



Product Catalogue

Electromechanical Components
around the Control Cabinet

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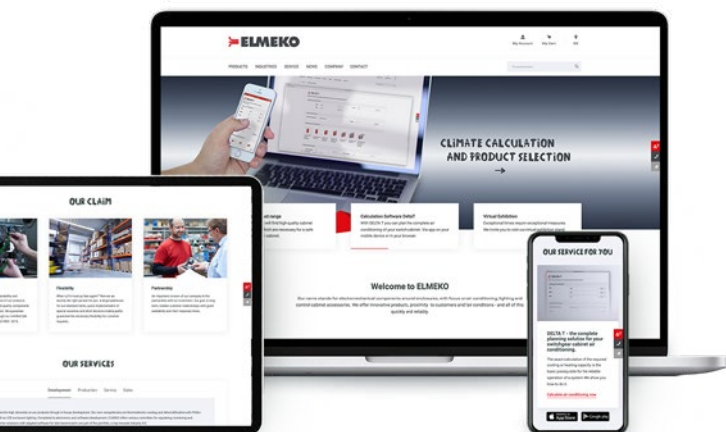
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More products and information at:
www.elmeko.de



History

ELMEKO was founded as a trading company in 2004, with the aim of providing its customers with the largest possible range of switchgear cabinets and accessories. Only a few years later, the company had progressed from simply trading to manufacturing. The idea was to implement not only customer requests, but also the company's own ideas. The first home-grown product was launched in 2008: the LED lamp LE-300-SX. In-house production of lamps and air conditioning components began in 2012, and it was necessary to double production floor area by 2017. Within only a few years, a wide variety of new, innovative products was added to the range.

2004

Foundation of ELMEKO GmbH + Co. KG as a distribution company for switchgear cabinet accessories, air conditioning and lighting

2006

Online shop, expansion of the range by the addition of signalling devices

2008

New development of the first LED lamp LE-300-SX

2010

Expansion of the LE series by the addition of high-voltage lamps for 230 V and other versions

2012

Relocation to newly built company premises in Liebenscheid, start of production of Peltier coolers, switchgear cabinet heaters and electric control units, presentation of the new SL 250 – 650 range of heaters

2013

New development of dehumidifier devices PSE 30 with Peltier technology

2014

New LED switchgear cabinet lighting, LLE series

2015

Presentation of patented Peltier coolers PM

2016

Distribution agreement with nVent (Pentair), distribution of cooling units

2017

Expansion of production area and warehouse space, market launch of multi-functional LED light LEX-350

2018

New LED switch gear cabinet lights LLX series

2019

ATEX approval PK 150 and new Peltier controller TPC 300

2020

New introduction: Drainage with OUT-FIT

Our Expertise

As a result of decades of experience in switchgear cabinet air-conditioning and the construction of electrical switchgear, and our direct contact with planners and customers, we create products that meet the demands of the market. Short decision paths and rapid conversion of a product idea into a serial product are important to us, but we always take care to maintain our high quality standards and guarantee that products remain available for many years.



QUALITY

In the manufacture of our products, we attach great importance to the label “Made in Germany”. ISO 9001:2015 certification confirms the quality of our products, which are made using high-quality components from well-known manufacturers. No product leaves our premises untested. So you are guaranteed technology you can rely on and we have satisfied customers in every sector of the industry.



FLEXIBILITY

And if fast delivery is required, we are the perfect partner. Large stocks of standard items, swift realisation of customized solutions and short decision paths guarantee the flexibility needed to meet customer requirements. You are very welcome to put us to the test. Send us an inquiry for the products you need.



PARTNERSHIP WITH CUSTOMERS

Close cooperation with customers is an important element of our business. That may seem obvious, but it is not something you can expect everywhere today. At ELMEKO, you can. We identify with your needs and make meeting your requirements our mission. These are not just words; they are a pledge. Put us to the test!

WE STAY ON COURSE FOR GROWTH...

with innovative ideas and state-of-the-art products. Our top priorities are product quality, fast and punctual delivery, and being a reliable partner. In conjunction with competitive prices, this is the basis of our long-term customer ties and sustainable success.

