



Technical data

| | Table 1 | Table 2 | Table 3 | Table 4 | Table 5 | Table 6 |
|------------------------------------|----------------------|----------------------------------|----------------------|----------------------|----------------------|----------------------|
| Permissible ripple content | ≤ 20 % | ≤ 20 % | ≤ 20 % | --- | ≤ 20 % | ≤ 20 % |
| No-load supply current | ≤ 10 mA | ≤ 17 mA (24 V) ≤ 30 mA (34 V) | ≤ 20 mA | ≤ 1.5 mA | --- | ≤ 10 mA |
| Leakage current at output | ≤ 0.1 mA | ≤ 0.1 mA | ≤ 0.1 mA | --- | --- | ≤ 0.1 mA |
| Voltage drop, switched state | ≤ 2.0 V | ≤ 2.5 V | ≤ 2.5 V | ≤ 8 V | --- | ≤ 2.0 V |
| Temperature drift % s _r | ≤ 10 % | ≤ 10 % | ≤ 10 % | ≤ 10 % | ≤ 10 % | ≤ 10 % |
| Hysteresis % s _r | 1...15 % (10 % typ.) | ≤ 20 % | ≤ 20 % | ≤ 20 % | --- | 1...15% (10% typ.) |
| Repeat accuracy | ≤ 5 % s _r | ≤ 5 % s _r | ≤ 5 % s _r | ≤ 5 % s _r | ≤ 5 % s _r | ≤ 5 % s _r |
| (according to IEC 60947-5-2) | | | | | | |
| Short-circuit protection | built-in | built-in | built-in | --- | built-in | built-in |
| Polarity reversal protection | built-in | built-in | built-in | built-in | --- | built-in |
| Power-on reset | built-in | built-in | built-in | built-in | --- | built-in |

| | Table 7 | Table 8 | Table 9 | Table 10 | Table 11 |
|------------------------------------|---|----------------------------------|--|---------------------------------|----------------------|
| Permissible ripple content | ≤ 20 % | ≤ 10 % | --- | ≤ 15 % / ≤ 20 % ^{***} | ≤ 20 % |
| No-load supply current | ≤ 10 mA | 30 mA (24 VDC) 40 mA (34 VDC) | typ. 1.5 mA (24 V) ≤ 2.0 mA (U _{max}) | ≤ 10 mA / ≤ 5 mA ^{***} | ≤ 0.6 mA |
| Output voltage, damped | 0 VDC | --- | --- | --- | --- |
| Output voltage, non-damped | 5 VDC / 10 VDC* | --- | --- | --- | --- |
| Leakage current at output | --- | 0.01 mA | < 2.0 mA | ≤ 0.1 mA | --- |
| Voltage drop, switched state | --- | ≤ 2.5 V | ≤ 8 V | ≤ 2.0 V | ≤ 5.0 V |
| Temperature drift % s _r | ≤ 5 % (0...+70 °C) ≤ 10 % (-25...0 °C)** | ≤ 10 % | ≤ 10 % | ≤ 15 % | ≤ 10 % |
| Hysteresis % s _r | --- | 1 ... 15 % | 1 ... 15 % | 3...15%/2...20% ^{****} | 1...15% (10% typ.) |
| Repeat accuracy | --- | ≤ 5 % s _r | ≤ 5 % s _r | ≤ 0.02 mm | ≤ 5 % s _r |
| (according to IEC 60947-5-2) | | | | | |
| Short-circuit protection | built-in | built-in | --- | built-in | built-in |
| Polarity reversal protection | built-in | built-in | --- | built-in | --- ^{*****} |
| Power-on reset | built-in | built-in | built-in | --- | built-in |

* DW-A#-5#9-M##-320/39# ** ≤ 5% (+32 ... +158 °F) / ≤ 10% (-13 ... +32 °F) *** amplifier **** see data sheets ***** non-polarized devices

Wiring diagrams

Diagram 1 NPN normally open (N.O.) / normally closed (N.C.)

