PMG 500-S – Fast-Switching Rectifier



Application:

Rectifier for operating electromagnetic brakes and electromagnets

This rectifier is particularly suitable for operating electromagnetic brakes.

Function:

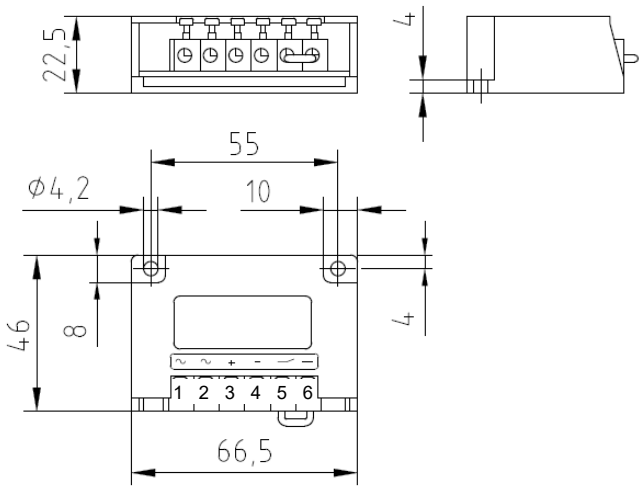
The rectifier switches from a bridge rectifier to a half-wave rectifier after the boost period.

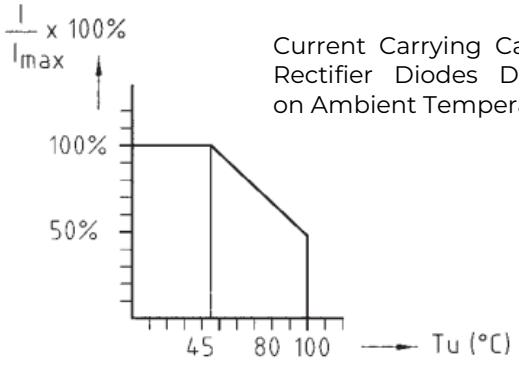
Application areas of the Fast-Switching Rectifier:

- **Boost Voltage Operation (up to 400% of Nominal Power)**
  Example: Brake voltage: 180 VDC, supply voltage: 400 VAC. The brake is released for 800 ms at 360 VDC, then held at 180 VDC.
  - Enables the release of brakes with high braking torque
  - Increases the wear reserve of the brake system
  - Shortens brake release times

- **Power Reduction Mode (down to 25% of Nominal Power)**
  Example: Brake voltage: 360 VDC, supply voltage: 400 VAC. The brake is released for 800 ms at 360 VDC, then held at 180 VDC.
  - Suitable for temperature-sensitive applications
  - Reduces the brake engagement time
  - Lowers energy consumption

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Current Carrying Capacity of Rectifier Diodes Depending on Ambient Temperature

Electrical Connection (Terminals)

1, 2 – Input voltage [VAC]
3, 4 – Brake coil [VDC]
5, 6 – Switching on AC side
(Switch bypassed)

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Rev. 1
03/2026

Technical Data

		PMG 500-S
Maximum input voltage (+10%)	VAC	U_1 = 215 - 500
Output voltage	VDC	U_2 = 0,9 x U_1 / U_3 = 0,45 x U_1
Max. output current (boost / holding)	A	4 / 2
Min. output current (boost / holding)	A	0,02 / 0,01
Boost time	ms	800 ±240
Pause time	ms	150
Terminal cross-section	mm²	0,34 – 2,5
Ambient temperature	°C	-25 to +80
Certification marks		CE
Article number		44698

Safety

Meaning of Safety and Warning Symbols

Danger Indicates a risk of fatal injury due to electric shock.

Warning Indicates a potential risk of fatal injury.

Validity

- The information provided in the technical documentation, as well as any application-specific advice, is given to the best of our knowledge and based on our understanding of the application. This also applies regarding potential infringement of third-party intellectual property rights.

Responsibility of the User

The use and application of our devices in end products are be yond our control and are therefore solely the responsibility of the user.

Qualification

- Installation, commissioning, and maintenance must only be carried out by qualified personnel (in accordance with IEC 364 or VDE 0100).

- The power supply must be disconnected before installing or servicing the device.

Design modifications reserved. Please check the ordering data before placing an order.

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