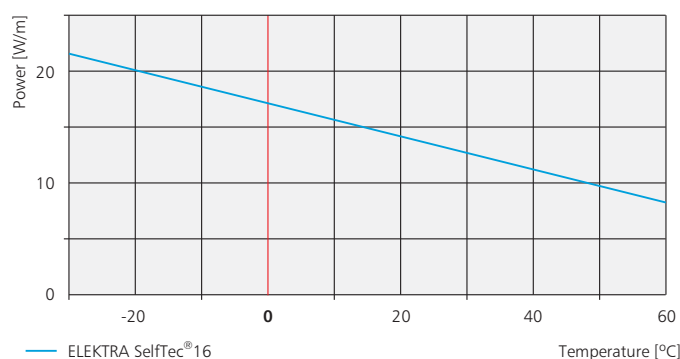
Temperature controllers: ETOR2, ETR2R, ETV, ETI

Installation accessories: page 51 and 52

ELEKTRA Heating Cables

ELEKTRA SelfTec®16 ready2heat Self-regulating Heating Cables are ready-to-install heating units. They consist of heating cable ending in conduit cable with hermetic plug. An antifrost protection system for pipes, gutters, downpipes, valves and other objects which may be damaged by low temperatures.

ELEKTRA SelfTec®16



Technical data:

Power output (+10°C):	16 W/m
Power output (0°C in ice water):	22 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 6 x 9 mm
Min. installation temperature:	-25°C
Max. working temperature:	+65°C
Max. exposure temperature:	+65°C
Conduit cables:	1 x 3 m; 3 x 0.75 mm ² or 3 x 1.0 mm ² , with the plug
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Conductor:	tin-coated copper 2 x 0.6 mm ²
Insulation:	modified polyolefin
Outer sheath:	UV resistant, halogen free polyolefin
Min. radius of bending cable:	3.5 D
Deformation strength:	> 1500 N
Pulling strength:	> 300 N
Ingress protection:	IPX7
Product certificates:	EAC
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE

Self-regulating SelfTec®16 ready2heat



This package contains:

- ELEKTRA SelfTec®16 ready2heat heating cable,
- 5 or 10 m of self-adhesive installation tape,
- instruction manual.



TYPE	LENGTH	POWER (+10°C)
-	m	W
SelfTec® 16/1	1	16
SelfTec® 16/2	2	32
SelfTec® 16/3	3	48
SelfTec® 16/5	5	80
SelfTec® 16/7	7	112
SelfTec® 16/10	10	160
SelfTec® 16/15	15	240
SelfTec® 16/20	20	320
SelfTec® 16/X	length acc. to order (up. to 80 m)	

> Accessories:

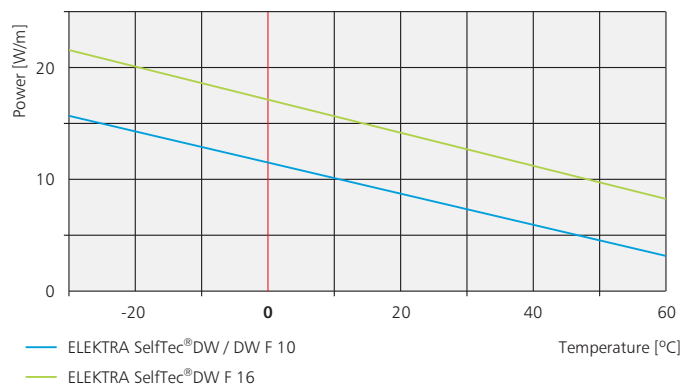
Installation accessories: page 51 and 52

ELEKTRA Heating Cables

Self-regulating SelfTec®DW / DW F

ELEKTRA SelfTec®DW / DW F Self-regulating Heating Cables. Multipurpose antifrost protection system, for applications both outside and inside of pipes. Certified for drinking water applications. Available in a double layer polyolefin + LDPE sheath (SelfTec®DW), as well as a single layer fluoropolymer sheath (SelfTec®DW F).

ELEKTRA SelfTec®DW / DW F



This package contains:

- ELEKTRA SelfTec®DW / DW F heating cable on a spool.

Technical data:

Power output (+10°C):	10 W/m or 16 W/m
Power output (0°C in ice water):	16 W/m (SelfTec®DW / DW F 10), 22 W/m (SelfTec®DW 16)
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 7 x 10 mm (SelfTec®DW) ~ 6 x 9 mm (SelfTec®DW F)
Min. installation temperature:	-25°C
Max. working temperature:	+65°C
Max. exposure temperature:	+65°C
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Conductor:	tin-coated copper 0.6 mm ²
Insulation:	modified polyolefin
Outer sheath:	double-layer, halogen free polyolefin + external LDPE, certified for drinking water applications (SelfTec®DW); single layer, fluoropolymer, certified for drinking water applications (SelfTec®DW F)
Min. radius of bending cable:	3.5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Product certificates:	EAC, FBUS, PZH (SelfTec®DW) and NSF 61 (SelfTec®DW F) Hygienic Certificates
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE

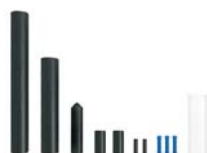


* applicable to SelfTec®DW
** applicable to SelfTec®DW F



TURN-ON TEMPERATURE	SelfTec®DW / DW F 10		SelfTec®DW F 16	
	CIRCUIT-BREAKER, C-TYPE			
	10A	16A	10A	16A
	MAX. CABLE LENGTH PER CIRCUIT [m]			
-20°C	75	110	55	75
-15°C	80	115	60	80
0°C	95	120	70	90
+10°C	100	125	80	100
+10°C in water	65	70	55	60
0°C in ice water	55	65	40	55

EC-PRO joint set



S-TWIN-PRO twin splice connection
for installation on pipes
only.



