

## ROBA<sup>®</sup>-brake-checker DC / Type 058.600.2

### Application

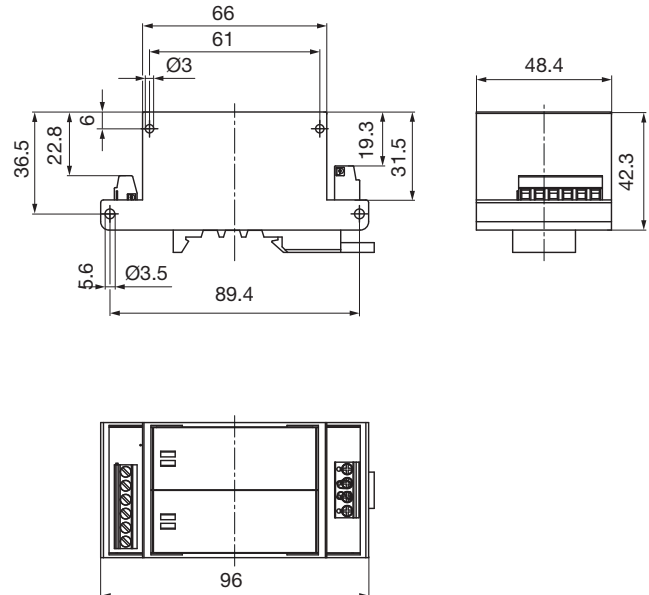
ROBA<sup>®</sup>-brake-checker DC monitoring modules are used to supply permitted ROBA<sup>®</sup>-stop safety brakes. Motion monitoring of the armature disk for released ROBA-stop<sup>®</sup> safety brakes is possible.

#### Monitoring module ROBA<sup>®</sup>-brake-checker DC

- Fast or slow disconnection
- Preventative function monitoring (wear recognition and error recognition, functional reserve)
- Armature disk motion recognition (release and drop-out recognition)
- Continuous drop-out recognition
- Maximum output current  $I_{RMS} = 10\text{ A}$
- Safe monitoring of the switching times (optional)
- Electrical isolation on the output channels



### Dimensions (mm)



### Function

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

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

Technical Data			Size 2
Supply voltage Control terminal	$U_I$	[VDC]	24 (SELV/PELV) (18 – 32)
Coil current	maximum	$I_{max}$	[A] 15
	at $\leq 45\text{ °C}$	$I_{RMS}$	[A] 10
	at $\leq 60\text{ °C}$	$I_{RMS}$	[A] 8
	at $\leq 70\text{ °C}$	$I_{RMS}$	[A] 8
Coil voltage maximum	$U_{max}$	[VDC]	50
Conformity markings			
Protection			IP20

### Order Number

— / 0 5 8 . 6 0 0 . 2  
▲  
2

## ROBA®-brake-checker AC / Type 059.500.2

### Application

ROBA®-brake-checker plus AC monitoring modules are used to supply permitted ROBA®-stop safety brakes. Motion monitoring of the armature disk for released ROBA®-stop safety brakes is possible.



### Monitoring module ROBA®-brake-checker AC

- Sensorless and contactless detection of switching statuses
- Preventative function monitoring (wear recognition and error recognition, functional reserve)
- Brake condition recognition (release and drop-out recognition of the armature disk)
- Continuous drop-out recognition
- Simple installation or retrofitting
- Electrical isolation on the output channels
- Maximum current  $I_{\max} = 3.5 \text{ A}$

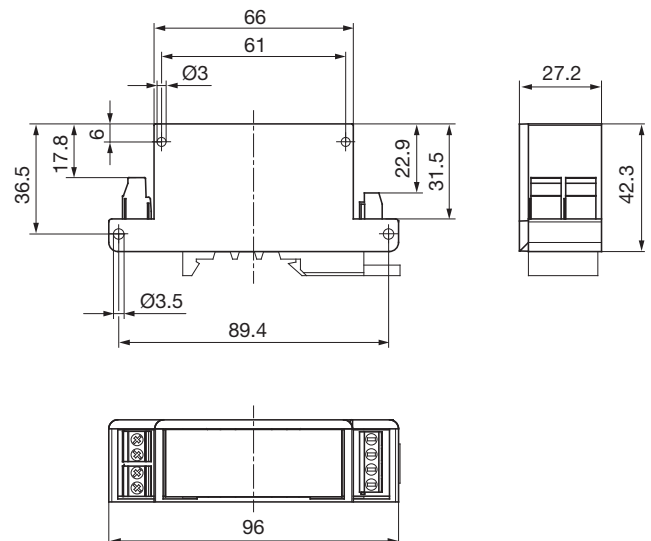


### Function

The ROBA®-brake-checker AC monitoring module is designed for the connection to half-wave or bridge rectifiers or to fast acting rectifiers based on half-wave or bridge rectification which are supplied with alternating voltage (50/60 Hz).

The module is switched between the rectifier and the brake and it monitors the movement of the armature disk. The determined switching condition is emitted via control terminal 3 (output signal). Critical conditions (line breakages, wear) can be recognised and the respective signal can be emitted via control terminal 4 (output error).

