

PROTEMP 45 S



FEATURES



Temperatures from
-40°C to +70°C



Indoor, Outdoor &
Offshore suitable
Protection class IP67



Highest power den-
sity with minimal
device-footprint



Optimal for all
common enclosure
geometries

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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	55 dB (measuring 1 m, maximum fan performance when used as intended with nominal voltage)
Max. input current	2.7 A
Rated current	2.1 A
Operating temperature range	-40 °C to +70 °C
Storage temperature range	-40 °C to +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, resistant to salt spray

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3 CONNECTOR ASSIGNMENT

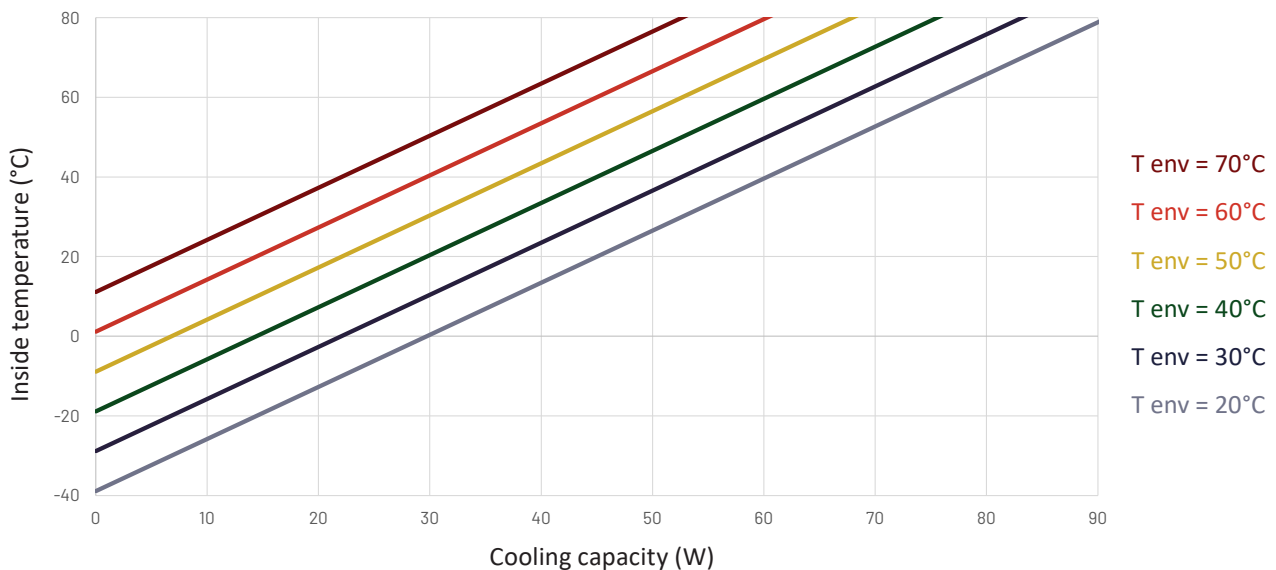
OVERVIEW

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

Connectors up to 1.5 mm² with Cage-Clamp technology

Note: The terminal features Cage-Clamp technology. Connectors can therefore be used without ferrules up to 1.5 mm².

4 PERFORMANCE DIAGRAM



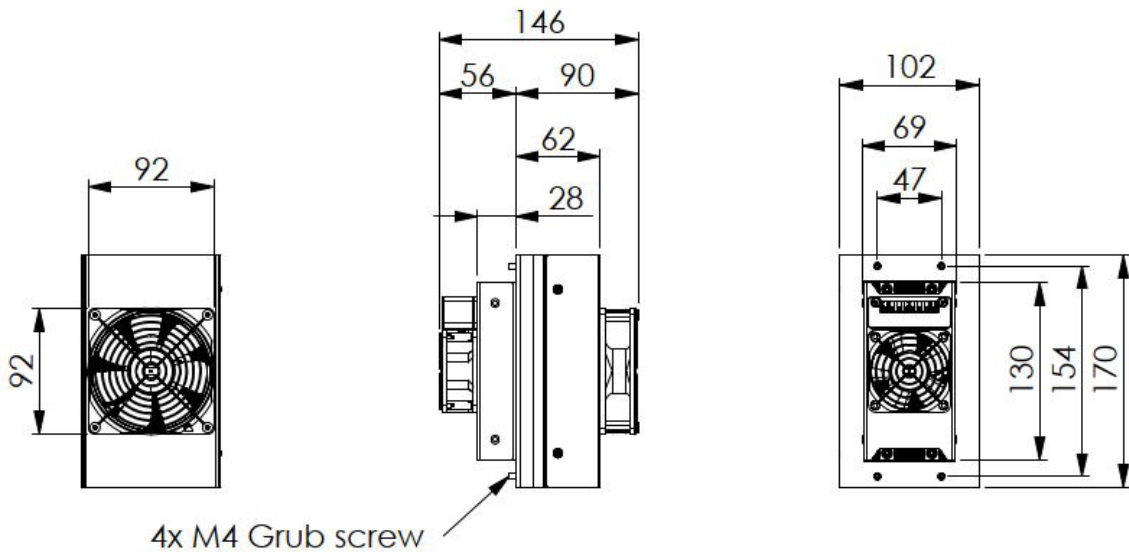
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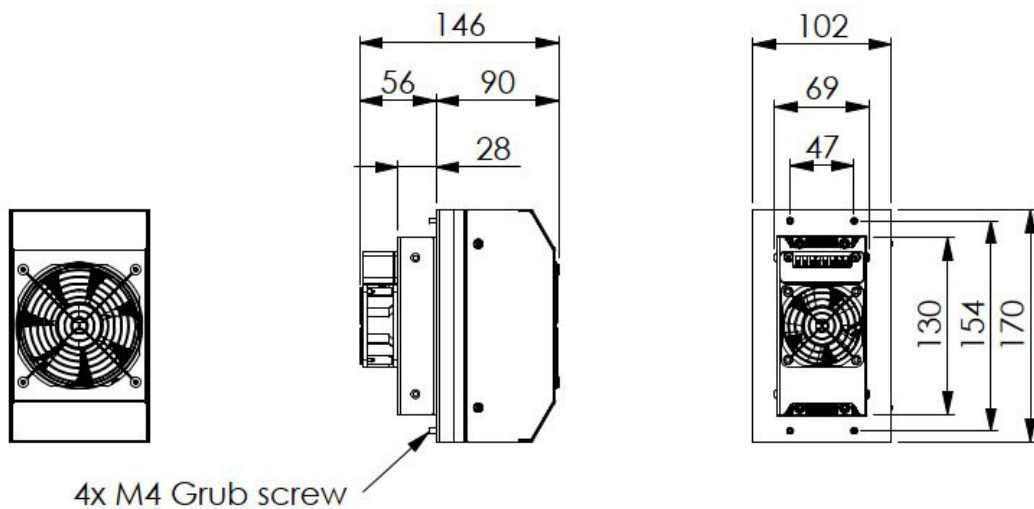
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5 DIMENSIONS