H-LT lead-through
(1/2", 3/4" & 1" set)



> Accessories:

EC-PRO joint set

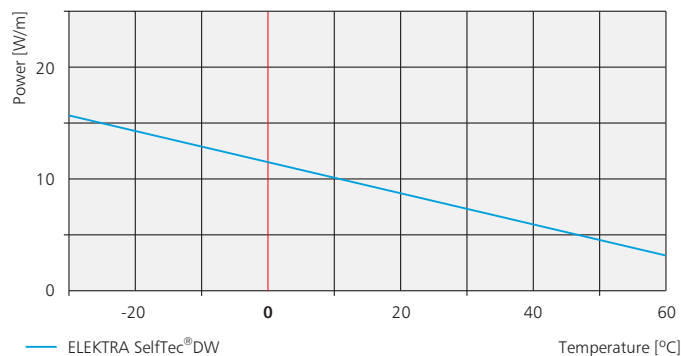
H-LT lead-through

Temperature controllers: ETV, ETI

ELEKTRA Heating Cables

ELEKTRA SelfTec®DW ready2heat Self-regulating Heating Cables are ready-to-install heating units. They consist of heating cable ending in conduit cable with hermetic plug. Multi-purpose antifrost protection system, for applications both outside and inside of pipes. Certified for drinking water applications.

ELEKTRA SelfTec®DW



Technical data:

Power output (+10°C):	10 W/m
Power output (0°C in ice water):	16 W/m
Power supply:	230 V ~ 50/60 Hz
External dimension of cable:	~ 7 x 10 mm
Min. installation temperature:	-25°C
Max. working temperature:	+65°C
Max. exposure temperature:	+65°C
Conduit cables:	1 x 3 m; 3 x 0.75 mm ² or 3 x 1.0 mm ² , with the plug
Type of heating cable:	self-regulating, single-side power supply
Screen of heating cables:	100% coverage, PET covered aluminum foil, tinned copper braiding
Conductor:	tin-coated copper 2 x 0.6 mm ²
Insulation:	modified polyolefin
Outer sheath:	double-layer, halogen free polyolefin and LDPE certified for drinking water applications
Min. radius of bending cable:	3.5 D
Deformation strength:	> 600 N
Pulling strength:	> 120 N
Ingress protection:	IPX8
Product certificates:	EAC, FBUS, PZH Hygienic Certificate
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE

Self-regulating SelfTec®DW ready2heat



This package contains:

- ELEKTRA SelfTec®DW ready2heat heating cable,
- 5 or 10 m of self-adhesive installation tape,
- instruction manual.



TYPE	LENGTH	POWER (+10°C)
-	m	W
SelfTec®DW 10/1	1	10
SelfTec®DW 10/2	2	20
SelfTec®DW 10/4	4	40
SelfTec®DW 10/6	6	60
SelfTec®DW 10/8	8	80
SelfTec®DW 10/10	10	100
SelfTec®DW 10/12	12	120
SelfTec®DW 10/15	15	150
SelfTec®DW 10/20	20	200
SelfTec®DW 10/X	length acc. to order (up. to 80 m)	

> Accessories:

Installation accessories: page 51 and 52

ELEKTRA Installation Accessories

Installation Tapes

TME 10 (10 m), TME 15 (15 m), TME 25 (25 m)

Thickness: ~ 0.8mm, Substance: aluminium

Installation Tape

TMS 10 (10 m)

Thickness: ~ 1.0 mm, Substance: zinc-coated steel

Roof trough installation strip

RT-L500-S-AL (0.5 m)

Width: 25 mm, Substance: aluminium (0.8 mm)
with special self-adhesive tape suitable for metal and PVC

Gutter spacing wire with clips

GSW-2 (20 m)

The distance between the holders along the wire: 40 cm
Substance: stainless steel and all weather resistant polymer

Downpipe spacing wire with clips

DSW-2 (20 m)

The distance between the holders along the wire: 40 cm
Substance: stainless steel and all weather resistant polymer

Roof trough installation band

RT-IB-1-P (1 m)

Substance: all weather resistant polymer

Gutter holder

GH-2 (25 pcs)

Substance: all weather resistant polymer

Downpipe spacing clip

DSC-2 (25 pcs)

Substance: all weather resistant polymer

Roof edge installation holder

RE-IH-1-ZNTI or RE-IH-1-CU (25 pcs)

Substance: ZnTi or Cu

Flexible cable support

FCS-1-SS (25 x 250mm, 2 pcs)

Substance: stainless steel



Downpipe spacing wire support bar

DSW-SB-1 (Ø 6 x 325 mm)

Substance: stainless steel



Underfloor heating installation monitor

UH-IM

Monitoring device for detection of damages occurring during heating mats and cables' installation



Self-adhesive installation tape

PG-TAPE-5 (5 m), PG-TAPE-10 (10 m) or PG-TAPE-20 (20 m)

Width: 19 mm



Self-adhesive aluminium foil

AL-TAPE-10 (10 m), AL-TAPE-45 (45 m)

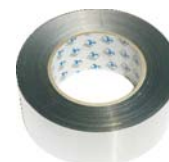
Width: 50 mm



**Self-adhesive aluminium foil
of increased mechanical durability**

Tape-PRO (50 m)

Width: 50 mm



ELEKTRA Portable Heating Mats

ELEKTRA MMV heating mats are portable, specialized heating devices dedicated for instant use which are produced in accordance with EN 60335-1.