### Dimensions (mm)



Technical data			Size 20	
Supply voltage	$U_i$	[VDC]	24 (SELV/PELV)	
Control terminal			(19 – 28)	
Coil current	max.	$I_{\max}$	[A]	3.5
	at $\leq 45 \text{ °C}$	$I_{\text{RMS}}$	[A]	3.5
	at $\leq 70 \text{ °C}$	$I_{\text{RMS}}$	[A]	3
Conformity markings			cUL US CE	
Protection			IP20	

### Order Number

— / 0 5 9 . 5 0 0 . 2

▲  
Size  
20

# ROBA®-brake-checker plus DC / Type 028.100.2

## Application

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

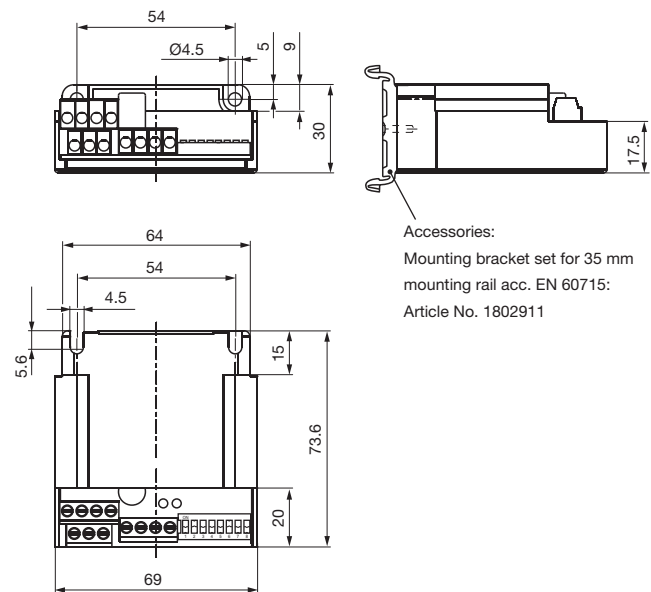
Motion monitoring of the armature disk for released ROBA-stop® safety brakes is possible.

### 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 disconnection
- 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



## Dimensions (mm)



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

### 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 plus DC monitoring and supply 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 voltage reduction mechanism mode can be switched off using a DIP switch.

In case of switched-off voltage reduction mechanism mode, 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 mm<sup>2</sup>, (AWG 20-12)  
Signal terminals 1.5 mm<sup>2</sup>, (AWG 30-14)  
Ambient temperature -25 °C up to +70 °C  
Storage temperature -40 °C up to +105 °C

ROBA®-brake-checker Sizes, Table 1

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

## Order Number

— / 0 2 8 . 1 0 0 . 2



Size  
2  
4

# ROBA®-brake-checker plus DC / Type 028.600.2

## Application

ROBA®-brake-checker plus DC monitoring and supply modules are used to supply permitted ROBA®-stop safety brakes. Motion monitoring of the armature disk for released ROBA-stop® safety brakes is possible.



### Monitoring module ROBA®-brake-checker DC

- Consumer operation with overexcitation and/or power reduction
- Controlled output voltage (on reduction)
- Automatic reduction to holding voltage  $U_H$
- Fast or slow disconnection
- Preventative function monitoring (wear recognition and error recognition, functional reserve)
- Armature disk motion recognition (release and drop-out recognition)
- Continuous drop-out recognition
- Maximum output current  $I_{RMS} = 5\text{ A}$
- Maximum overexcitation current  $I_o = 16\text{ A}$
- Safe monitoring of the switching times (optional)



### CAUTION



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

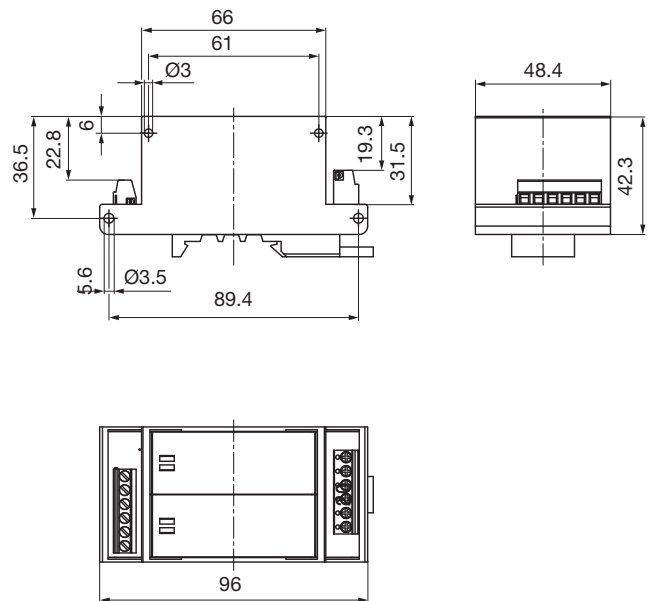
## Function

The ROBA®-brake-checker plus DC monitoring and supply module is intended for use with an input voltage of 24 VDC. The monitoring module monitors the movement of the armature disk and emits the determined switching condition via control terminal (signal output). Critical conditions (line breakages, wear, excess temperature) can be recognised and the respective signal can be emitted via control terminal (error output).