Burkhard Herr



BURKHARD HERR,
MANAGING DIRECTOR



**MACHINE TOOLS, FOOD INDUSTRY,
WAREHOUSE TECHNOLOGY, CHEMICAL
PLANTS**

Industries

MECHANICAL AND PLANT ENGINEERING

Mechanical and plant engineering is one of the most innovative sectors of German industry. Around 1 million people are employed in mechanical and plant engineering, a sector with an annual turnover of more than 200 billion euros which makes it a key factor in the German economy. The most important sub-sector in the industry is machine tools. We maintain close ties with the entire industry, and deliver our products to many reputable machine manufacturers.



**RENEWABLE ENERGY SOURCES, WIND
POWER, ENERGY DISTRIBUTION AND
STORAGE TECHNOLOGY**

ENERGY TECHNOLOGY

One of the most important challenges of our age is the environment-friendly and efficient production, storage and use of power. The fast-growing, high-revenue energy technology sector is one of the most important branches of the electrical engineering industry, whose success depends strongly on the innovative strength of many of its manufacturers – and suppliers like us. We're a partner of the energy technology industry.

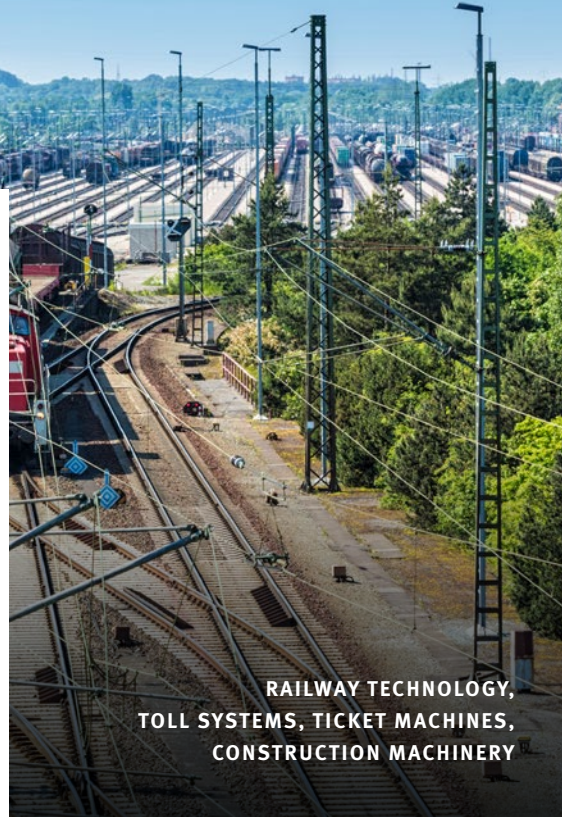


TRANSPORT TECHNOLOGY AND INFRASTRUCTURE

Modern transport technology would be inconceivable without electronic, measuring and communications engineering. Road, rail, sea and air traffic are kept running with an increasing number of decentralised systems packed with sensitive electronics that need to function reliably under the toughest ambient conditions and in all weathers. To make sure this happens, we have developed a range of coolers, heaters and dehumidifiers that are robust, require minimal maintenance and function properly even under extreme conditions.

