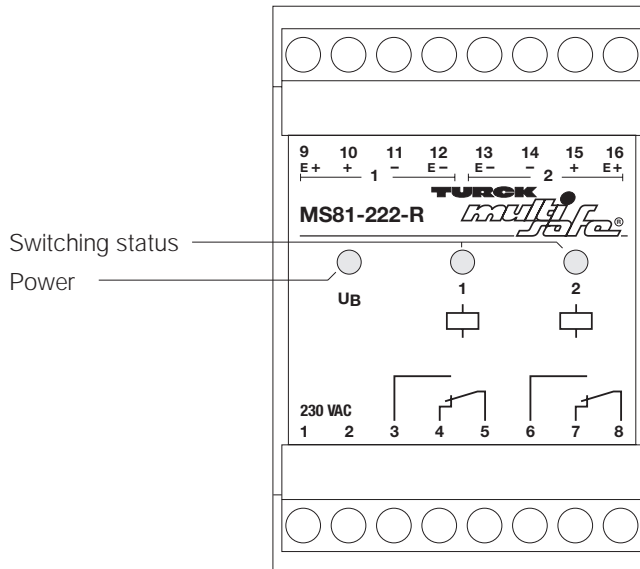


## Amplifier Relay MS81-222-R 2 channels



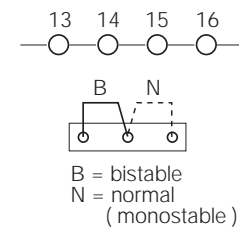
- 2 channel power supply for 3-wire proximity sensors (npn or pnp) or 2-wire sensors per EN 50227 (NAMUR)
- Monostable or bistable function (programmable)
- Programmable NO or NC output function of each channel
- 2 relay outputs, each with 1 SPDT contact
- Sealed relays with hard gold plated contacts

The MS81-222-R amplifier relay is a dual channel device with relay outputs suitable for connection of two proximity switches. The input circuits are capable of powering two 3-wire proximity sensors (npn or pnp) or 2-wire Namur sensors. The maximum sensor current is 20 mA (maximum output current of device 40 mA).

Each channel has one SPDT relay output with hard gold plated contacts.

The operation mode of each channel may be programmed from NO to NC by jumpering two terminals. Status indications of the outputs are provided by two yellow LEDs. A green LED illuminates when the device is powered.

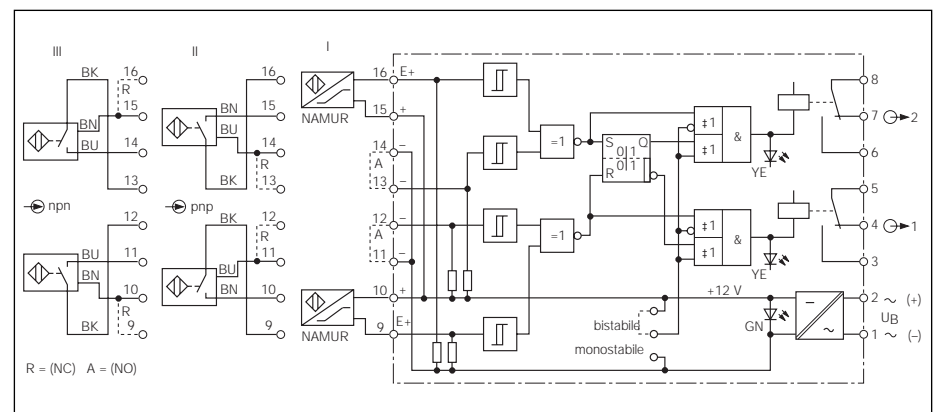
### Programming (with wire jumpers)



The plug-in jumper is located inside the device, under the black cover. The cover can be lifted off after removing the terminal blocks.

The device can be set to bistable operation by setting the jumper block under the front cover of the device. In the bistable mode one input serves as a set input and the other as a reset input. The outputs are triggered alternatively (complementary output function).

When power is applied, the device resets to the standard (preferred) state: channel 1, relay de-energised (LED 1, off) channel 2, relay energised (LED 2, on).



# Power Supplies and Power Monitors



|                                           |                                                                                         |                                                                     |
|-------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Type</b>                               | MS81-222-R/230VAC                                                                       | MS 81-222-R/115VAC                                                  |
| Ident-No.                                 | 05 111 00                                                                               | 05 111 02                                                           |
| <b>Operating Voltage</b> $U_B$            | 184...264 VAC                                                                           | 92...132 VAC                                                        |
| Line frequency                            | 48...62 Hz                                                                              | 48...62 Hz                                                          |
| Power/current consumption                 | $\leq 4.5$ VA                                                                           | $\leq 5$ VA                                                         |
| Galvanic isolation                        | between input circuit and output circuit                                                | between input circuit and output circuit                            |
| <b>Input Circuits</b>                     | 3-wire sensors, pnp<br>3-wire sensors, npn<br>2-wire sensors, NAMUR                     | 3-wire sensors, pnp<br>3-wire sensors, npn<br>2-wire sensors, NAMUR |
| Sensor Supply                             | 12 V $\pm$ 5 %, stabilised                                                              | 12 V $\pm$ 5 %, stabilised                                          |
| - Ripple $W_{PP}$                         | $\leq 1$ %                                                                              | $\leq 1$ %                                                          |
| - Maximum load                            | $\leq 40$ mA                                                                            | $\leq 40$ mA                                                        |
| <b>Output Circuits</b>                    | 2 relay outputs                                                                         | 2 relay outputs                                                     |
| Number of contacts                        | each 1 SPDT contact, AgCdO + 3 $\mu$ Au                                                 | each 1 SPDT contact, AgCdO + 3 $\mu$ Au                             |
| Switching voltage                         | $\leq 250$ V                                                                            | $\leq 250$ V                                                        |
| Switching current                         | $\leq 2$ A                                                                              | $\leq 2$ A                                                          |
| Switching capacity                        | < 500 VA/60 W                                                                           | < 500 VA/60 W                                                       |
| <b>LED Indications</b>                    |                                                                                         |                                                                     |
| - Power "ON"                              | green                                                                                   | green                                                               |
| - Switching status                        | 2 x yellow                                                                              | 2 x yellow                                                          |
| <b>Housing</b>                            | 50 mm wide, Polycarbonate/ABS                                                           |                                                                     |
| Mounting                                  | panel mounting or snap-on clamps for top-hat rail (DIN 50022)                           |                                                                     |
| Connection                                | 2 x 8 self-lifting pressure plates                                                      |                                                                     |
| Connecton profile                         | $\leq 2 \times 2.5$ mm <sup>2</sup> or $2 \times 1.5$ mm <sup>2</sup> with wire sleeves |                                                                     |
| Degree of protection (IEC 60529/EN 60529) | IP20                                                                                    |                                                                     |
| Operating temperature                     | -25...+60 °C                                                                            |                                                                     |

