

Isolating switching amplifier

Type 8583 for max. 2 three-core cable sensors

8583



Description

The type 8583 isolating switching amplifier is used to convert the switching signal that is affected by the supply voltage from plus-switching binary sensors in 3-core cable systems or passive 2-core cable systems into a zero-potential switching contact output. While in PLC units the supply voltage (of DC 24 V) is made available for the operation of 3-core cable systems from the PLC unit and the output signal is processed directly in the PLC unit, this option is missing in smaller conventional units.

The isolating switching amplifier supplies the supply voltage required for the operation of the sensor. This supply voltage has a current limiting device to handle a short circuit, overload or the like. The switching amplifier offers as input two inputs that are separated from one another, each with the relevant separate output relay and a changeover contact.

This thus allows the connection of two sensors (carefully note the maximum current rating), each with its own changeover contact as output or a sensor with two changeover contacts as output, whereby the various voltage levels (e.g. AC 230 V and safety low voltage system) can be switched via the various changeover contacts. An input can also be used as a monitoring input for safety switching. This is done for preference by bridging terminals 14 and 15. The output contact of K1 (terminals 5 - 6 - 7) then reports, for example, failure of the power supply.

Typical applications are, for example, use with the rain sensor (type 8925) or the temperature sensor (type 8434) or the magnetic switch (type 8441).

Function

The type 8583 isolating switching amplifier consists of a transformer mains section (transformer in accordance with VDE 0551) with linear regulation and an output stage with zero-potential relay contacts. The linear regulation effectively limits the short-circuit current to < 400mA. The thermal overload switching takes effect at on-load current > 300mA at a correspondingly higher ambient temperature.

The sensor inputs (terminals 15 and 12) are connected directly with the relay coils of the output relay. A diode protective switching device (recovery diode) is built in.



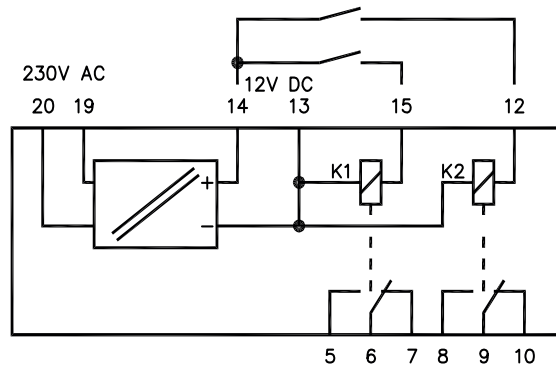
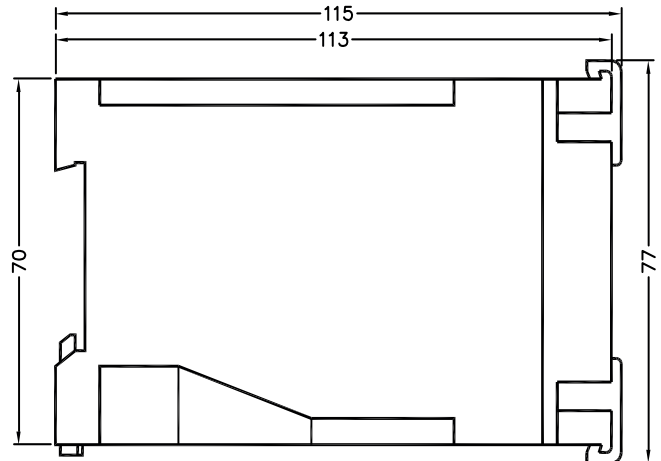
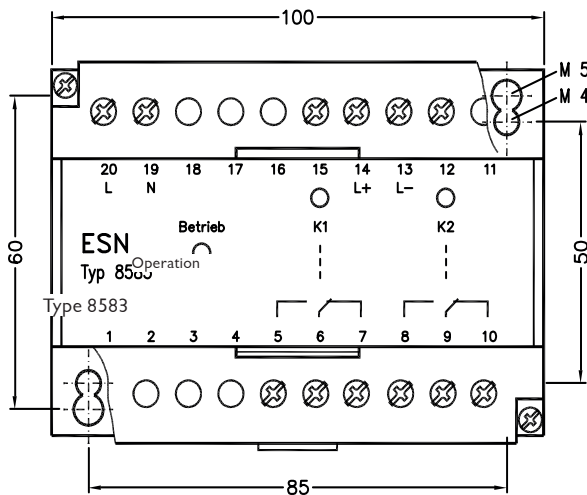
Technical data

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|-------------------------------------|--|
| Dimensions | see figure, WxHxD 100x70x115 mm |
| Housing | ABS / polycarbonate |
| Attachment | 2 holes to be drilled as per the drilling template, standard carrying rail as per DIN EN 50022 |
| Type of protection | Housing IP 40; terminals: IP 10 |
| Connections | 2 X 2.5 mm ² solid as per DIN 46288 or 2 x 1.5 mm ² with sleeve |
| Ambient temperature | -20°C to +60°C |
| Supply voltage | Terminal 19 (N); terminal 20 (L) AC 230 V +10/-15% |
| Power drawn | max. 15 VA |
| Sensor connection | resistant to short-circuits, terminal 14 (L+); terminal 13 (L-) |
| Nominal voltage | DC 12 V ± 10% / 300 mA |
| Max. current (I_k) | < 400 mA |
| Input | Terminal 15 (K1); terminal 12 (K2) DC 9 - 15 V; load approx. 500 W |
| Relay output | 1 changeover contact / relay (zero-potential) Terminals 5 - 7 (K1); terminals 8 - 10 (K2) AC 250 V 4 A cosφ > 0.7 DC 120 V 1 A ohmic load |
| Displays | 1 LED (green) as operating display 1 LED (yellow) relay K1 1 LED (yellow) relay K2 |
| Test voltage | Supply voltage → Sensor = 4 kV _{eff} Input → output = 4kV _{eff} Output → output = 4kV _{eff} |
| Accessories | For example, plus-switching binary sensors using 3-core cable technology or passive 2-core cable sensors. |
| Temperature sensor | see brochure sheet 8434 |
| Rain sensor | see brochure sheet 8925 |
| Magnetic switch | see brochure sheet 8441 |

Ordering information

| Type | Part No. |
|---------|----------|
| 8583 00 | 420300 |

Typ 8583



Connection examples