INFORMATION TECHNOLOGY

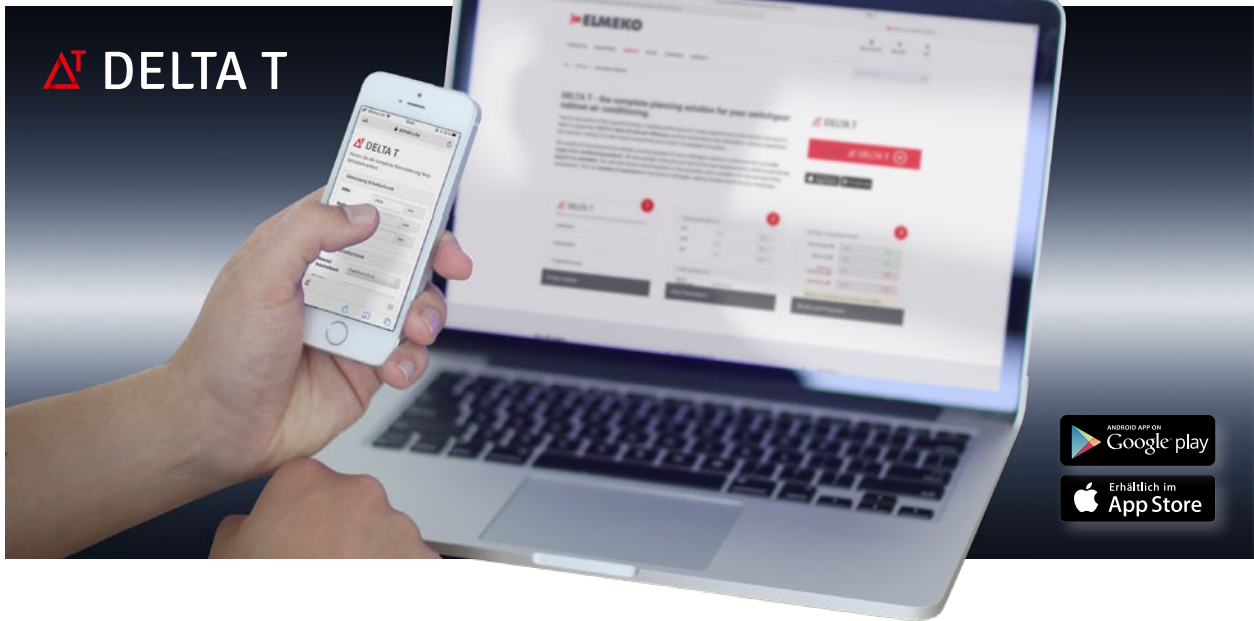
In the IT area, reliability and a long service life have a high status. Optimum environmental conditions and trouble-free operation around the clock have the highest priority. Roof mounted fans and 19 "fan units ensure efficient airflow through the IT cabinets and prevent heat accumulation. A bright cabinet lighting facilitates maintenance.



RAILWAY TECHNOLOGY,
TOLL SYSTEMS, TICKET MACHINES,
CONSTRUCTION MACHINERY



CLIMATISATION AND LIGHTING FOR
SERVER CABINETS AND SYSTEMS



Calculation Software DELTA T

Precise calculation of the required cooling or heating performance is a basic requirement for the reliable running of a plant or equipment. DELTA T takes all relevant influences such as temperature, heat dissipation, cabinet material etc. into account, making it an ideal way to ensure that your project is evaluated accurately.



The results are accompanied by climate control proposals for your switchgear cabinet or enclosure from our wide range of air-conditioning products. We also provide a free print-out service for your documentation, which is **sent to our experts for evaluation**.

You will then receive rapid feedback on the evaluation and a quotation for the corresponding components. Turn our decades of experience in the field of switchgear cabinet climate control to your advantage.

From customer request to serial production

We manufacture all our products at our plant in Liebenscheid, which ensures that we stay flexible and maintain our high quality standards – Made in Germany. We keep standard articles permanently in stock and use reputable logistics partners for the rapid despatch of products to our customers all over the world – availability guaranteed!



NEW
PRODUCT IDEA



CONCEPT FOR
IMPLEMENTATION



PROTOTYPES
FOR TESTS AND
RELEASES



EXAMINATIONS
AND CERTIFICA-
TIONS



SERIES
PRODUCTION



MARKET LAUNCH,
SALES



Product Range

A switchgear cabinet protects the electrical control or DP systems inside it. To ensure that those highly sensitive systems work safely and reliably, the cabinet needs to meet ever more exacting requirements. Air-conditioning and lighting are becoming particularly important here.



LIGHTING

Efficient LED lighting has prevailed in many industrial applications. ELMEKO specializes in solutions for control cabinet and machine lighting. There are different series for different requirements. Luminaires with motion detectors, door limit switches, wide-range voltage for the control cabinet or high degree of protection for machine lights can be selected from the extensive product range.



AIR CONDITIONING

Switch gear cabinets come in many different and individual types, sizes and equipment versions - and environmental conditions often require specific air conditioning. ELMEKO offers solutions for a wide range of applications. Coolers, dehumidifiers, fans, heaters, heat exchangers as well as thermostats and regulators are part of the delivery program.



ACCESSORIES

ELMEKO limited its accessory program to important things that are required in every enclosure. Some products in our portfolio include document pockets in different sizes and materials, power sockets for mounting in enclosures, and ground straps for earthing enclosure doors and housing parts. The program is supplemented by elements for pressure equalization and drainage for avoiding condensation inside enclosures.