MAIN DIMENSIONS VARIANT COMPACT



MAIN DIMENSIONS VARIANT OUTDOOR



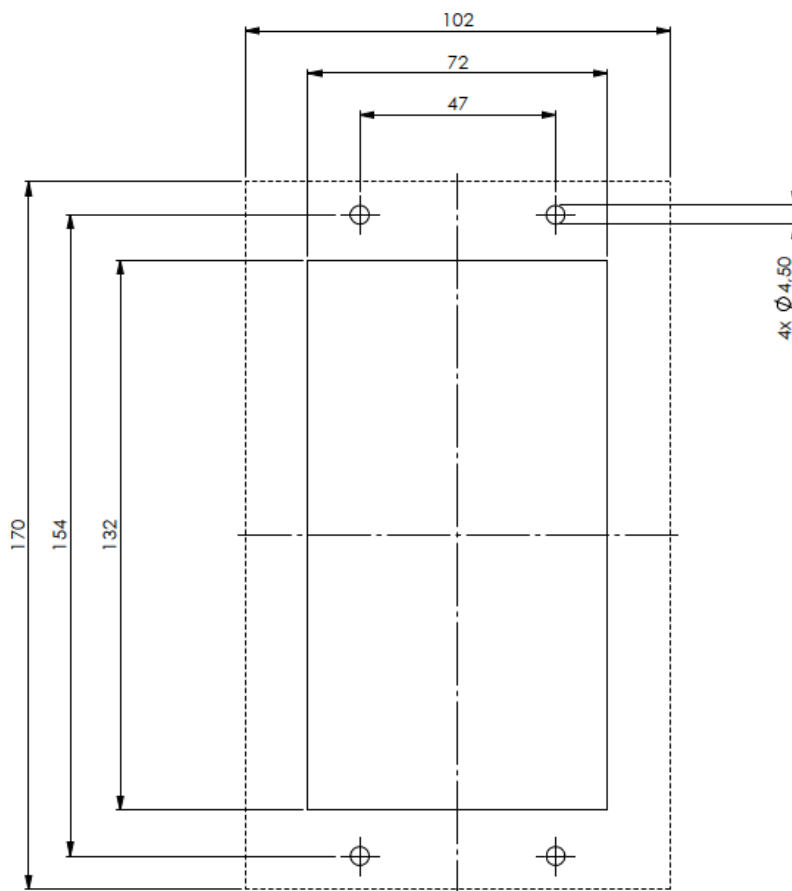
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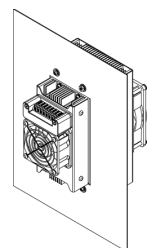
5 DIMENSIONS

CUT-OUT



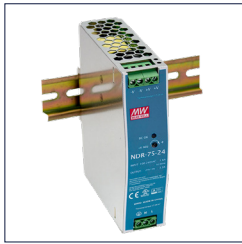
NOTES ON INSTALLATION

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 operation of the devices via an integrated H-bridge.



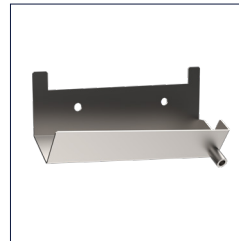
Thermostat - 004815

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 suitable for outdoor areas. Mounted on the base of the enclosure.



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 enclosure.



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 pressure equalization & IP68 protection. Space-saving installation from the inside. Drainage via side housing wall.

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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

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