

# Installation and Adjustment of the Release Monitoring with Microswitch on ROBA®-stop Type 8 . . . . . Sizes 5 to 11

(E006 07 091 000 4 EN)

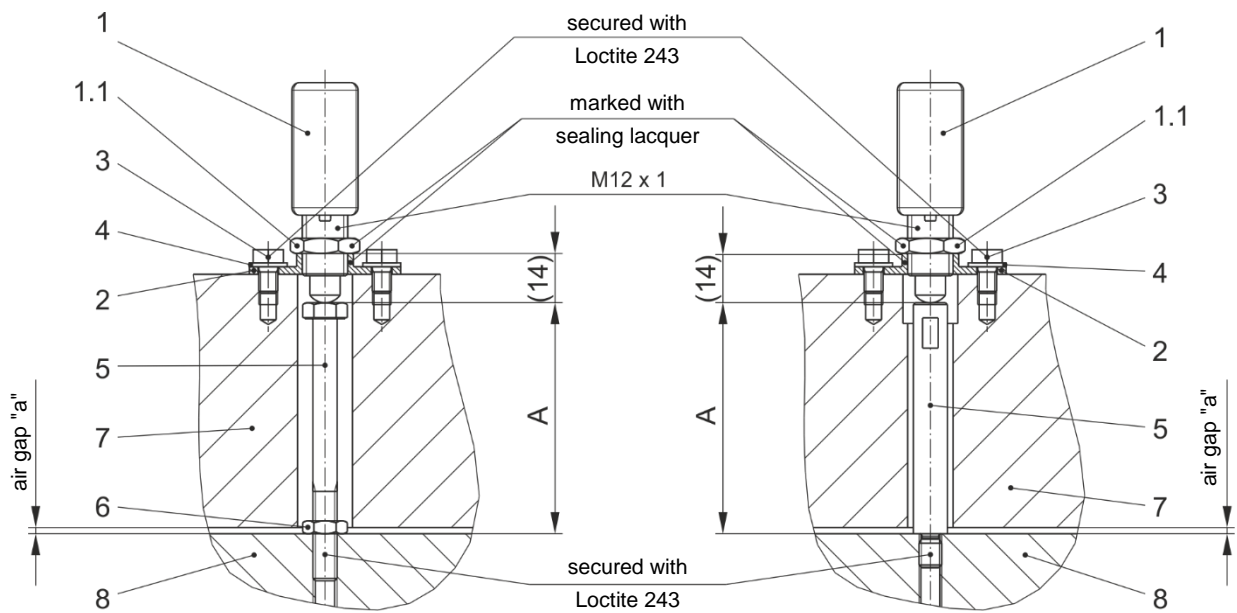


Fig.1



These Additional Instructions serve only as a supplement of the brake Installation and Operational Instructions. Please also observe the Safety Regulations and Protective Measures in the Installation and Operational Instructions!

## Function

When the magnetic coil in the coil carrier (7) is energised, the armature disk (8) is attracted to the coil carrier (7). The microswitch (1) emits a signal and the brake is released.

## Installation of the Release Monitoring (see Fig. 1):

- For Sizes 6 to 10: Screw the hexagon head screw (5) into the armature disk (8). Adjust dimension "A" and counter the adjustment with the hexagon nut (6).  
For Sizes 5 and 11: Screw the bolts (5) are additionally secured in the armature disk (8) using Loctite 243.
- Screw in the adjustment washer (2) using both hexagon head screws (3) and the washers (4) placed under them at the rear side.
- Screw the hexagon nut (1.1) onto the microswitch thread (1). The hexagon nut (1.1) is later used to counter the switch adjustment.
- Screw the microswitch (1) by turning the entire switch into the thread of the adjustment washer (2).
- Adjust the microswitch (1).

## Parts List (Only use mayr® original parts)

Item	Name
1	Microswitch
1.1	Hexagon nut M12 x 1
2	Adjustment washer
3	Hexagon head screw
4	Washer
5	Hexagon head screw (on Sizes 5 and 11: bolt)
6	Hexagon nut (only Sizes 6 to 10)
7	Coil carrier
8	Armature disk

The ROBA®-stop brakes are supplied with manufacturer-side installed and adjusted release monitoring devices. For brake sizes 5 to 9, the safety clip over the microswitch (1) must be removed in order to screw on the brake, as the clip covers a fixing screw. After installation, the safety clip must be re-mounted to protect the microswitch (1). A microswitch (1) emits a signal for every brake condition change: "brake opened" or "brake closed"

**The customer is responsible for a signal evaluation of both conditions.**

From the point at which the brake is energised, a time span of three times the separation time must pass before the switch signal on the release monitoring is evaluated.

