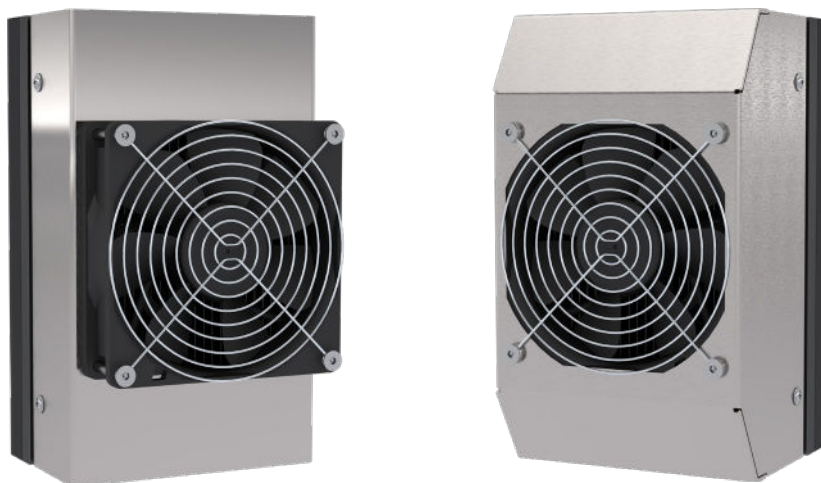


SWITCH CABINET COOLER

Series PROTEMP

PROTEMP 45 S



FEATURES



**Temperatures from
-40°C bis 70°C**



**Indoor, Outdoor &
Offshore- suitable
Protection class IP67**



**Highest power den-
sity with minimal
device-footprint**



**Optimal for all
common enclosure
geometries**

DATA SHEET CONTENT

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YOUR PARTNER FOR THERMOELECTRIC SOLUTIONS

SWITCH CABINET COOLER

Series PROTEMP

PROTEMP 45 S | AA-45S-24-NN4-XXX-DNPT

1 TECHNICAL SPECIFICATION

General data

| | |
|---------------------------------|------------------------------------------------------------------------------------------|
| Dimensions [HxWxD] | 170 x 102 x 146 mm |
| Weight | approx. 1.8 kg |
| Material outer side (Warm-side) | 1.4404-V4A grounded or aluminium in RAL7035 (V4A optionally powder coated in RAL7035) |
| Life expectancy | 40.000 h (L10 lifespan at +60 °C operational temperature) |
| Supply voltage | 24 V |
| Input power | 50 W |
| Noise emission | 50 dB |
| Max. input current | 2.7 A |
| Rated current | 2.1 A |
| Operating temperature range | -40 °C bis +70 °C |
| Storage temperature range | -40 °C bis +70 °C |
| Recommended pre-fuse | TBD |

Cooling and tempering

| | |
|------------------------------|--------------|
| Cooling capacity (L35 / L35) | 45 W |
| Heating operation possible | yes |
| Heating capacity | approx. 68 W |

IP-protection and safety features

| | |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Protection class outer side (warm-side) | IP67 |
| Protection class inner side (cold-side) | IP20 (inner fans with protection class IP55) |
| Temperature switch, warm-side | Bimetal switch NC, 250 V-AC 5A, 24V-DC 10A The Alarm can be configured as safety shut-off or as fault message |
| Switch-point temperature switch | +90 °C |

2 VARIANTS AND ORDER CODES

PROTEMP 45 S | Cabinet cooler

| Variant | Item # | Device-Code | Description |
|---------------|--------|------------------------|------------------------------------------------|
| COMPACT - RAL | 006506 | AA-45S-24-NN4-SCR-DNPT | Small footprint for optimal integration |
| OUTDOOR - V4A | 006507 | AA-45S-24-NN4-SOV-DNPT | Robust V4A-outer hood |
| OUTDOOR - RAL | 006508 | AA-45S-24-NN4-SOR-DNPT | Robust outer hood powder-coated in RAL7035 |
| OUTDOOR - V4A | 006985 | AA-45S-24-NN4-SSV-DNPT | Robust V4A-outer hood, resistent to salt spray |

