

ESM-BT421 (Order no. 090820)

Base unit ESM-BT.., 4 safety contacts, time-delay, Cat. 4

- ▶ Use up to category 4 according to EN ISO 13849-1
- ▶ LED status indicators
- ▶ 1-channel or 2-channel control
- ▶ 4 redundant safety contacts of which 1 contact time-delayed
- ▶ Delay time range 1 s–30 s
- ▶ Short circuit and earth fault/ground fault monitoring



Relay outputs

The outputs are electrically decoupled and of redundant design.

Connection options

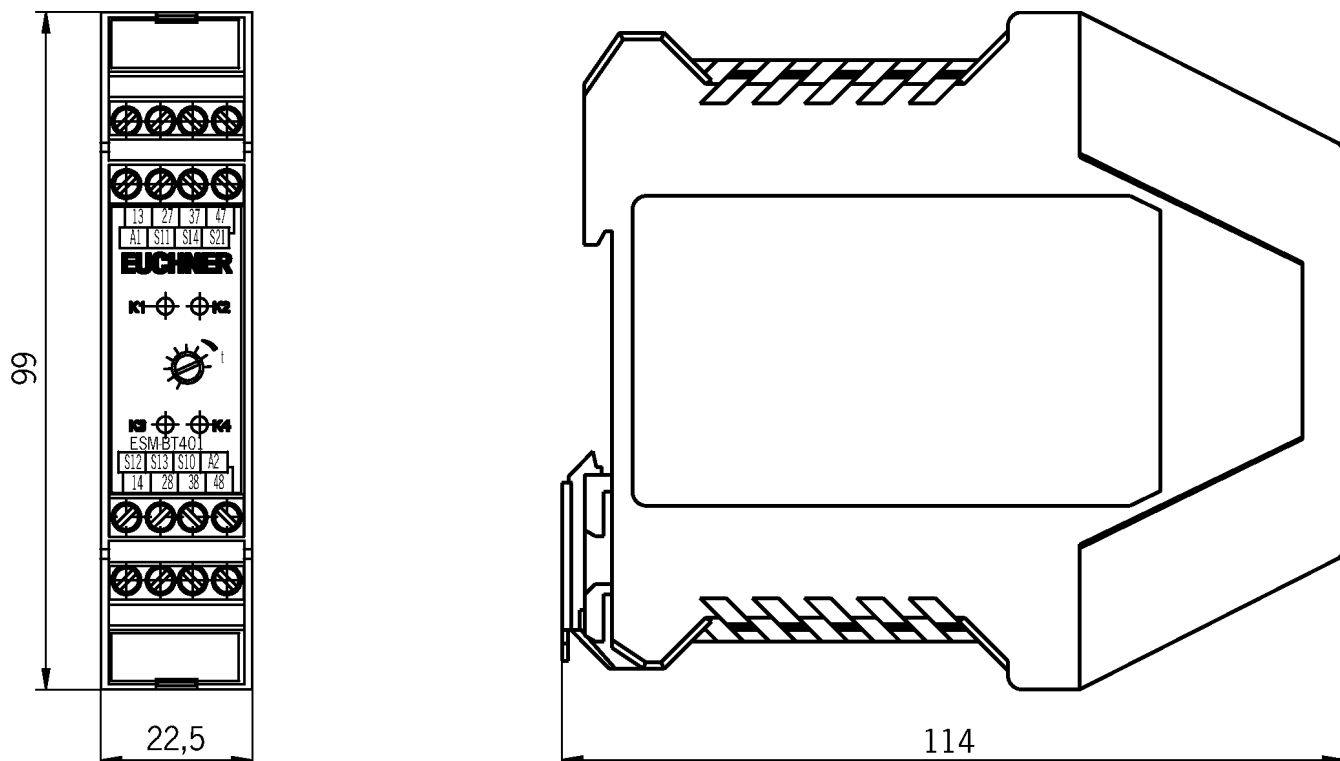
By using suitable wiring, the following functions can be selected:

- ▶ Relay start with automatic start, a start button or a monitored start button
- ▶ Monitoring of downstream relays or contactors.
- ▶ Simultaneity monitoring to monitor safety components over time
- ▶ Relay start using a monitored start button
- ▶ Short circuit monitoring to detect short circuits between the connecting cables and to shut down the outputs or prevent relay starting if necessary
- ▶ Earth fault/ground fault monitoring to detect short circuits between the connecting cables and earth or ground and to shut down the outputs or prevent relay starting if necessary.

