

Q12 PLASTIC RECTANGULAR SERIES

ARTICLE PROPERTIES

| | | | |
|---------------------------------|-----------------------------|---|-----------------------------------|
| SENSOR TYPE | Inductive sensor | CONNECTION TYPES (see table) | |
| SIZE | 12 x 7.1 x 27.8 mm | • cable | PVC, 0.34 mm ² , 2 m** |
| RATED OPERATING DISTANCE | see table | | |
| NUMBER OF CONDUCTORS | 2-wire / 3-wire (see table) | ** other cable lengths are available on request | |

MECHANICAL DATA

| | |
|---|-------------------------------|
| MOUNTING (mounting nuts included in delivery) | non-flush (see table) |
| HOUSING | rectangular |
| MATERIAL HOUSING | PBT |
| MATERIAL SENSING SURFACE | PBT |
| TIGHTENING TORQUE LOCKING | 1 Nm |
| STANDARD TEST | FE360 |
| ATTENUATION COEFFICIENT | St37 = 1, V2A = 0.7, Al = 0.3 |

ELECTRICAL DATA

| | |
|------------------------------------|--------------------------------------|
| OPERATING VOLTAGE | DC: 10 ... 30 V DC |
| RATED OPERATING CURRENT | 2-wire: ≤ 100 mA 3-wire: ≤ 200 mA |
| SWITCHING FREQUENCY | see table |
| SWITCHING OUTPUT | see table |
| FUNCTION INDICATOR | yellow LED |
| HYSTERESIS | 3 ... 15 % |
| TEMPERATURE DRIFT | ±10 % |
| SHORT-CIRCUIT PROTECTION | yes |
| OVERLOAD RESISTANCE | yes |
| REVERSE POLARITY PROTECTION | yes |

ENVIRONMENTAL CONDITIONS

| | | | |
|----------------------------|---------------|--|-------------|
| PROTECTION CLASS | IP67 | VIBRATION RESISTANCE (EN 60068-2-27) | 55 Hz, 1 mm |
| AMBIENT TEMPERATURE | -25 ... 70 °C | SHOCK RESISTANCE (EN 60068-2-6) | 30g/11 ms |

STANDARDS AND DIRECTIVES

| | |
|---|------------------------------|
| LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR | DIN EN IEC 60947-5-2:2021-04 |
|---|------------------------------|

APPROVALS



Q12 PLASTIC RECTANGULAR SERIES

DC 2-WIRE OUTPUT CABLE

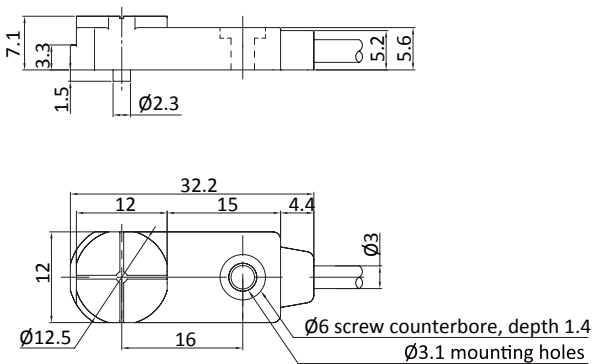
| Article number | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|----------------|-----------|-----------------------------|-----------------------------------|---------------------|------------|
| Ni4-Q12-OD6L | non-flush | 4 mm | DC NO (WD1) | 500 Hz | see Fig. 1 |
| Ni4-Q12-CD6L | non-flush | 4 mm | DC NC (WD2) | 500 Hz | see Fig. 1 |

DC 3-WIRE OUTPUT CABLE

| Article number | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|----------------|-----------|-----------------------------|-----------------------------------|---------------------|------------|
| Ni4-Q12-OP6L | non-flush | 4 mm | PNP NO (WD7) | 500 Hz | see Fig. 1 |
| Ni4-Q12-ON6L | non-flush | 4 mm | NPN NO (WD8) | 500 Hz | see Fig. 1 |
| Ni4-Q12-CP6L | non-flush | 4 mm | PNP NC (WD9) | 500 Hz | see Fig. 1 |
| Ni4-Q12-CN6L | non-flush | 4 mm | NPN NC (WD10) | 500 Hz | see Fig. 1 |

DIMENSIONS

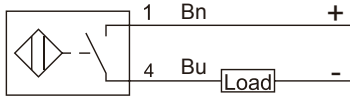
Fig. 1 Inductive sensor with cable (non-flush)



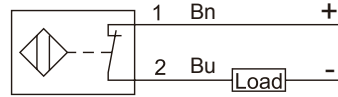
Q12 PLASTIC RECTANGULAR SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