Heaters without Fans

Heaters protect components in a switchgear cabinet from excessively low temperatures and prevent the occurrence of condensation in the cabinet as a result of marked fluctuations in temperature or increased humidity. We offer heaters with or without fan for different operating voltages. The electrical power capacity ranges from 10 W up to 1,500 W. Special designs, for example with mounting plates, are available at short notice.

FEATURES

Our heaters are fitted with self-regulating PTC heating elements, which limit surface temperature and reduce heat output when the temperature rises. PTC heaters maintain practically the same heat output across a wide range of input voltages. The profiled structure of the aluminium housing ensures good heat dissipation and warm air circulation. Power supply via spring-cage or screw terminal. Heaters are fixed to the mounting rail with clips.

Heaters prevent condensation, corrosion and malfunctions in switchgear cabinets installed outdoors.

APPLICATION

Switchgear cabinet heaters prevent corrosion and switching malfunctions. They are used mainly in outdoor applications such as traffic technology, ticket machines, traffic monitoring systems, traffic lights, packing stations and cranes. They are also used in machinery for the food and beverage industry and the textile industry.

VERSIONS

Series SM

- Electrical power capacity from 10 to 45 W
- PTC heating element
- Compact design
- Attachment with clip on mounting rail



Series SH

- PTC heating elements or fixed resistors
- Heating capacity from 50 to 150 W
- Special versions for wind turbines



Series SF

- Heating capacity from 30 to 50 W
- For special voltages
- Fixed resistor



HEATERS WITHOUT FANS SM TECHNICAL DATA

Type	SM 10	SM 10	SM 20	SM 20	SM 30	SM 30	SM 45
Part number	20 M10 70X	20 M10 80X	20 M20 70X	20 M20 80X	20 M30 70X	20 M30 80X	20 M45 70X
Operating voltage	110 – 240 V AC/DC	12 – 24 V AC/DC	110 – 240 V AC/DC	12 – 24 V AC/DC	110 – 240 V AC/DC	12 – 24 V AC/DC	110 – 240 V AC/DC
Thermal output at 20 °C [W]	10	10	20	20	30	30	45
Width [mm]	30	30	30	30	30	30	30
Height [mm]	80	80	100	100	120	120	170
Depth [mm]	60	60	60	60	60	60	60
Service life [h]	100,000	100,000	100,000	100,000	100,000	100,000	100,000
Approvals	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE	cURus / CE

HEATERS WITHOUT FANS SH TECHNICAL DATA

Type	SH 60	SH 75	SH 75D	SH 100	SH 100D	SH 150
Part number	20 60S 70X	20 75S 70X	20 75S D0X	20 10S 70X	20 10S D0X	20 15S 70X
Operating voltage	110 – 240 V AC/DC	110 – 240 V AC/DC	400 V AC/DC	110 – 240 V AC/DC	400 V AC/DC	110 – 240 V AC/DC
Thermal output at 20 °C [W]	60	75	70	100	100	150
Width [mm]	80	80	80	80	80	80
Height [mm]	105	155	185	185	215	245
Depth [mm]	83	83	83	83	83	83
Service life [h]	100,000	100,000	100,000	100,000	100,000	100,000
Approval/s	UR / CE	UR / CE	CE	UR / CE	CE	UR / CE

HEATERS WITHOUT FANS SF TECHNICAL DATA

Type	SF 35	SF35	SF 55	SF55
Part number	20 F35 50X	20 F35 D0X	20 F55 50X	20 F55 D0X
Operating voltage	24 V AC/DC	400 V AC/DC	24 V AC/DC	400 V AC/DC
Thermal output at 20 °C [W]	30	35	45	45
Width [mm]	64.5	64.5	64.5	64.5
Height [mm]	158	158	193	193
Depth [mm]	60.7	60.7	60.7	60.7
Service life [h]	100,000	100,000	100,000	100,000
Approval	CE	CE	CE	CE



Heaters with Fans

To ensure ideal air circulation inside the enclosure, we recommend our heaters with fan. Depending on the model, the fans can be switched separately, thus ensuring a permanently optimal air circulation. Various controllers for temperature and humidity for external control are available as accessories.