Table 1

Size	Dimension "A"	Nominal air gap "a"
5	15 (fix)	0.3 – 0.45
6	16	0.3 – 0.45
7	28	0.3 – 0.45
8	34	0.3 – 0.45
9	37	0.3 – 0.45
10	50	0.35 – 0.5
11	61 (fix)	0.4 – 0.6

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## Adjustment of the Release Monitoring

The hexagon nut (1.1) must be repositioned so that the microswitch (1) in the adjustment washer (2) can be turned.

1. Energise the brake. The armature disk (8) must lie evenly against the coil carrier (7).
2. Turn the microswitch (1) clockwise until the microswitch (1) switches. The switching contact change (switching point) in the microswitch (1) produces a clearly audible noise.
3. On Sizes 5 to 9, please turn the microswitch (1) by 60°, on Size 10 by 75° and on Size 11 by 90° clockwise.
4. Counter the adjustment with the hexagon nut (1.1) and mark it using sealing lacquer.
5. Dependent on the required position, the microswitch (1) can be turned with the adjustment washer (2) after removal of both hexagon head screws (3). When screwing on the adjustment washer (2), the hexagon head screws (3) must be secured using Loctite 243.
6. After adjustment, the microswitch (1) is protected from damage by screwing on the safety clip.

## Wiring Diagram of the Release Monitoring

The release monitoring prevents start-up of the drive motor against the closed brake. In the following wiring example, the motor contactor is actuated directly via the microswitch (1) change-over contact.

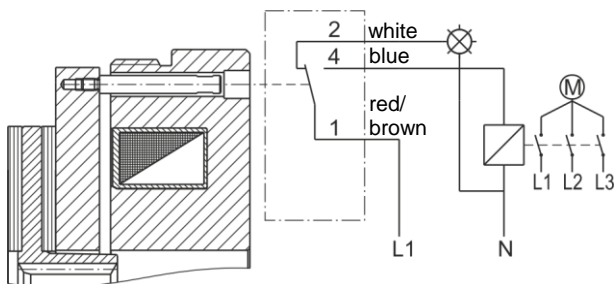


Fig. 2

### Brake is closed:

Connections 1 (red/brown) and 2 (white) are bridged. The signal lamp lights up, the motor contactor is de-energised.

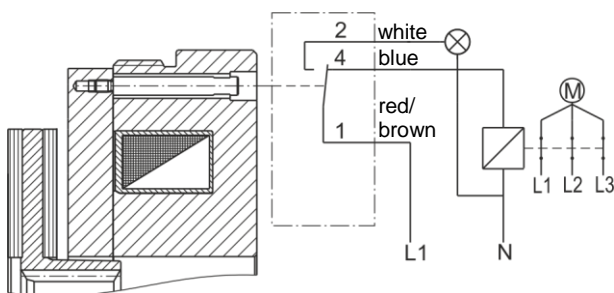


Fig. 3

### Brake is released:

Connections 1 (red/brown) and 4 (white) are bridged. The motor contactor is energised, the motor runs.

## Technical Data

Microswitch	
Dimensions:	DIN 41635 - form E, approx. 35 x 17.5 x 49 mm
Protection:	IP67
Mechanical lifetime:	50 x 10 <sup>6</sup> switchings
Switching frequency:	max. 200 switching operations/min
Permitted operating temperature:	-40 °C to +130 °C
Characteristic values for measurement:	250 VAC / 6 A 125 VDC / 0.5 A 250 VDC / 0.25 A
Switching contact:	Change-over contact with double contacts
Connection cable	
Conductor cross-section:	3 x 1 mm <sup>2</sup>
Conductor insulation:	Polyurethane
Temperature range:	-40 °C to +90 °C

## The Following Prevent Actuation of the Microswitch (1) and Lead to a Malfunction:

- Heavy contamination between the armature disk (8) and the coil carrier (7).
- Extreme warping on the armature disk (8).
- Excessively large air gap "a" between the armature disk (8) and the coil carrier (7) due to wear on the friction linings.
- Defective brake magnetic coil.
- No or incorrect voltage on the brake coil.

If none of these error sources prove to be the reason for incorrect release monitoring function, the microswitch (1) must be checked and the adjustment corrected if necessary.



Microswitches cannot be guaranteed fail-safe. Therefore, please ensure appropriate access for replacement or adjustment. The switching contacts are designed so that they can be used for both small switching powers and medium ones. However, after switching a medium switching power, small switching powers are no longer reliably possible. In order to switch inductive, capacitive and non-linear loads, please use the appropriate protection circuit to protect against electric arcs and unpermitted loads!