It is possible to select between fast and slow disconnection via the input F/S on the control terminal.

Louder switching noises are generated on the brakes in case of fast switch-off than in case of slow switch-off.

## Dimensions (mm)



## Technical data

Input voltage power terminal	SELV/PELV, $U_i$ [VDC]	24 (18 - 32)
Output voltage	$\pm 5\%$ $U_o$ [VDC]	$0.99 \times U_i$
	$U_H$ [VDC]	4, 6, 8, 12, 16, 20, 24
Output current	at $\leq 45\text{ }^\circ\text{C}$ $I_{RMS}$ [A]	5
	at max. $70\text{ }^\circ\text{C}$ $I_{RMS}$ [A]	2.5
Conformity markings		cULus CE
Protection		IP20

## Order Number

— / 0 2 8 . 6 0 0 . 2



## ROBA<sup>®</sup>-brake-checker plus AC / Type 029.700.2

### Application

ROBA<sup>®</sup>-brake-checker plus AC monitoring and supply modules are used to connect permitted ROBA<sup>®</sup>-stop safety brakes to AC voltage.

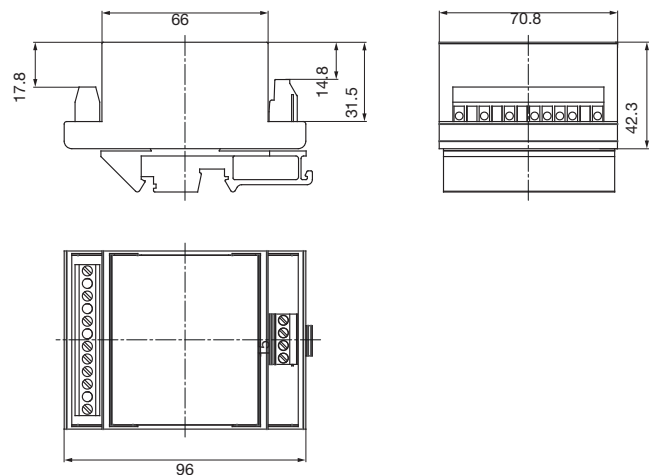
Motion monitoring of the armature disk for released ROBA-stop<sup>®</sup> safety brakes is possible.



### Monitoring and supply module ROBA<sup>®</sup>-brake-checker plus AC

- Consistently controlled output voltage in the entire input voltage range
- Consumer operation with overexcitation or power reduction
- Input voltage: 200 – 480 VAC
- Supply voltage with 50 or 60 Hz
- Max. output current  $I_{RMS}$ : 2 A
- Sensorless and contactless detection of switching statuses
- Motion recognition of the brake (release and drop-out recognition of the armature disk)
- Preventative function monitoring (wear recognition and error recognition, functional reserve)
- Continuous drop-out recognition
- Simple installation or retrofitting
- Electrical isolation on the output channels

### Dimensions (mm)



#### CAUTION



The ROBA<sup>®</sup>-brake-checker cannot be used in all applications (e.g. when operating noise-damped brakes, it cannot be used without additional measures). The product's suitability should be checked before use.

### Function

The ROBA<sup>®</sup>-brake-checker monitoring and supply module is intended for use with an input voltage from 200 up to 480 VAC. The module supplies the connected brakes and regulates to a permanently programmed overexcitation voltage. After the overexcitation time ends, it regulates to the permanently programmed holding voltage.

The overexcitation time is set automatically. The module monitors the movement of the armature disk and emits the determined switching condition via control terminal 2 (signal output).

Critical conditions (line breakages, wear) can be recognised and the respective signal can be emitted via control terminal 3 (error output).

### Order Number

— / 0 2 9 . 7 0 0 . 2



Size  
20

Technical Data		104 VDC	180/ 207 VDC
Brake nominal voltage		104 VDC	180/ 207 VDC
Supply voltage, power terminal	$U_i$ [VAC]	200 – 480 / 320 <sup>1)</sup>	
Input voltage, control terminal	$U_i$ [VDC]	24 (SELV/PELV) (7 – 30)	
Output voltage Reduction	$U_o$ [VDC]	104	207 <sup>2)</sup>
	$U_H$ [VDC]	52	104
Output voltage Overexcitation	$U_o$ [VDC]	185	360 <sup>2)</sup>
	$U_H$ [VDC]	104	185 <sup>2)</sup>
Output current	at $\leq 45$ °C	$I_{RMS}$ [A]	2
	at $\leq 60$ °C	$I_{RMS}$ [A]	1 cUL US
	at $\leq 70$ °C	$I_{RMS}$ [A]	1 CE
Protection		IP20	
Conformity markings		CE cUL US	

1) CSA-C22.2 No. 14-18

2) Approx.  $0.9 \times U_i$  (supply voltage, power terminal)