Composed of a constant resistant heating cable and insulation layer installed inside PVC mat reinforced by polyester mesh. The mats are designed for universal applications such as defrosting of the ground, defrosting of haylage in prisms or hayballs or retrieving flexibility of cables on drums to allow unrolling in winter season.

Single-side power supply MMV



This package contains:

- ELEKTRA MMV heating mat,
- warranty card,
- instruction manual.

> Technical data:

Power output:	300 W/m ²
Total output power:	1000 W
Power supply:	230 V, ~ 50/60 Hz
Length x width x thickness:	~ 3000 x 1000 x 20 mm
Min. installation temperature:	-30°C
Max. working temperature:	+65°C
Overheating protection:	+80°C
Conduit cables:	1 x 3 m; 3 x 1.5 mm ² with hermetic plug IP44
Mat fabric:	PVC mat reinforced with polyester mesh
Thermal insulation:	10 mm
Rated power output tolerance:	+5%, -10%
Ingress protection:	IP 67
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



Single-side power supply MMR

ELEKTRA Portable Heating Mats



This package contains:

- ELEKTRA MMR heating mat,
- warranty card,
- instruction manual.

ELEKTRA MMR heating mats are portable heating devices manufactured in accordance with EN 60335-1 standard. Their construction is based on a constant-resistance heating cable embedded within a layer of a vulcanized elastomer, which lends the mat exceptional resistance against abrasion as well as mechanical durability.

The mats are dedicated to applications in locations where the danger of icing or snow deposition exists, e.g. in front of entrances to buildings, or – alternatively – under unheated workstations, thus ensuring comfort and safety of work.

> Technical data:

Power output:	340 W/m ²
Total output power:	300 W
Power supply:	230 V, ~50/60 Hz
Length x width x thickness:	~1180 x 760 x 10 mm
Min. installation temperature:	-35°C
Max. working temperature:	+80°C
Conduit cables:	1 x 3 m; 3 x 1.5 mm ² , with hermetic plug IP44
Mat fabric:	Elastomer
Rated power output tolerance:	+5%, -10%
Ingress protection:	IP 67
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



ELEKTRA Portable Heating Sleeves

ELEKTRA MMT heating sleeves are specialized portable heating appliances, enabling immediate reusable application. These plastic sleeves comprise a layer of thermal insulation and a SelfTec®16 ready2heat heating cable terminated with a sealed plug. The sleeves are dedicated to frost protection of long elements, vulnerable to low temperature damage, such as pipes, valves and other objects.

Single-side power supply MMT



This package contains:

- ELEKTRA MMT heating sleeve,
- instruction manual.

> Technical data:

Power output (+10°C):	16 W/m
Power supply:	230 V ~ 50/60 Hz
Min. installation temperature:	-25°C
Max. working temperature:	+65°C
Max. exposure temperature:	+65°C
Conduit cables:	1 x 3 m; 3 x 0.75 mm ² or 3 x 1.0 mm ² with hermetic plug IP44 self-regulating, single-side power supply
Type of heating cable:	
Thermal insulation:	15 mm
Ingress protection:	IPX7
Certificate of ISO 9001:	IQNET, PCBC
Product mark:	CE



TYPE	LENGTH	POWER (+10°C)
-	m	W
MMT 16/5	5	80
MMT 16/10	10	160
MMT 16/15	15	240
MMT 20/15	20	320
MMT 25/15	25	400

ELEKTRA Towel Dryers

CX 700, CX 800, CX 900

ELEKTRA Towel Dryers are adjusted to dry and warm clothes and towels, and to heat up spaces. They are produced in accordance with EN 60335-2-43:2002. The Dryer is composed of ladder shaped metal tubes with heating cable installed inside the tubes.



This package contains:

- ELEKTRA dryer,
- installation set,
- instruction manual.



> Technical data:

Power output:	95 ÷ 230 W
Power supply:	230 V ~ 50/60 Hz
Tubes diameter:	25 mm
Max. working temperature (constant):	60°C
Conduit cables:	1 x 2 m, 3 x 1.5 mm ² , end of plug (CX xxx) or connection through the bracket without plug (CX xxxN)
Type of heating cable:	one-core silicon insulated
Ingress protection:	IP 44
Certificate of ISO 9001:	PCBC, IQNET
Product mark:	CE



Standard version. Power lead with plug.

TYPE	DIMENSIONS	POWER	COLOUR
-	width x height (mm)	W	-
CX 700	527 x 697	130	White
CX 700r	527 x 697	130	RAL
CX 800	527 x 997	175	White
CX 800r	527 x 997	175	RAL
CX 900	527 x 1227	230	White
CX 900r	527 x 1227	230	RAL

Special version. Power lead without plug. Connection through the bracket.