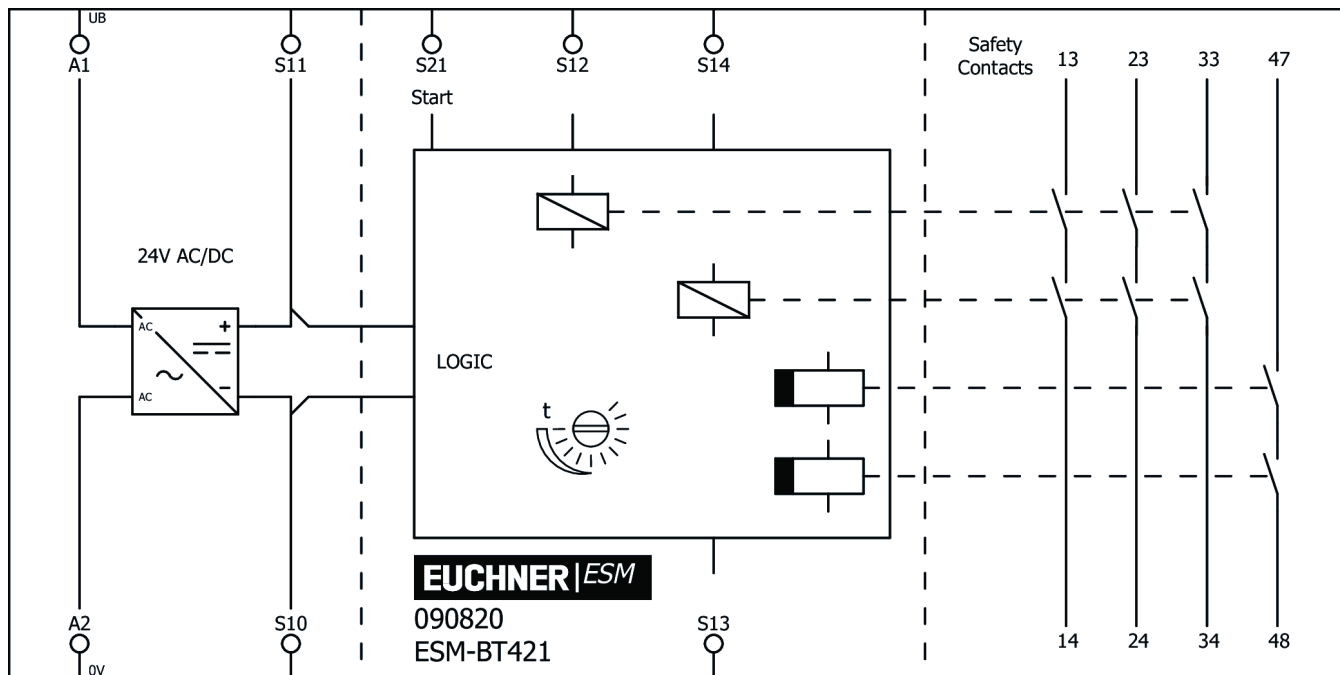
Time-delayed shutdown

The release time for the time-delay contacts can be set as required using a potentiometer on the safety relay.

Dimensional drawings



Connection examples



Technical data

Approvals

Zulassung EAC Zulassung TÜV Rheinland, BMPB mit ZG: Product Safety, Functional Safety Zulassung c_UL_us LISTED

Mechanical values and environment

Housing material

Housing Polyamide PA6.6

Weight

Net 0,25 kg

Ambient temperature

-15 ... 40 °C

Degree of protection

IP20

Mechanical life

operating cycles 10×10^6

Contact material

AgSnO₂

Mounting method

Mounting rail 35mm according to DIN EN 60715 TH35

Connection

Connection terminals

Length of control cable

With conductor cross-section 0.75mm² 1000 m

Safety contacts 13/14, 23/24, 33/34, 47/48

Number of safety contacts

4

Electrical connection ratings

Drop-out delay at 24V AC

max.20 ms Emergency stop

Drop-out delay at 24V DC

max.30 ms Emergency stop

Operating voltage

AC/DC 24 V -10% ... +10%

(All the electrical connections must either be isolated from the mains supply by a safety transformer according to EN 61558-2-6 with limited output voltage in the event of a fault, or by other equivalent isolation measures.)

Power consumption (apparent power)

At 24V AC 5,3 VA

Rated insulation voltage U_i

250 V