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3 CONNECTOR ASSIGNMENT

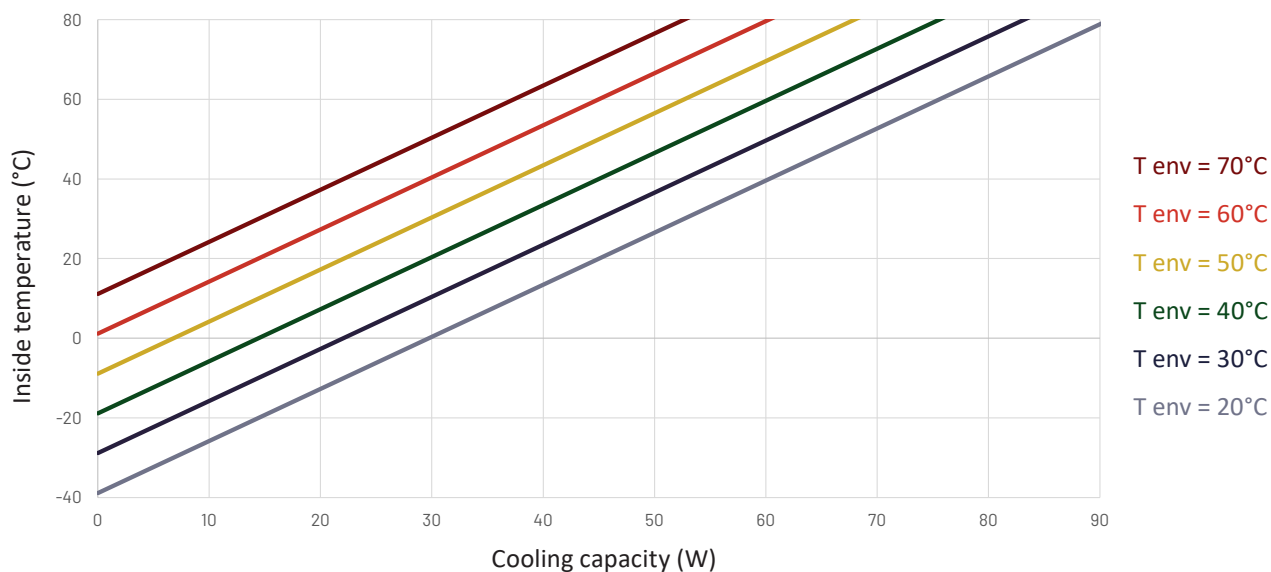
OVERVIEW

| Terminal | Terminal assignment |
|----------|---------------------|
| 1 | Peltier + |
| 2 | Outer fans + |
| 3 | Inner fans + |
| 4 | Peltier - |
| 5 | Outer fans - |
| 6 | Inner fans - |
| 7 | Alarm |
| 8 | Alarm |

- 1 Peltier (+)
- 2 Außenlüfter (+)
- 3 Innenlüfter (+)
- 4 Peltier (-)
- 5 Außenlüfter (-)
- 6 Innenlüfter (-)
- 7 Thermostat (11)
- 8 Thermostat (12)

The maximum wire diameter is 1.5 mm² when bridged and 2.5 mm² without bridge.