TYPE	DIMENSIONS	POWER	COLOUR
-	width x height (mm)	W	-
CX 700N	527 x 697	130	White
CX 700Nr	527 x 697	130	RAL
CX 800N	527 x 997	175	White
CX 800Nr	527 x 997	175	RAL
CX 900N	527 x 1227	230	White
CX 900Nr	527 x 1227	230	RAL

ELEKTRA Temperature Controllers

The electronic 6-event temperature controller ELEKTRA MWD5 WiFi is designed for heating systems, especially electric floor heating. Enriched with the WiFi functionality enabling the users to have each controller individually operated, or combine them in one or more jointly controlled heating zones. Produced in accordance with EN 60730-2-9. The set consists of the controller with a built-in air sensor and a thin floor sensor. Possible configuration of 3 temperature measurement methods: via the air sensor, floor sensor or air and floor (limiting) sensor. Compatible with most commercially available floor sensors. Equipped with a 2-inch colour touch-screen.

> Technical data:

Power supply:	100-240 VAC ~ 50/60 Hz
Max. load:	16A
Installation:	flush mounting
Built-in switch:	2-pole, 16A
Clock functions:	6 programmable events for each day
Comfort temperature range:	+5°C ÷ +40°C for each event
Economical temperature range:	+5°C ÷ +40°C for each event
Open window detection:	system idle for 30 minutes
Hysteresis:	PI*
Ingress protection:	IP 21
Dimensions (H x W x D):	82 x 82 x 40 mm
Display:	176 x 220 pixel (TFT)
Wireless control:	WiFi (cloud)
Applications:	Android, iOS
Certificates:	VDE, BEAB
Product mark:	CE

* Adaptative system (proportional-integral) adjusting the deviation to the set temperature depending on the duration of the temperature's increase or decrease. Due to this feature the controller's operational characteristics is self-adjusted to ambient conditions, in real time.

Possible installation in the common frame:

PRODUCER	PRODUCT
ABB	Basic 55
Berker	B3, S1
Gira	Standard 55, Event, E2, Esprit 55
Hager / Polo	Lumina 2
Jung	A Creation, AS 500, A
Plus	
Legrand	Valena
Merten Schneider	M Smart, Arc, Plan, Star
Simon	82 Nature, Basic Standard



Electronic programmable touch MWD5 WiFi



This package contains:

Type MWD5-1999

- controller MWD5 with built-in air temperature sensor,
- a thin floor temperature sensor with 3 m tail (ETF-144/99T),
- instruction manual (with a link to programming instruction).



ETF-144/99T



Wi-Fi



PROGRAMMABLE



TOUCH SCREEN



Electronic
programmable
touch
MCD5



This package contains:

Type MCD5-1999

- controller MCD5 with built-in air temperature sensor,
- a thin floor temperature sensor with 3 m tail (ETF-144/99T),
- instruction manual (with a link to programming instruction).



ETF-144/99T



ELEKTRA Temperature Controllers

The Electronic 6-event Temperature Controller ELEKTRA MCD5 is designed for heating systems, especially for electric floor heating. Produced in accordance with EN 60730-2-9. It consists of controller with built-in air sensor and a thin floor sensor. Possible configuration of 3 temperature measurement methods: air sensor, floor sensor or air and limitation floor sensor. Compatible with most of floor sensors in the market. Equipped with a 2-inch colour touch-screen.

The calendar installed in the controller enables entering the date of the beginning and ending of your holiday/absence - in this time the heating will be off, or only the required min. set temperature will be maintained. Application of the QR code enables fast preview of the controller's settings in your smartphone.

Technical data:

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A
Installation:	flush mounting
Built-in switch:	2-pole, 16A
Clock functions:	6 programmable events for each day
Comfort temperature range:	+5°C ÷ +40°C for each event
Economical temperature range:	+5°C ÷ +40°C for each event
Limitation floor sensor:	
Min.:	+5°C ÷ +25°C
Max.:	+10°C ÷ +40°C
Manual work mode:	
temperature range:	+5°C ÷ +40°C
work time:	to the next event or to the cancellation system idle for 30 minutes
Open window detection:	PI*
Hysteresis:	IP 21
Ingress protection:	display function
Work signalization:	82 x 82 x 40 mm
Dimensions (H x W x D):	2", 176 x 220 pixel TFT
Display:	VDE, BEAB
Certificates:	CE
Product mark:	

* Adaptive system (proportional-integral) adjusting the deviation to the set temperature depending on the duration of the temperature's increase or decrease. Due to this feature the controller's operational characteristics is self-adjusted to ambient conditions, in real time.

Possible installation in the common frame:

PRODUCER	PRODUCT
ABB	Basic 55
Berker	B3, S1
Gira	Standard 55, Event, E2, Esprit 55
Hager / Polo	Lumina 2
Jung	A Creation, AS 500, A Plus
Legrand	Valena
Merten Schneider	M Smart, Arc, Plan, Star
Simon	82 Nature, Basic Standard



ELEKTRA Temperature Controllers

The Electronic 6-event Temperature Controller ELEKTRA ELR20 with LCD display is designed for heating systems, especially for electric floor heating. Produced in accordance with EN 60730-1 and EN 60730-2-9. Possible configuration of 3 temperature measurement methods through: air sensor, floor sensor or air and limitation floor sensor. Large LCD display ensures users' friendly communication.

Electronic programmable ELR20



This package contains:

Type ELR20

- ELR20 controller with built-in air temperature sensor,
- floor temperature sensor with 3 m tail,
- instruction manual.

