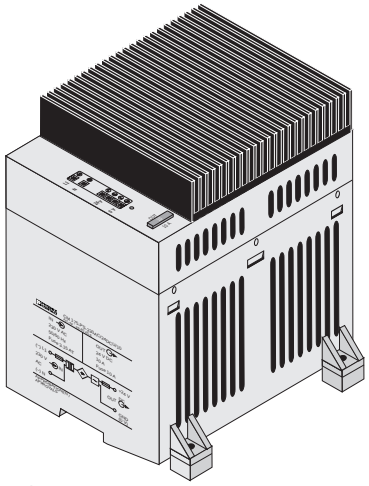
Non-Regulated Compact Power Supply CM 175-PS-…/24 DCU/10



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dnr. 1977 TNR 9220904-09.96

ENGLISH

1. Application Field

The CM-175-PS-... non-regulated compact power supplies are suitable for supplying control components. The advantage of the design in accordance with DIN 19240 is the low ripple factor of the output voltage (5%).

To increase the power output, the outputs of the devices may be connected in parallel:
The maximum permissible load is then 80 % of the total load, i. e. 0.8 x (P1 + P2).

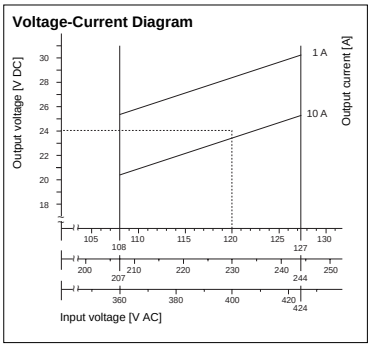


Fig. 1

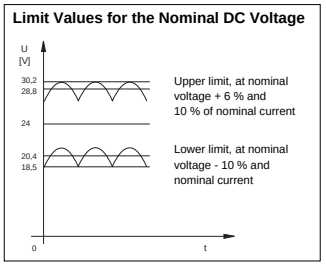


Fig. 2

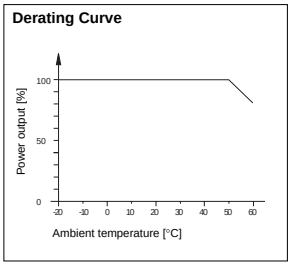


Fig. 3

2. Standards

The device is designed for primary voltage in accordance with IEC 38.

The device meets the requirements for power supplies used for electronic controls in accordance with DIN 19240 (see Fig. 2).

Protective separation between input and output in accordance with DIN 0106 part 101, referring to VDE 0160, is ensured.

The CM 175-PS-... power supplies have been shock-tested in accordance with IEC 68, parts 2-27.

Permissible shock load

- for panel installation on mounting rails (see 3.1.): 10 g / 25 ms.
- for panel installation with screws (see 3.2.): 30 g / 18 ms.

3. Connection Notes

Please be aware of the weight of the compact power supplies!

Should the device fall down during installation or operation, this may cause considerable injuries or damage!

If shocks and vibration are to be expected during the transportation of the switch cabinet, it is recommended to install the device as described in 3.2!

When **installing modules in row,** observe a **minimum spacing of 10 mm!**

3.1. Panel Installation on Mounting Rails

The power supply snaps onto an unperforated mounting rail EN 50022-35x15.
At the future location of the power supply, mount the rail to the panel **with three screws spaced 10 cm apart** (to the left, to the right, and under the device)
(see drill template, last page).

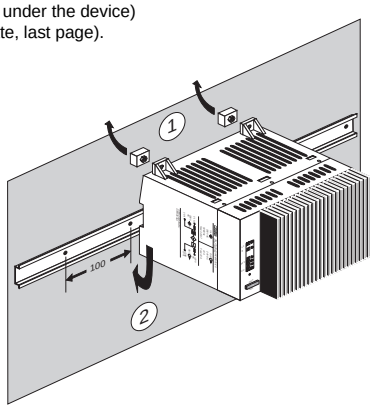


Fig. 4

Before mounting the module to the rail, **please remove the spacers** by hand from the three device holders ①.

Spring catches (orange) on the underside of the module:

- Unlocked position
- Locked position

Fig. 5

Mounting (Fig.6): Place the orange spring catches in the unlocked position using a screwdriver (see also Fig. 7).

Hook in the device with the mounting rail guide on the top edge of the mounting rail and lock it downwards into position ② (Fig. 4 and Fig.6) - Lock the spring catches with light pressure on them.

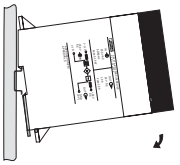


Fig. 6

Check whether the device is firmly seated on the mounting rail!

Dismounting (Fig.7): Place the orange spring catches in the unlocked position.

As soon as the spring catches have engaged in the dismount position, the device may be lifted to disengage it from the mounting rail.

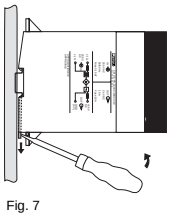


Fig. 7

3.2. Panel Installation with Screws

Fasten the device **with three M4 screws to the switch cabinet panel** in accordance with the drill template.