4 PERFORMANCE DIAGRAM



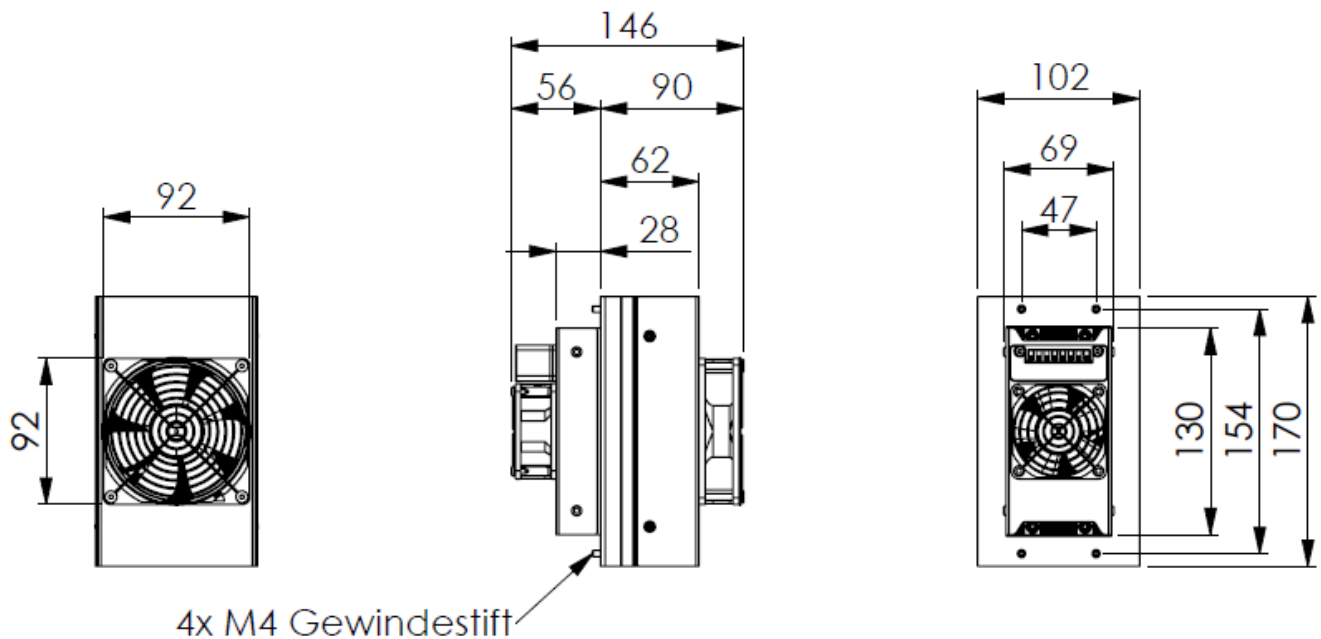
SWITCH CABINET COOLER

Series PROTEMP

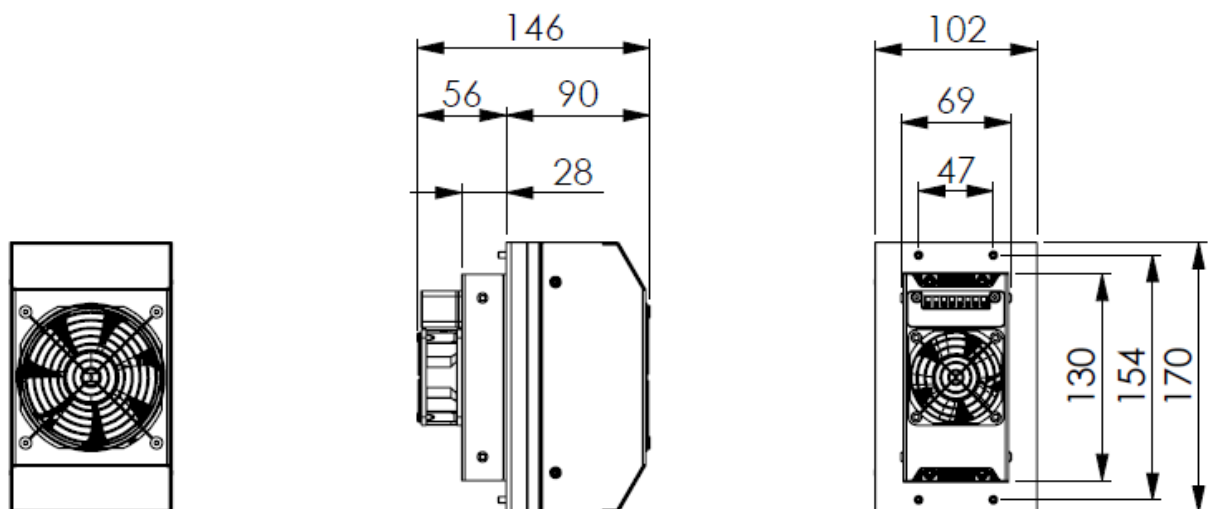
PROTEMP 45 S | AA-45S-24-NN4-XXX-DNPT

5 DIMENSIONS

MAIN DIMENSIONS VARIANT COMPACT



MAIN DIMENSIONS VARIANT OUTDOOR



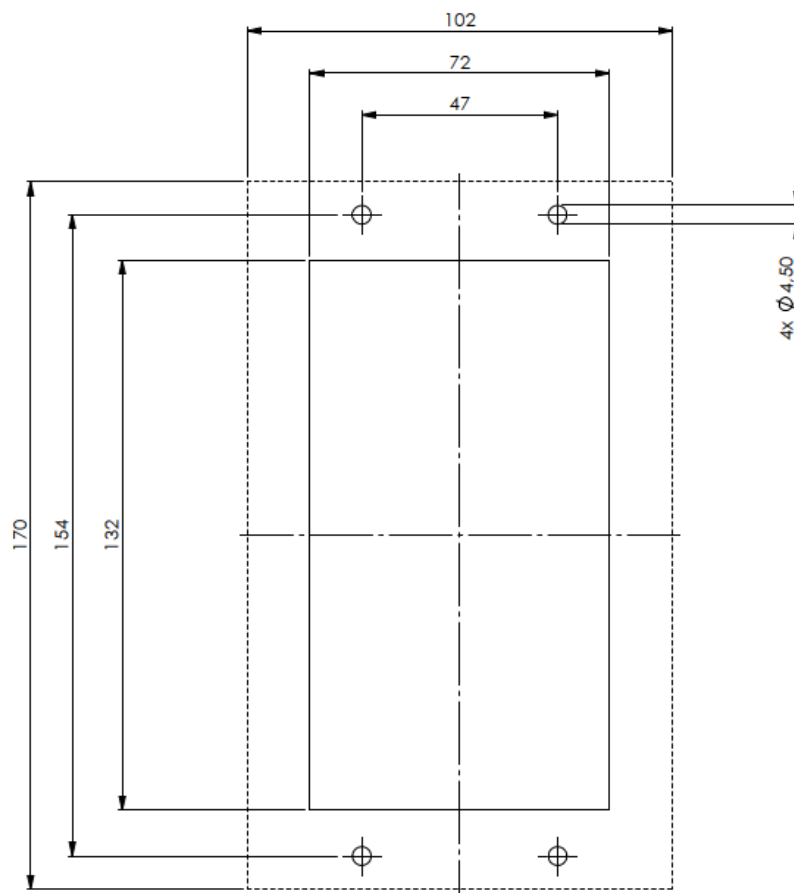
SWITCH CABINET COOLER

Series PROTEMP

PROTEMP 45 S | AA-45S-24-NN4-XXX-DNPT

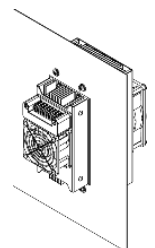
5 DIMENSIONS

CUT-OUT



NOTES ON INSTALLATION

In principle, the position and mounting orientation of the device are freely selectable. However, when installing the device in a side or rear wall or in the door of the switch cabinet, it is recommended to align the device in such a way that the connection terminals are located at the top. Please also refer to the installation instructions in the operating manual.



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6 ACCESSORIES



Power supply - 006046

DIN rail power supply NDR-75-24
Manufacturer: MeanWell

Compact DIN rail power supply unit
for a reliable power supply to the
Peltier housing cooler



Power supply - 003464

Screw mount power supply
HLG-60H-24
Manufacturer: MeanWell

Sealed LED power supply unit with
high IP protection, which is also
suitable for outdoor installation.



Peltier control - 11

Compact Peltier controller SCC-
003-A for top-hat rail mounting.
Enables heating and cooling opera-
tion of the devices via an integrated
H-bridge.



Thermostat - 004815

Compact top-hat rail thermostat for
simple control of the Peltier cooler
for use in cooling mode.



Stacking frame - 006071

The stacking frame prevents the
device from protruding into the
housing.
Ideal for applications where space is
particularly limited.



Condensate drainage - 005919

The condensate drainage channel
reliably collects condensate on the
cold side and prevents corrosion
and damage to the housing.



Condensate drainage - 005795

KAE-36 drainage element for the
safe removal of condensate from
the housing.
IP68 protected and therefore suita-
ble for outdoor areas.
Mounted on the base of the enco-
sure.



Condensate drainage - 005806