> Technical data:

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A
Low energy consumption in the standby mode:	<1W
Installation:	flush mounting
Conduit cables connected to one clamp:	max. 2 conduit cables 1.5 mm ² or 1 conduit cable 2 mm ²
Clock functions:	6 programmable events for each day
Comfort temperature range:	+5°C ÷ +90°C for each event
Economical temperature range:	+5°C ÷ +90°C for each event
Limitation floor sensor:	+16°C ÷ +60°C
Frost protection temperature control range:	+5°C ÷ +10°C
Manual work mode:	
temperature range:	+5°C ÷ +90°C
work time:	until cancelled
Open window detection:	system idle for 30 minutes
Difference/Hysteresis:	adjustable 0.5°C ÷ 10°C
Ingress protection:	IP 20
Dimensions (H x W x D):	90 x 86 x 45 mm
Display:	46 x 55 mm (LCD)
Product mark:	CE



Floor temperature sensor



PROGRAMMABLE



Electronic programmable ELR30 WiFi



This package contains:

Type ELR30 WiFi

- ELR30 WiFi controller with built-in air temperature sensor,
- floor temperature sensor with 3 m tail,
- instruction manual.



Floor temperature sensor



Wi-Fi



PROGRAMMABLE



ELEKTRA Temperature Controllers

The Electronic 4-event Temperature Controller ELEKTRA ELR30 with LCD display and smartphone WiFi and Bluetooth access. Designed for heating systems, especially for electric floor heating. Produced in accordance with EN 60730-1 and EN 60730-2-9. Configuration of 3 temperature measurement methods through: air sensor, floor sensor or air and limitation floor sensor. Large LCD display for direct access to heating system parameters and easy-to-use Tuya Smart and Smart Life Apps ensures users' friendly communication.

> Technical data:

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A
Low energy consumption in the standby mode:	<1.5W
Installation:	flush mounting
Conduit cables connected to one clamp:	max. 2 conduit cables 1.5 mm ² or 1 conduit cable 2.5 mm ²
Clock functions:	4 programmable events for each day
Comfort temperature range:	+5°C ÷ +90°C for each event
Economical temperature range:	+5°C ÷ +90°C for each event
Limitation floor sensor:	+16°C ÷ +60°C
Frost protection temperature control range:	+5°C ÷ +10°C
Manual work mode:	
temperature range:	+5°C ÷ +90°C
work time:	until cancelled
Open window detection:	system idle for 10-60 minutes
Difference/Hysteresis:	adjustable 0.5°C ÷ 10°C
Ingress protection:	IP 20
Dimensions (H x W x D):	86 x 86 x 46 mm
Display:	65 x 55 mm (LCD)
Wireless control:	WiFi (cloud)
Applications:	Android, iOS
Product mark:	CE

ELEKTRA Temperature Controllers

Electronic DIN-rail ControlTec Smart SMCG

ELEKTRA SMCG Electronic Temperature Controller has been designed for the control of heating systems dedicated to snow and ice protection. Manufactured in accordance with the EN 62368-1 and EN 62311 standards. The device incorporates the controller and the moisture detector integrated with temperature sensor. The ELEKTRA SMCG can independently control two heating zones, or one zone – employing two sensors. Due to this, control in extended applications becomes possible, such as car parks, pedestrian passages or garage driveways.

With appropriate connection of sensors (ETOG-56T, ETOR-55 and ETF-744), independent control of two various zones is possible (e.g. gutters and garage driveway). The controller features the WiFi module and Ethernet port for easy software update and remote operation via a web browser, using an user or installer account. The additional advantage of the device is the feature of modification of the characteristics of the moisture detector output power in the function of the ambient temperature, which enables even better adjustment of the controller's operation to the specific ambient environmental conditions. The controller additionally features an analog option of cooperation with the BMS system via a relay informing of alarm situations, and two pairs of clamps for manual switch-on or stand-by of the heating system run from the BMS level.



This package contains:

Type SMCG

- ControlTec Smart SMC controller,
- moisture detector with an integral temperature sensor (ETOG-56T),
- ETOK-T installation tube for ETOG-56T sensor,
- instruction manual.

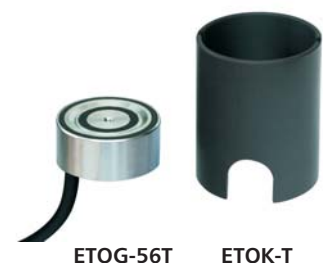
Technical data:

SMC

Power supply:	230 V ~50/60 Hz
Max. load:	2 x 16 A (potential free relays)
Installation:	DIN rail
Temperature range:	-25°C ÷ +50°C
Hysteresis:	0.3K
Ingress protection:	IP 20
Operation indicator:	LED
User control:	Multi-function knob control, web browser (desktop and mobile)
Working temperature:	-10°C ÷ +40°C
Dimensions (H x W x D):	90 x 177 x 72 mm
Modules:	10
WiFi:	20 MHz and 40 MHz 802.11 b/g/n (n - 2.4 GHz only) - 2400 ÷ 2483.5 MHz 802.11n MCS0-7 for 20 MHz and 40 MHz
Ethernet port:	RJ-45
Product mark:	CE

ETOG-56T

Installation:	in the ground
Ingress protection:	IP 68
Dimensions (H x D):	30 x 60 mm
Measurement:	ground temperature and moisture
Working temperature:	-50°C ÷ +70°C
Heater output:	1-8 W



Electronic DIN-rail ControlTec Smart SMCR



This package contains:

Type SMCR

- ControlTec Smart SMC controller,
- moisture detector (ETOR-55),
- air temperature sensor in hermetic housing (ETF-744/99),
- instruction manual.



