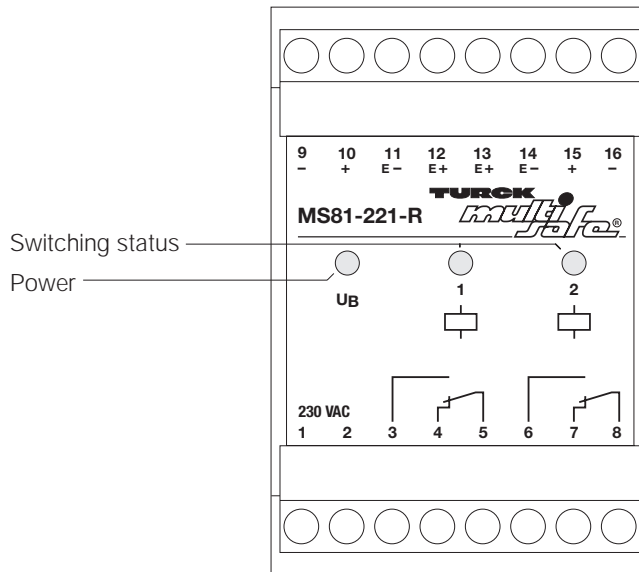


## Amplifier Relay MS81-221-R 2 channels



- **2 channel power supply for 3-wire proximity sensors (npn, pnp)**
- **Programmable NO or NC output function of each channel**
- **Stabilised and short-circuit protected sensor supply circuit**
- **2 relay outputs, each with 1 SPDT contact**
- **Sealed relays with hard gold plated contacts**

The MS81-221-R amplifier relay is a dual channel device with relay outputs.

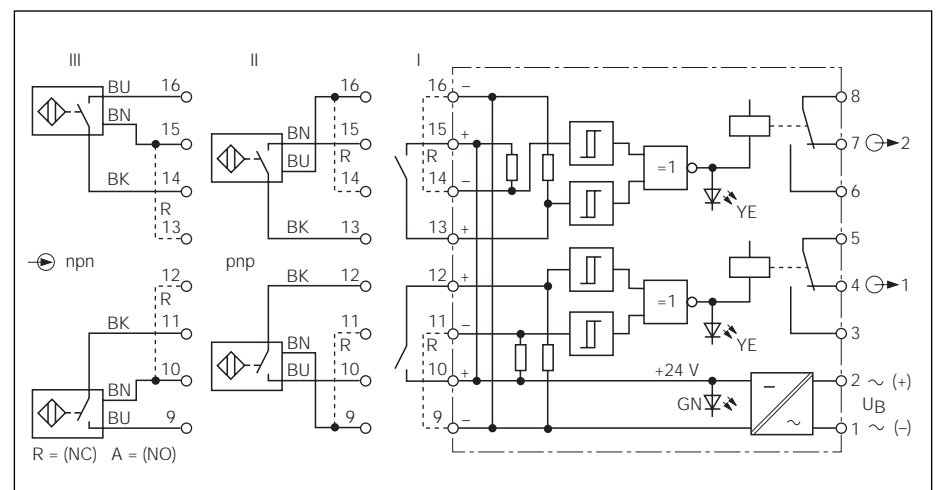
The device is capable of powering two 3-wire pnp sensors (II) or two 3-wire npn sensors (III). Mechanical contacts may also be used as input devices (I) (for operation as a contact protection relay). The maximum output current of the device is 50 mA per channel. It is therefore suitable for use with:

- inductive sensors
- magnet-inductive sensors
- capacitive sensors
- photoelectric sensors
- ultrasonic sensors

Each channel has one SPDT relay output.

The operation of each channel may be changed from NO (without bridge) to NC (with bridge) by jumpering two terminals.

Status indications are provided by three LEDs located on the front panel. The green LED is energised when the device is powered, the two yellow LEDs indicate the status of the respective outputs.



# Power Supplies and Power Monitors



|   |  |  |
|---|--|--|
| <b>Type</b>                               | MS81-221-R/230VAC  | MS81-221-R/115VAC                        |
| Ident-No.                                 | 05 121   | 05 109                                   |
| <b>Operating Voltage</b> $U_B$            | 196...253 VAC  | 98...132 VAC                             |
| Line frequency                            | 48...62 Hz   | 48...62 Hz                               |
| Power/current consumption                 | $\leq 6$ VA  | $\leq 6$ VA                              |
| Galvanic isolation                        | between input circuit and output circuit   | between input circuit and output circuit |
| <b>Input Circuits</b>                     | for 3-wire sensors, pnp/npn  | for 3-wire sensors, pnp/npn              |
| Sensor supply                             |  |  |
| – Sensor voltage                          | 24 VDC, stabilised   | 24 VDC, stabilised                       |
| – Sensor current                          | $\leq 2 \times 50$ mA  | $\leq 2 \times 50$ mA                    |
| Ripple $W_{PP}$                           | $\leq 5$ %   | $\leq 5$ %                               |
| Maximum load                              | $\leq 100$ mA  | $\leq 100$ mA                            |
| <b>Output Circuits</b>                    | 2 relay outputs  | 2 relay outputs                          |
| Number of contacts                        | 1 SPDT contact, AgCdO + 3 $\mu$ Au   | 1 SPDT contact, AgCdO + 3 $\mu$ Au       |
| Switching voltage                         | 250 V  | 250 V                                    |
| Switching current                         | $\leq 2$ A   | $\leq 2$ A                               |
| Switching capacity                        | $\leq 500$ VA/60 W   | $\leq 500$ VA/60 W                       |
| Switching frequency                       | $\leq 10$ Hz   | $\leq 10$ Hz                             |
| Switch-on time                            | $\leq 15$ ms   | $\leq 15$ ms                             |
| Switch-off time                           | $\leq 15$ ms   | $\leq 15$ ms                             |
| <b>LED Indications</b>                    |  |  |
| – Power "ON"                              | green  | green                                    |
| – Switching status                        | yellow   | 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 x 1.5 mm <sup>2</sup> with wire sleeves |  |
| Degree of protection (IEC 60529/EN 60529) | IP20   |  |
| Operating temperature                     | -25...60 °C  |  |