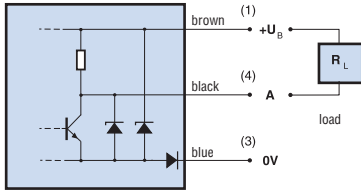
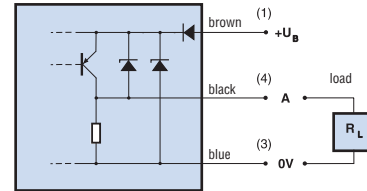


Diagram 1

PNP normally open (N.O.) / normally closed (N.C.)



PNP normally open (N.O.) / normally closed (N.C.)

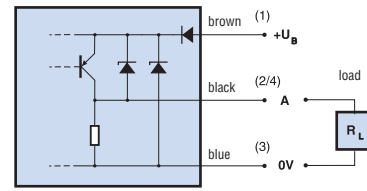
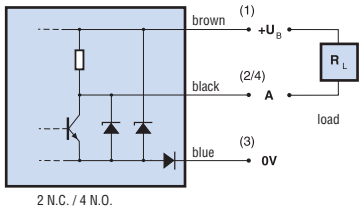


Diagram 2

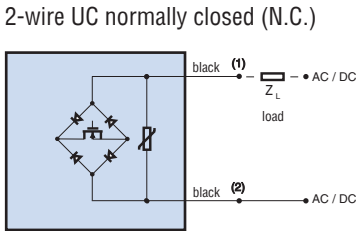
NPN normally open (N.O.) / normally closed (N.C.)



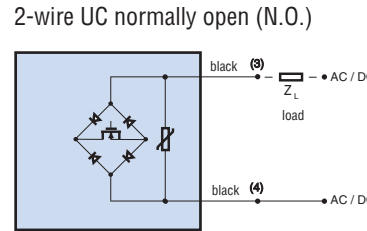
2 N.C. / 4 N.O.

2 N.C. / 4 N.O.

Diagram 3

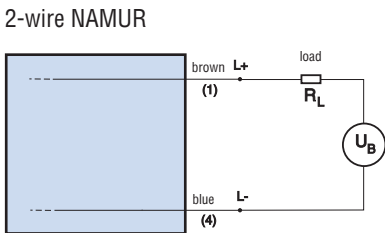


2-wire UC normally closed (N.C.)



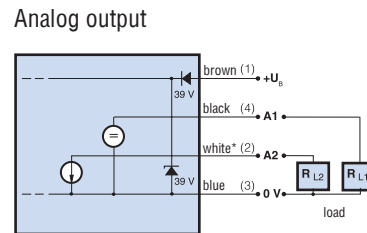
2-wire UC normally open (N.O.)

Diagram 4



2-wire NAMUR

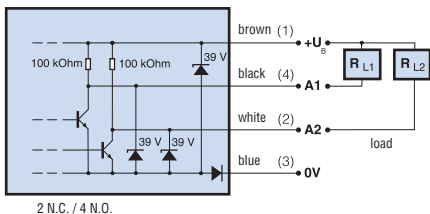
Diagram 5



* only for models with current output

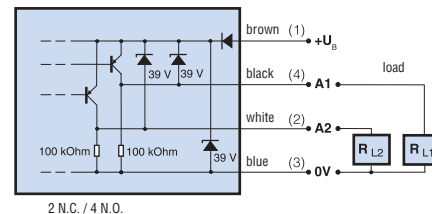
Diagram 6

NPN normally open (N.O.) + normally closed (N.C.)



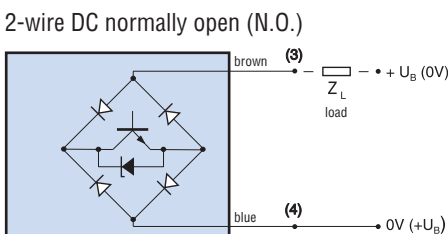
2 N.C. / 4 N.O.

PNP normally open (N.O.) + normally closed (N.C.)



2 N.C. / 4 N.O.

Diagram 7



2-wire DC normally open (N.O.)