## **Application**

ROBA®-switch 24V fast switching modules are used to operate DC consumers with overexcitation or power reduction, for example electromagnetic brakes and clutches (ROBA-stop®, ROBA®-quick, ROBATIC®), electromagnets, electrovalves, etc.

#### Fast acting rectifier ROBA®-switch 24V 018.100.2

- · Consumer operation with overexcitation or power reduction
- Integrated DC-side disconnection (shorter connection time t<sub>s</sub>)
- Input voltage: 24 VDC
- Max. output current I<sub>RMS</sub>: 5 A
- UL-approved



The ROBA®-switch 24V with integrated DC-side disconnection is not suitable for being the only safety disconnection in applications!

# **Function**

The ROBA®-switch 24V units are used for an input voltage of 24 VDC. They can switch internally, meaning that the output voltage switches to holding voltage from the input voltage (=overexcitation voltage) via pulse-width modulation using 20 kHz. The overexcitation time can be adjusted via a DIP switch to 150 ms, 450 ms, 1 s, 1,5 s and 2,15 s. The holding voltage can be adjusted via a further DIP switch to 1/4, 1/3, 1/2 and 2/3 of the input voltage (equals 6 V, 8 V, 12 V and 16 V at an input voltage of 24 V).

Apart from this, the ROBA®-switch 24V has an 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 in standard mode and causes short switching times on the electromagnetic consumer. This can, however, be deactivated by installing a bridge between terminals 7 and 8 in order to produce soft brakings and quieter switching noises. However, this substantially lengthens the switching times (approx. 6 - 10 x).

## **Electrical connection** (Terminals)

2 + 3Input voltage, ground

4 Control input

5 – 7 Input voltage +24 VDC

Output voltage +

Output voltage -

#### **Technical Data**

Input voltage U

Output voltage U<sub>over</sub>

Output voltage U<sub>hold</sub>

Output current I<sub>RMS</sub> at ≤ 45 °C 5,0 A Output current I at max 70 °C

Protection

Terminal nominal cross-section Ambient temperature

Storage temperature

24 VDC + 20 % / - 10 %

SELV/PELV

Input voltage U

 $\frac{1}{4}$ ,  $\frac{1}{3}$ ,  $\frac{1}{2}$ ,  $\frac{2}{3}$  x U<sub>1</sub> ± 20 %

2,5 A IP00

1,5 mm<sup>2</sup> (AWG 22-14)

-25 °C up to +70 °C

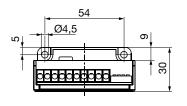
-40 °C up to +105 °C

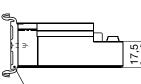
## **Order Number**

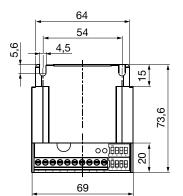




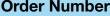
# **Dimensions** (mm)







Accessories: Mounting bracket set for 35 mm rail acc. EN 60715: Article No. 1802911



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