ETF-744/99



ETOR-55



Wi-Fi



ETHERNET



VARIABLE
SENSOR
POWER



SENSOR
CONFIG



ELEKTRA Temperature Controllers

ELEKTRA SMCR Electronic Temperature Controller has been designed for the control of heating systems dedicated to snow and ice protection. Manufactured in accordance with the EN 62368-1 and EN 62311 standards. The device incorporates the controller, the temperature sensor and gutter moisture detector. The ELEKTRA SMCR can independently control two heating zones, or one zone – employing two sensors. Due to this, control in extended applications becomes possible, such as roof runners or roof edges.

With appropriate connection of sensors (ETOG-56T, ETOR-55 and ETF-744), independent control of two various zones is possible (e.g. gutters and a garage driveway). The controller features the WiFi module and Ethernet port for easy software update and remote operation via a web browser, using an user or installer account. The additional advantage of the device is the feature of modification of the characteristics of the moisture detector output power in the function of the ambient temperature, which enables even better adjustment of the controller's operation to the specific ambient environmental conditions in the operation area. The controller additionally features an analog option of cooperation with the BMS system via a relay informing of alarm situations, and two pairs of clamps for manual switch-on or stand-by of the heating system run from the BMS level.

> Technical data:

SMC

Power supply:	230 V ~50/60 Hz
Max. load:	2 x 16 A (potential free relays)
Installation:	DIN rail
Temperature range:	-25°C ÷ +50°C
Hysteresis:	0.3K
Ingress protection:	IP 20
Operation indicator:	LED
User control:	Multi-function knob control, web browser (desktop and mobile)
Working temperature:	-10°C ÷ +40°C
Dimensions (H x W x D):	90 x 177 x 72 mm
Modules:	10
WiFi:	20 MHz and 40 MHz 802.11 b/g/n (n - 2.4 GHz only) - 2400 ÷ 2483.5 MHz 802.11n MCS0-7 for 20 MHz and 40 MHz
Ethernet port:	RJ-45
Product mark:	CE

ETF-744/99

Installation:	surface mounting, outdoor
Ingress protection:	IP 54
Dimensions (H x W x D):	85 x 50 x 35 mm
Measurement:	air temperature
Working temperature:	-50°C ÷ +70°C

ETOR-55

Installation:	inside the gutter
Ingress protection:	IP 68
Dimensions (H x W x D):	107 x 26 x 15 mm
Measurement:	moisture
Working temperature:	-50°C ÷ +70°C
Heater output:	1-8 W

ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETOG2 is designed especially for snow and ice protection electric heating systems. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of a controller and a ground moisture detector with an integrated air temperature sensor. ETOG2 controls up to 2 zones or a single zone by means of 2 sensors. It is a solution even for large applications, e.g. car parks or driveways.

ETOG2 may also control 2 independent areas, e.g. a driveway and gutters (combination of ETOG-56T, ETOR-55 and ETF-744 sensors).

The controller features the possibility to cooperate analogously with a BMS system via a relay informing about the alarm status and two pairs of connectors enabling manual switch on or stand-by of the heating system from the BMS.

Electronic DIN-rail ETOG2



This package contains:

Type ETOG2

- ETOG-4550 controller,
- moisture detector with an integral temperature sensor (ETOG-56T),
- ETOK-T installation tube for ETOG-56T sensor,
- cover for surface mounting,
- instruction manual.

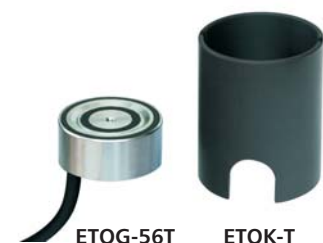
> Technical data:

ETO2-4550

Power supply:	115/240 V ~ 50/60 Hz
Built-in transformer:	24VAC, 6VA
Max. load:	3 x 16A (potential free relays)
Installation:	DIN-rail or surface mounting
Temperature range:	-20°C ÷ +50°C
Difference/Hysteresis:	0.3K
Ingress protection (surface mounting):	IP 21
Operation indicator:	LED
Temperature sensor calibration:	potentiometer
Working temperature:	0°C ÷ +50°C
Dimensions (H x W x D):	90 x 156 x 45 mm
Modules:	9
Certificates:	EAC
Product mark:	CE

ETOG-56T

Installation:	in the ground
Ingress protection:	IP 68
Dimensions (H x D):	30 x 60 mm
Measurement:	moisture and ground temperature
Working temperature:	-50°C ÷ +70°C



Surface
mounting box



Electronic DIN-rail ETOR2



This package contains:

Type ETOR2

- ETO2-4550 controller,
- moisture detector (ETOR-55),
- air temperature sensor in hermetic housing (ETF-744/99),
- cover for surface mounting,
- accessories for installation,
- instruction manual.



ETF-744/99



ETOR-55



Surface
mounting box



ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETOR2 is designed for snow and ice protection electric heating systems. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of a controller, gutter moisture and air temperature sensors.

ETOR2 controls up to 2 zones or a single zone by means of 2 sensors. It is a solution even for large applications, e.g. roof troughs and roofs.

