

Dimension sheet for ROBA®-brake-checker plus DC Type 028.100.2

(M.0281002.EN)

Application


ROBA®-brake-checker monitoring modules are used to operate DC consumers.

Motion monitoring of the armature disk for released ROBA-stop® safety brakes is possible.

Monitoring module ROBA®-brake-checker 028.100.2

- Consumer operation with overexcitation and/or power reduction
- Controlled output voltage (on reduction)
- Simple adjustment of holding voltage and overexcitation time via a DIP switch
- Fast or slow switch off
- Armature disk condition recognition (release and drop-out recognition)
- Wear recognition and error recognition
- Wide input voltage range
- Maximum output current $I_{RMS} = 10 \text{ A} / 5 \text{ A}$
- Maximum overexcitation current $I_o = 20 \text{ A} / 10 \text{ A}$
- Automatic reduction to holding voltage U_H
- Electrical isolation of power terminal and control terminal

CAUTION



The ROBA®-brake-checker with integrated DC-side disconnection is not suitable for being the only safety disconnection in applications!

Function

The ROBA®-brake-checker monitoring module is intended for use with an input voltage of 24 or 48 VDC. The module monitors the movement of the armature disk and emits the determined switching condition via control terminal 3 (signal output).

Critical conditions (line breakages, wear) can be recognised and the respective signal can be emitted via control terminal 7 (error output).

After a brake-specific overexcitation time period, the integrated voltage reduction mechanism mode adjusts to the pre-set reduction voltage. The automatic voltage reduction mode can be switched off using a DIP switch.

In case of switched-off automatic voltage reduction mechanism, the overexcitation time can be adjusted manually to 150 ms, 450 ms, 1 s, 1.5 s, and 2 s using the DIP switch.

Electrical Connection (Terminals)

Power terminal

- 1 Supply voltage +24 VDC / +48 VDC
- 2 Output voltage +
- 3 Output voltage -
- 4 Supply voltage 0 VDC

Signal Terminal

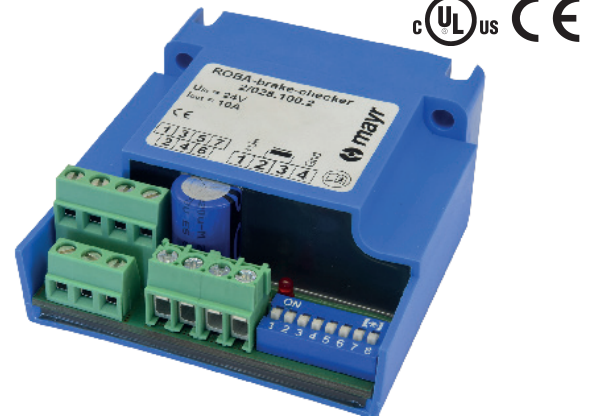
- 1 Supply voltage 0 VDC
- 2 Switch-off fast/slow (input)
- 3 Signal output (release monitoring)
- 4 24 V (auxiliary power supply for bridging)
- 5 Supply voltage +24 VDC
- 6 Start (input)
- 7 Error output max. 300 mA

Technical Data

Input voltage see Table 1
 Output voltage see Table 1
 Protection IP65 components, IP20 terminals, IP20 DIP switch

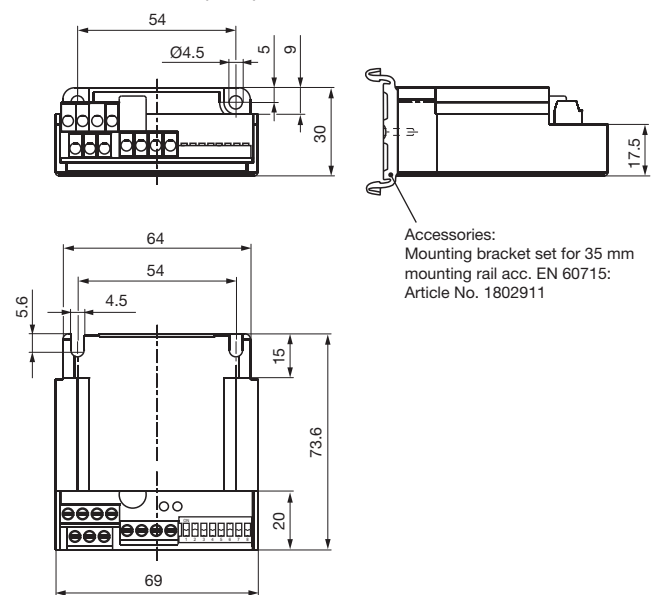
Terminal nominal cross-section





Power terminals 4 mm², (AWG 20-12)
 Signal terminals 1.5 mm², (AWG 30-14)
 Ambient temperature -25 °C up to +70 °C
 Storage temperature -40 °C up to +105 °C



The UL information applies only when the UL mark is printed onto the product label.

Dimensions (mm)



Technical Data		Size	
		2 24 VDC	4 48 VDC
Input voltage, power terminal	SELV/PELV U_1 [VDC]	18 – 30	42 – 54
Input voltage, signal terminal	U_1 [VDC]	24 (19 – 28)	
Output voltage	$\pm 5\%$ U_o [VDC]	Input voltage U_1	
	$\pm 5\%$ U_H [VDC]	4, 6, 8, 12, 16	8, 12, 16, 24, 32
Output current	at $\leq 45^\circ\text{C}$ I_{RMS} [A]	10.0	5.0
	 at $\leq 60^\circ\text{C}$ I_{RMS} [A]	5.0	2.5
	 at $\leq 70^\circ\text{C}$ I_{RMS} [A]	5.0	2.5
Protection		IP20	
Conformity markings		 	

Order Number

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Size
2
4