KAE-36-VENT Drainage element with
integrated pressure equalization for
safe drainage of condensate from
the enclosure - IP68 protected.
Mounted on the base of the enco-
sure.



Condensate drainage - 005570

KAE-4 drainage element for the safe
removal of condensate from the
housing.
IP68 protected.
Space-saving installation from the
inside.
Drainage via side housing wall.



Condensate drainage - 005822

KAE-4-VENT drainage element for
safe drainage of condensate from
the housing with integrated pres-
sure equalization & IP68 protection
Space-saving installation from the
inside.
Drainage via side housing wall.

SWITCH CABINET COOLER

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7 CERTIFICATES AND NOTES

CERTIFICATES



NOTES

For the product „DR.NEUMANN Peltier-switch cabinet cooler PROTEMP 45 S “ the CE label is issued on the basis of the Directive 2014/30/EU of the Council of the European Community of 26 February 2014 on the approximation of the laws of the Member States relating to communication equipment, including the mutual recognition of their conformity.

The product „DR.NEUMANN Peltier-switch cabinet cooler PROTEMP 45 S“ as described here meets the requirements for CE labeling:

Interference immunity according to EN 50082-2

Electromagnetic compatibility generic standards interference immunity

Radio interference suppression according to EN 55022 Class A

Electromagnetic compatibility of information processing and telecommunications equipment

Electrical safety according to EN 60950

Safety of information technology equipment including electrical office machines

This device is intended for use in industrial environments. The interference immunity and interference emission comply with the guidelines for industrial equipment. When used in residential and business areas, interference with other devices (e.g. radio) may occur under certain circumstances. The operator must independently ensure that no third party is affected by possible interference.

This declaration is made responsibly for the manufacturer

DR. NEUMANN Peltier-Technik GmbH

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