ETOR2 may also control 2 independent areas, e.g. a driveway and gutters (combination of ETOG-56T, ETOR-55 and ETF-744 sensors).

The controller features the possibility to cooperate analogously with a BMS system via a relay informing about the alarm status and two pairs of connectors enabling manual switch on or stand-by of the heating system from the BMS.

> Technical data:

ETO2-4550

Power supply:	115/240 V ~ 50/60 Hz
Built-in transformer:	24 VAC, 6 VA
Max. load:	3 x 16A (potential free relays)
Installation:	DIN-rail or surface mounting
Temperature range:	-20°C ÷ +50°C
Difference/Hysteresis:	0.3K
Ingress protection (surface mounting):	IP 21
Operation indicator:	LED
Temperature sensor calibration:	potentiometer
Working temperature:	0°C ÷ +50°C
Dimensions (H x W x D):	90 x 156 x 45 mm
Modules:	9
Certificates:	EAC
Product mark:	CE

ETF-744/99

Installation:	surface mounting, outdoor
Ingress protection:	IP 54
Dimensions (H x W x D):	85 x 50 x 35 mm
Measurement:	air temperature
Working temperature:	-50°C ÷ +70°C

ETOR-55

Installation:	inside the gutter
Ingress protection:	IP 68
Dimensions (H x W x D):	107 x 26 x 15 mm
Measurement:	moisture
Working temperature:	-50°C ÷ +70°C

ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETR2G is designed specifically for snow and ice protection electric heating systems. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of controller and a ground moisture detector with an integrated air temperature sensor.

Electronic DIN-rail ETR2G



This package contains:

Type ETR2G

- ETR2-1550 controller,
- moisture detector with an integral temperature sensor (ETOG-56T),
- ETOK-T installation tube for ETOG-56T sensor,
- instruction manual.

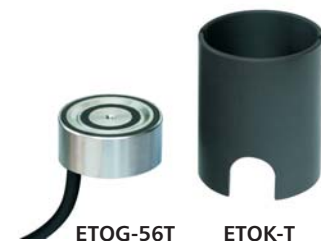
> Technical data:

ETR2-1550

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A (potential free relays)
Installation:	DIN-rail
Temperature range:	0°C ÷ +10°C
Difference/Hysteresis:	0.3K
Ingress protection:	IP 20
Operation indicator:	LED ON (green) : power on LED RELAY (red) : output on LED TEMP (red) : outdoor temperature below setpoint LED MOIST (red) : moisture detected
Timer:	Switch-off delay adjustable 0-6 hours
Working temperature:	-20°C ÷ +50°C
Dimensions (H x W x D):	86 x 52 x 59 mm
Modules:	3
Certificates:	EAC
Product mark:	CE

ETOG-56T

Installation:	in the ground
Ingress protection:	IP 68
Dimensions (H x D):	30 x 60 mm
Measurement:	moisture and ground temperature
Working temperature:	-50°C ÷ +70°C



Electronic DIN-rail ETR2R



ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETR2R is designed specifically for snow and ice protection electric heating systems. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of controller, gutter moisture and air temperature sensors.

This package contains:

Type ETR2R

- ETR2-1550 controller,
- moisture detector (ETOR-55),
- air temperature sensor in the hermetic cover (ETF-744/99),
- instruction manual.



ETF-744/99



ETOR-55

Technical data:

ETR2-1550

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A (potential free relays)
Installation:	DIN-rail
Temperature range:	0°C ÷ +10°C
Difference/Hysteresis:	0.3K
Ingress protection:	IP 20
Operation indicator:	LED ON (green): power on LED RELAY (red) : output on LED TEMP (red) : outdoor temperature below setpoint LED MOIST (red) : moisture detected
Timer:	Switch-off delay adjustable 0-6 hours
Working temperature:	-20°C ÷ +50°C
Dimensions (H x W x D):	86 x 52 x 59 mm
Modules:	3
Certificates:	EAC
Product mark:	CE

ETF-744/99

Installation:	surface mounting, outdoor
Ingress protection:	IP 54
Dimensions (H x W x D):	85 x 50 x 35 mm
Measurement:	air temperature
Working temperature:	-50°C ÷ +70°C

ETOR-55

Installation:	inside the gutter
Ingress protection:	IP 68
Dimensions (H x W x D):	107 x 26 x 15 mm
Measurement:	moisture
Working temperature:	-50°C ÷ +70°C



ELEKTRA Temperature Controllers

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.

Electronic UTR 60-PRO



This package contains:

UTR 60-PRO

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



F 892 002

> Technical data:

UTR 60-PRO

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

F 892 002

Installation:	on pipe
Ingress protection:	IP 67
Working temperature:	-40°C ÷ +120°C



Electronic
DIN-rail
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 (potential free relays)
Analog output:	V: 0...1V, 0...5V, 0...10V, I: 0...20mA, 4...20mA
Installation:	DIN-rail
Temperature range:	-200°C ÷ +800°C
Hysteresis:	0.1 ... 30 K
Ingress protection:	IP 20
Operation indicator:	LED
Working temperature:	-5°C ÷ +55°C
Dimensions (H x W x D):	85 x 70 x 61 mm
Modules:	4
Product mark:	CE

886030081500

Mounting:	on pipe
Ingress protection:	IP 67
Working temperature:	-50°C ÷ +110°C



ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETV is designed for heating systems, especially for floor and pipe electric heating. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of the controller and an appropriate sensor dependent on the application.