VERSIONS

Series SM, Series SH

- Compensation of temperature fluctuations in the switchgear cabinet
- Prevention of condensation
- PTC heating elements
- Heating capacity from 50 to 400 W
- Special versions for wind turbines
- Plug-in connection terminal



Series HL

HL heaters are especially suitable for use in outdoor switchgear cabinets

Their robust, compact design, wide operating temperature range of -40 °C to +70 °C, and long service life of 50,000 h mean that HL heaters are particularly suitable for use in outdoor switchgear cabinets.



Series SL

- Various power levels from 250 to 650 W in the same housing
- Two heating circuits with different switching options for SL 500 and SL 650
- Fan and heating separately connectable at SL 500 and SL 650
- Integrated temperature limiter for shutdown if the fan fails
- Compact design, low weight
- Eyelets for screw fastening and clip for mounting rail
- Connection via spring-cage terminals
- Cover over the terminals



Series ML

- very compact construction
- low-noise operation
- Mounting clip for mounting rail
- 3-pole spring-cage terminal



HEATERS WITH FANS SM, SH UND ML TECHNICAL DATA

Type	SM 50L	SM 100L	SH 130L	SH 250L	SH 400L	ML 150
Part number	20 M50 50X	20 10M 10X	20 13S 10X	20 25S 10X	20 40S 10X	20 15M 10X
Operating voltage	24 V DC	230 V 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V 50/60 Hz
Thermal output at 20 °C [W]	50	100	130	250	400	150
Width [mm]	60	60	80	80	80	66
Height [mm]	130	150	155	155	235	88
Depth [mm]	90	90	110	110	110	97
Service life [h]	50,000	50,000	50,000	50,000	50,000	50,000
Approval/s	CE	CE	UR* / CE	UR* / CE	UR* / CE	CE

* for UL versions, please add the suffix "UL" to the article number

HEATERS WITH FANS SL AND HL TECHNICAL DATA

Type	SL 250	SL 350	SL 500	SL 650	HL 1200	HL 1500
Part number	20 25SL 102	20 35SL 102	20 50SL 106	20 65SL 106	20 1200 10X	20 1500 10X
Operating voltage	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz	230 V AC 50/60 Hz
Thermal output at 20 °C [W]	250	350	280/500	380/650	1200	1500
Width [mm]	115	115	115	115	120	120
Height [mm]	100	100	100	100	130	130
Depth [mm]	114	114	114	114	165	165
Service life [h]	50,000	50,000	50,000	50,000	50,000	50,000
Approval	CE	CE	CE	CE	CE	CE

HEATERS WITH AND WITHOUT FANS ACCESSORIES



Thermostat TFH 05
Part number: 15 TFH 005



Thermostat TKW 60
Part number: 15 TKW 060



Hygrostat HYW 90
Part number: 15 HYW 090



Digital thermostat TER 200
Part number: 15 TER 200



Thermostat TRO 60
Part number: 15 TRO 060



Thermo-Hygrostat ETUH 22
Part number: 15 ETUH 022



Thermostats and Controllers

We offer a wide range of thermostats and control units for the regulation of temperature, humidity or rotation speed to ensure that all switchgear cabinet components work efficiently and consume less power. We supply the right product for every application – everything from a simple bimetallic thermostat to an adjustable control unit with sensors and interface.

APPLICATION

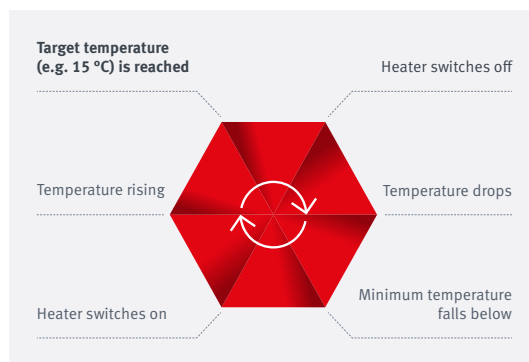
A range of temperature and humidity control units ensure that various components such as fans, heaters or coolers can be switched on and off as and when required. Thermostats are also used as contacts to signal malfunctions. There are control units with fixed settings for standard applications to prevent unintentional adjustment. Peltier coolers require special control units for regulation of their heating and cooling function.

A wide range of thermostats and control units provides tailor-made solutions.

