

ALARM BOX

Brush wear detection device



Characteristics

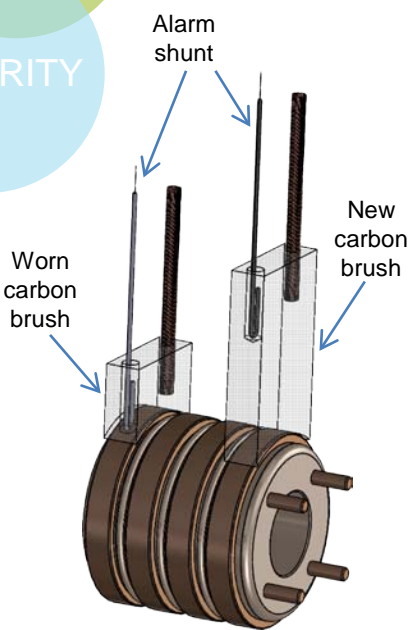
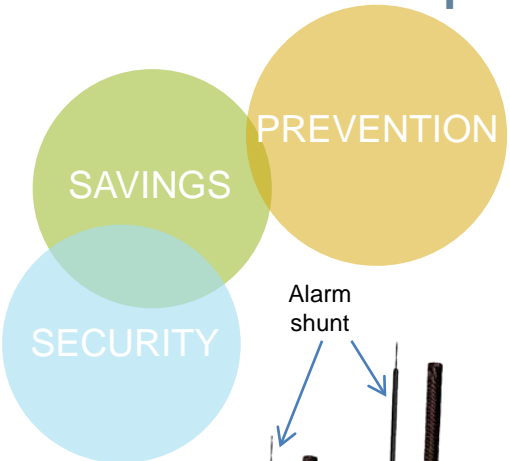
- Box size: 45 x 70 x 100 mm (1.8 x 2.8 x 3.9 in)
- Weight: 225 g
- Fastening: screws Ø4 – 35 x 60 mm distance (1.4 x 2.4 in) or on support bar
- Maximum voltage: - 800 V DC
- 660 V RMS AC
- Maximum voltage between inlet and outlet terminals: 2.5 kV (according to VDE 0110 - C group standard)
- Relay power: 220 V $\begin{matrix} +10\% \\ -15\% \end{matrix}$ - 50-60 Hz
- Relay outlet power: $\sim 220 \text{ V} / 220 \text{ V} = 4 / 0.2 \text{ A}$
- Service temperature range: -10°-+50°C (14-122°F)
- Wiring of two carbon brushes per alarm box

Ref. 90702

MERSEN

Mersen's Alarm box

The solution to preserve your commutators / slip rings



Working principle

The alarm carbon brush includes, in addition to its shunt, a thin copper braid, entirely protected by an insulated sleeve; it is located deeper than the carbon brush tamping.

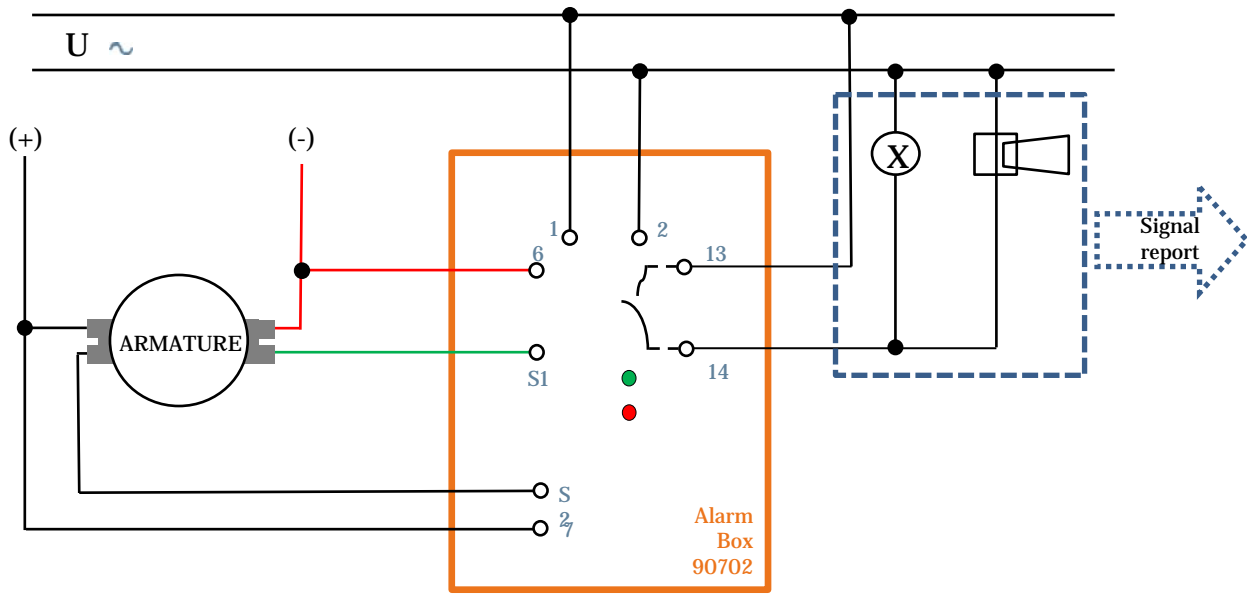
With new carbon brushes, the circuit is open between the S1 or S2 terminals and the 6 or 7 terminals (see wiring diagram below). The insulating material has an infinite impedance.

When the carbon brush is worn, the alarm shunt comes into contact with the commutator / slip ring (without causing any damage to the sliding surface), the short circuit triggers the warning light.

When one of the carbon brushes is worn, the insulating material is broken and the circuit progressively closes via the commutator. The red light « worn brush » lights up for an impedance < 11,5 kΩ.

Please note: A connection for signal report is available.

Wiring diagram (two polarity model (=), of different phases (~) or motors)



- = Carbon brush with alarm shunt
- = Red LED on: worn carbon brush
- = Green LED on: Power ON / Off: Power OFF)

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