Electronic DIN-rail ETV



> Technical data:

ETV-1990

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A
Installation:	DIN-rail
Temperature range:	0°C ÷ +40°C
Setback temperature:	about 5°C
Control of setback temperature:	supply signal 230 V ~ 50/60 Hz
Difference/Hysteresis:	0.4K
Ingress protection:	IP 20
Operation indicator:	LED
Working temperature:	0°C ÷ +50°C
Dimensions (H x W x D):	86 x 36 x 58 mm
Modules:	2
Certificates:	EAC
Product mark:	CE

ETF-744/99

Installation:	surface mounting, outdoor
Ingress protection:	IP 54
Dimensions (H x W x D):	85 x 50 x 35 mm
Working temperature:	-50°C ÷ +70°C

ETF-144/99

Installation:	floor or on pipe
Ingress protection:	IP 67
Working temperature:	-20°C ÷ +70°C

ETF-944/99

Installation:	surface mounting, indoor
Ingress protection:	IP 20
Dimensions (H x W x D):	80 x 80 x 16 mm
Working temperature:	-20°C ÷ +70°C

This package contains:

Type ETV-1991

- ETV-1990 controller,
- temperature sensor with 3 m tail (ETF-144/99),
- instruction manual.

Type ETV-1999

- ETV-1990 controller,
- indoor air temperature sensor (ETF-944/99) or (optional) air temperature sensor in the hermetic cover (ETF-744/99),
- instruction manual.



ETF-744/99



ETF-144/99



ETF-944/99



Electronic DIN-rail ETN4



This package contains:

Type ETN4-1999

- ETN4 controller,
- thin floor temperature sensor with 3m tail (ETF-144/99T),
- instruction manual,
- programming instruction.

Option:

Depending on the application, the controller can service one or two sensors of the below:

- ETF-144/99T,
- ETF-744,
- ETF-944.



ETF-144/99T



ETF-744/99



ETF-944/99



ELEKTRA Temperature Controllers

The ELEKTRA ETN4 electronic temperature controller, is suitable for the purposes of electric heating systems' control, anti-frost protection of pipes, protection of buildings' foundations and control in cooling applications. The controller is manufactured in compliance with the EN 60730-1 and EN 60730-2-9 technical standards. One of the features of ETN4 is significantly wide range of set temperature: between -19.5°C and $+70^{\circ}\text{C}$. Large backlit display emphasises current operating parameters, while three buttons enable easy menu navigation.

> Technical data:

ETN4-1999

Power supply:	230 V ~ 50/60 Hz
Max. load:	16A
Built-in switch:	2-pole, 16A
Installation:	DIN-rail
Control principle:	ON/OFF or PWM/PI
Temperature range:	$-19.5^{\circ}\text{C} \div +70^{\circ}\text{C}$
Limit sensor control temperature range:	
Min.:	$-19.5/+70^{\circ}\text{C}$
Max.:	$-19.5/+70^{\circ}\text{C}$
Temperature setback or increase:	
with connected sensor:	$-19.5/+30^{\circ}\text{C}$
no connected sensor:	0-100%
Frost protection:	
with connected sensor:	0-10°C
no connected sensor:	0-100%
Control hysteresis:	0.3-10K
Ingress protection:	IP 20
Frost protection and temperature increase or setback:	with the voltage impulse
	230 V / ~ 50/60 Hz
Working temperature:	$-20 \div +55^{\circ}\text{C}$
Dimensions (H x W x D):	86 x 52.5 x 58 mm
Modules:	3
Certificates:	EAC, VDE
Product mark:	CE

ETF-144/99T

Installation:	in-floor or on-pipe
Ingress protection:	IP 67
Working temperature:	$-20^{\circ}\text{C} \div +70^{\circ}\text{C}$

ETF-744/99

Installation:	surface mounting
Ingress protection:	IP 54
Dimensions (H x W x D):	85 x 50 x 35 mm
Working temperature:	$-50^{\circ}\text{C} \div +70^{\circ}\text{C}$

ETF-944/99

Installation:	indoor, surface mounting
Ingress protection:	IP 20
Dimensions (H x W x D):	80 x 80 x 16 mm
Working temperature:	$-20^{\circ}\text{C} \div +70^{\circ}\text{C}$

ELEKTRA Temperature Controllers

The Electronic Temperature Controller ELEKTRA ETI is designed for heating and cooling systems, especially basement protection (coolers) and pipelines. Produced in accordance with EN 60730-1 and EN 60730-2-9. It consists of the controller and an temperature sensor.

Electronic DIN-rail ETI



This package contains:

Type ETI-1544

- ETI-1551 controller,
- temperature sensor with 3m tail (ETF-144/99),
- instruction manual.

> Technical data:

ETI-1551

Power supply:	230 V ~ 50/60 Hz
Max. load:	10A
Built-in switch:	2-pole, 10A
Installation:	DIN-rail
Temperature range:	-10°C ÷ +50°C
Difference/Hysteresis:	0.3 ÷ 6K
Ingress protection:	IP 20
Operation indicator:	LED
Working temperature:	-20°C ÷ +50°C
Dimensions (H x W x D):	86 x 36 x 58 mm
Modules:	3
Certificates:	EAC
Product mark:	CE

ETF-144/99

Installation:	floor or on pipe
Ingress protection:	IP 67
Working temperature:	-20°C ÷ +70°C



ETF-144/99



**ELEKTRA**

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