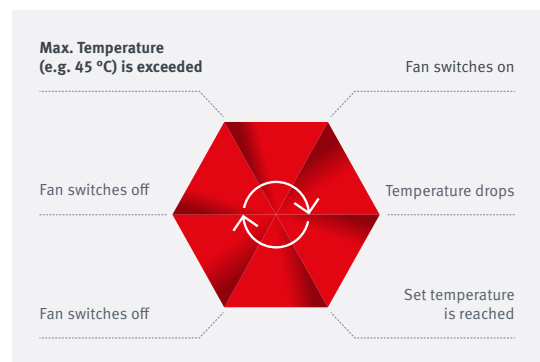
FEATURES

- Temperature controllers with bimetallic or external sensors
- Humidity controllers for the monitoring of relative humidity
- Compact enclosures for fixing to mounting rails
- Switch contact to actuate opening, closing or changeover functions
- Switching of air-conditioning components or as signal contact
- Special control units for Peltier coolers
- Rotational speed controller with temperature-dependent control to reduce noise emission

PRINCIPLE OF OPERATION TRO 60



PRINCIPLE OF OPERATION TRS 60



BIMETALLIC THERMOSTATS TECHNICAL DATA



Type	TFH 05	TFC 35	TRO 60	TRS 60	TRW 60	TWR 60
Part number	15 TFH 005	15 TFC 035	15 TRO 060	15 TRS 060	15 TRW 060	15 TWR 060
Regulating variable	temperature	temperature	temperature	temperature	temperature	temperature
Suitable for	heaters	fans and heat exchangers	heaters	fans and heat exchangers	fans, heaters	fans, heaters, heat exchangers
Control range	5 °C (fix)	35 °C (fix)	0 to 60 °C	0 to 60 °C	0 to 60 °C	0 to 60 °C
Contact	NC	NO	NC	NO	CO	CO
Hysteresis	10 K	10 K	4 to 7 K	4 to 7 K	4 to 7 K	1 K
Max. switching capacity*	AC: 5 (1,6) A DC: max. 30 W	AC: 5 (1,6) A DC: max. 30 W	AC: 10 (2) A DC: max. 30 W	AC: 10 (2) A DC: max. 30 W	AC: 10 (2) A DC: max. 30 W	AC: 10 (2) A DC: max. 30 W

TEMPERATURE, HUMIDITY AND SPEED CONTROLLERS TECHNICAL DATA



Type	TKW 60	TER 200	THRV 22	ETUH 22	HYW 90	TLR 400
Part number	15 TKW 060	15 TER 200	15 THRV 022	15 ETUH 022	15 HYW 090	15 TLR 400
Regulating variable	temperature	temperature	temperature	temperature, humidity	humidity	speed
Suitable for	fans, heaters	fans, heaters	fans, heaters	heaters, dehumidifiers	heaters, dehumidifiers	fans, heat exchangers
Control range	0 to 60 °C	-100 to +600 °C	0 to 60 °C	0 to 60 °C 20 to 90 % r. F.	40 % to 90 % r. F.	0 to 100 %
Contact	CO	2 CO	1 NO, 1 NC	CO	CO	electrical connection: fans
Hysteresis	3 K	1 bis 50 K	7 K	2 K / 5 % r. F.	5 %	0.5 K
Max. switching capacity*	AC: 10 (2) A DC: max. 30 W	15 A bei 250 V AC	AC: 10 A (1.6 A) DC: max. 30 W	AC: 10 A (250 V) DC: 8 A (30 V)	AC: 2 (0.2) bei 24 V min 100 mA	400 W

PELTIER CONTROLLERS TECHNICAL DATA



Type	TES 60	TRP 205	HPC 100	TPC 300 V2
Part number	15 TES 060	45 TRP 205	45 HPC 100	45 TPC 300V2
Regulating variable	temperature	temperature	humidity	temperature, humidity
Suitable for	thermoelectric coolers, heaters	thermoelectric coolers	dehumidifiers	thermoelectric coolers, dehumidifiers
Control range	0 to +60 °C	heating: 0 to 20 °C cooling: 30 to 50 °C	10 to 90%	0 °C to +60 °C 10 to 90%
Contact	CO	electrical connection: peltier + fans	electrical connection: peltier + fans	electrical connection: peltier + fans
Hysteresis	2 to 3 K	2 K	5 to 20 %	0.5 to 9.5 °C
Max. switching capacity*	16 A at 24 V DC	16 A at 24 V DC	4.5 A at 24 V DC	24 A at 24 V DC

* values in brackets apply to inductive load