

Dimension sheet for ROBA®-switch Type 017.110.2

(M.0171102.EN)

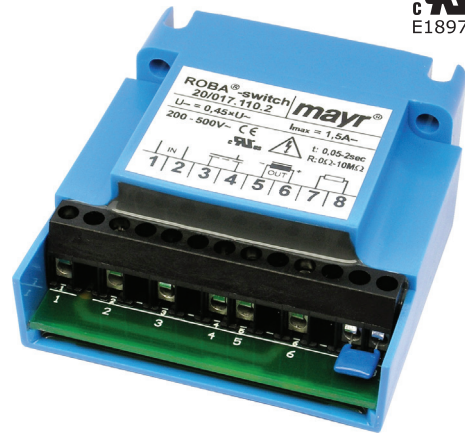


Application

ROBA®-switch fast acting rectifiers are used to connect DC consumers to alternating voltage supplies, for example electromagnetic brakes and clutches (ROBA-stop®, ROBA®-quick, ROBATIC®) as well as electromagnets, electrovalves, etc.

Fast acting rectifier ROBA®-switch 017.110.2

- Integrated DC-side disconnection (shorter connection time t_1)
- Consumer operation with overexcitation or power reduction
- Input voltage: 100 – 500 VAC
- Maximum output current I_{RMS} : 1.5 A
- UL-approved



CAUTION



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

Function

The ROBA®-switch is used for operation at an input voltage of between 100 and 500 VAC, depending on the size. It can switch internally from bridge rectification output voltage to half-wave rectification output voltage. The bridge rectification time can be modified from 0.05 to 2 seconds by exchanging the external resistor (R_{ext}).

In addition, the ROBA®-switch features integrated DC-side disconnection. In contrast to the usual DC-side disconnection, no further protective measures or external components are required. The DC-side disconnection is activated as a standard measure (terminals 3 and 4 are not wired) and causes short switching times on the electromagnetic consumer.

The integrated DC-side disconnection is deactivated by fitting a bridge between the terminals 3 and 4, and the coil is deenergised via the freewheeling diode. This has the advantages of gentler braking actions and quieter switching noise. However, this substantially lengthens the switching times (approx. 6 – 10x).

Electrical Connection (Terminals)

- 1 + 2 Input voltage (fitted protective varistor)
- 3 + 4 Switching between DC and AC-side disconnection
- 5 + 6 Output voltage (fitted protective varistor)
- 7 + 8 R_{ext} for bridge rectification time adjustment

Technical Data

Input voltage	see Table 1
Output voltage	see Table 1
Protection	IP65 components, IP20 terminals, IP10 R_{ext}
Terminal nominal cross-section	1.5 mm ² (AWG 22-14)
Ambient temperature	-25 °C up to +70 °C
Storage temperature	-40 °C up to +70 °C

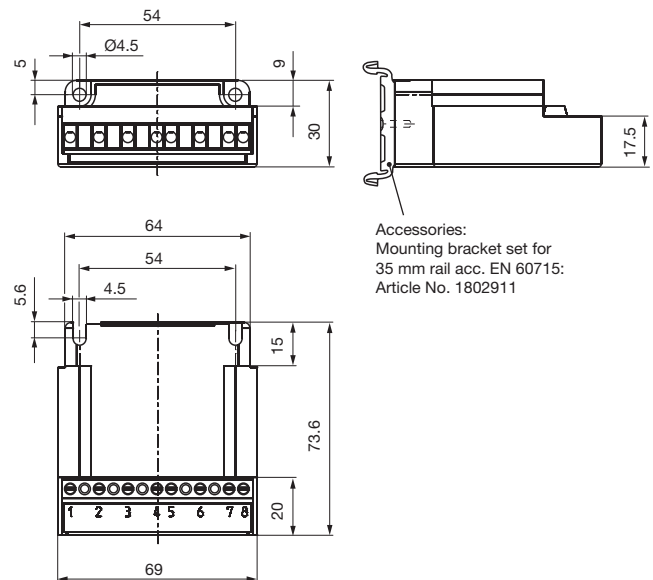
Order Number

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Sizes
10
20

Dimensions (mm)



ROBA®-switch Sizes, Table 1

			Sizes	
			10	20
Input voltage $\pm 10\%$	U_{AC} [VAC]	100 – 250	200 – 500	
Output voltage	U_{bridge} [VDC]	90 – 225	180 – 450	
	$U_{half-wave}$ [VDC]	45 – 113	90 – 225	
Output current	at $\leq 45\text{ °C}$ I_{RMS} [A]	1.5	1.5	
	at max. 70 °C I_{RMS} [A]	0.75	0.75	
Conformity markings				