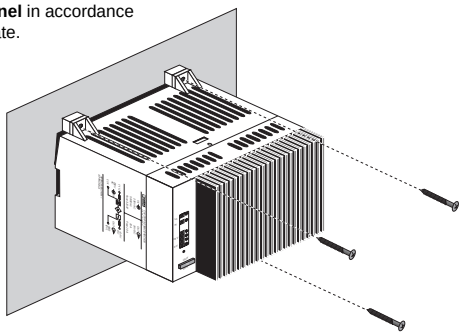


Fig. 8

Caution: Danger! Never install the devices with live voltage!

3.3. Connecting Terminals

The connecting cables are connected as shown in Figure 9, with screw-clamp terminals identified accordingly.

When the power supply operates properly, the status is indicated by a yellow LED in the secondary circuit.

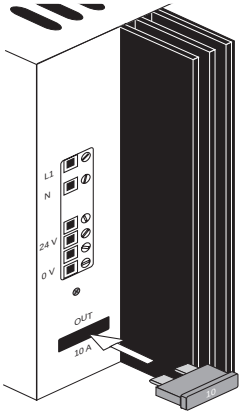


Fig. 9

3.4. Fuses

The input fuse (IN) is not accessible from outside.

The output fuse (OUT) is accessible from the housing front and is easy to replace (Figure 9):
It may only be replaced with a fuse as specified in the technical data or on the data sheet!

3.5. Connecting Cables

Cables with a conductor cross section of 1.0 mm^2 to 2.5 mm^2 may be employed.

The conductor terminations must be stripped over a length of 8 mm and, if flexible cables are used, be equipped with conductor sleeves (see Figure 10) to ensure a reliable and shock-hazard protected contact.

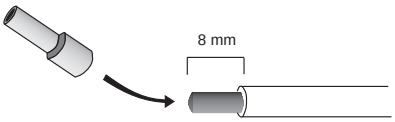
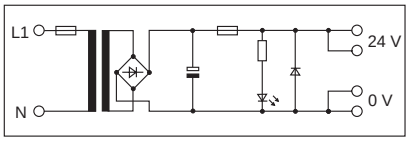


Fig. 10

4. Technical Data

4.1. Block Diagram

Input voltage: 120/230 V AC



Input voltage: 400 V AC

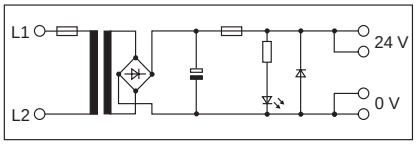


Fig. 11

4.2. Dimensions

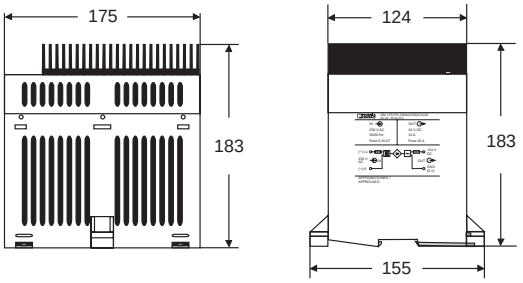


Fig. 12

4.3. Data Sheet

	CM 175-PS-		
	120 AC...	**230 AC...**	**400 AC...**
Order number	29 40 44 3	29 40 45 6	29 40 46 9
Input			
Input voltage + 6% –10%	120 V AC	230 V AC	400 V AC
Input current	Approx. 3.0 A	Approx. 1.6 A	Approx. 0.95 A
Inrush current (ohmic load)	15 x I_N	15 x I_N	15 x I_N
Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Power consumption	Approx. 370 VA	Approx. 370 VA	Approx. 380 VA
Efficiency	≥ 0.80	≥ 0.80	≥ 0.80
Input fuse	7 AT	3,15 AT	2.5 AM/500 V
	UL198G	DIN 41662	
	6.3 x 32	5 x 20	6.3 x 32
	Inside	Inside	Inside

Output	
Output voltage (acc. to DIN 19240)	24 V DC (see UI diagram, page 9)
Output current	10 A
Mains buffering	10 ms
Ripple factor	< 5 %
Output fuse	10 A - blade-type fuse According to DIN 72581 part III C
Output protection circuit	Varistor, damping diode
General Data	
Test voltage input/output	4 kV, 50 Hz, 1 min.
Ambient temperature range	-20 °C to + 60 °C
Rated duty	100 % (c.d.f.)
Regulations	IEC 664/IEC 664A/DIN VDE 0110 (01.89) DIN VDE 0551 (transformer) VDE 0106, part 101 (11.86) DIN VDE 0160 (12.90), draft DIN 19240 (output voltage at load current ≥ 1A) UL 1012 — —
Type of connection	Screw-clamp terminals
Installation position	Ventilation slots at top and bottom
Mounting	On horizontal mounting rail NS35/15 unperforated, or wall mounting with screws; can be installed in a row with a spacing of > 10 mm
Degree of protection according to IEC 529/DIN 40050	IP 20
Weight	Approx. 6.6 kg
Dimensions (W/H/D)	(175 / 155 / 183) mm

5. Bohrschablone / Drilling Template