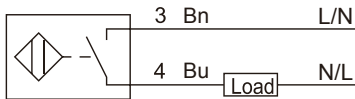
WD1 DC 2-wire NO



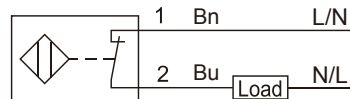
WD2 DC 2-wire NC



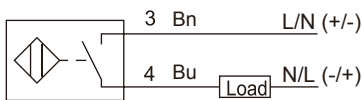
WD3 AC 2-wire NO



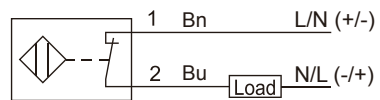
WD4 AC 2-wire NC



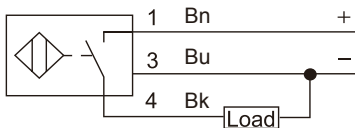
WD5 AC / DC 2-wire NO



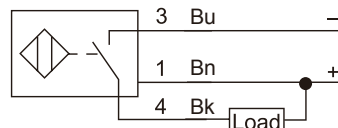
WD6 AC / DC 2-wire NC



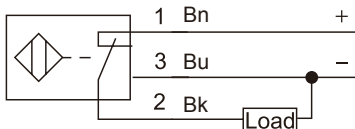
WD7 DC 3-wire PNP NO



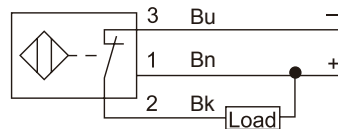
WD8 DC 3-wire NPN NO



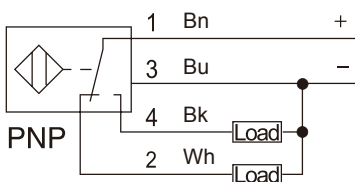
WD9 DC 3-wire PNP NC



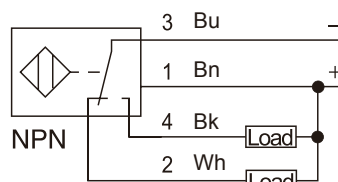
WD10 DC 3-wire NPN NC



WD11 DC 4-wire PNP NO + NC



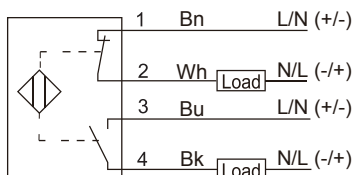
WD12 DC 4-wire NPN NO + NC



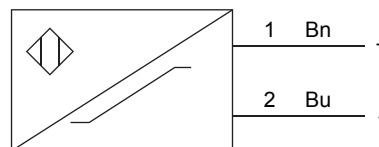
Q12 PLASTIC RECTANGULAR SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

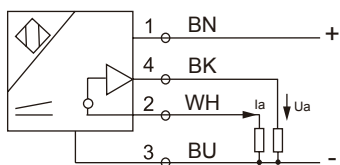
WD13 AC/DC 4-wire NO+NC



WD14 NAMUR 2-wire NC



WD15 DC 4-wire 0-10V+0-20mA



Q12B PLASTIC RECTANGULAR SERIES

ARTICLE PROPERTIES

| | | | |
|---------------------------------|-----------------------------|---|-----------------------------------|
| SENSOR TYPE | Inductive sensor | CONNECTION TYPES (see table) | |
| SIZE | 12 x 13 x 27.4 mm | • cable | PVC, 0.34 mm ² , 2 m** |
| RATED OPERATING DISTANCE | see table | | |
| NUMBER OF CONDUCTORS | 2-wire / 3-wire (see table) | ** other cable lengths are available on request | |

MECHANICAL DATA

| | |
|---|-------------------------------|
| MOUNTING (mounting nuts included in delivery) | non-flush (see table) |
| HOUSING | rectangular |
| MATERIAL HOUSING | PBT |
| MATERIAL SENSING SURFACE | PBT |
| TIGHTENING TORQUE LOCKING | 1 Nm |
| STANDARD TEST | FE360 |
| ATTENUATION COEFFICIENT | St37 = 1, V2A = 0.7, Al = 0.3 |

ELECTRICAL DATA

| | |
|------------------------------------|--------------------------------------|
| OPERATING VOLTAGE | DC: 10 ... 30 V DC |
| RATED OPERATING CURRENT | 2-wire: ≤ 100 mA 3-wire: ≤ 200 mA |
| SWITCHING FREQUENCY | see table |
| SWITCHING OUTPUT | see table |
| FUNCTION INDICATOR | yellow LED |
| HYSTERESIS | 3 ... 15 % |
| TEMPERATURE DRIFT | ±10 % |
| SHORT-CIRCUIT PROTECTION | yes |
| OVERLOAD RESISTANCE | yes |
| REVERSE POLARITY PROTECTION | yes |

ENVIRONMENTAL CONDITIONS

| | | | |
|----------------------------|---------------|--|-------------|
| PROTECTION CLASS | IP67 | VIBRATION RESISTANCE (EN 60068-2-27) | 55 Hz, 1 mm |
| AMBIENT TEMPERATURE | -25 ... 70 °C | SHOCK RESISTANCE (EN 60068-2-6) | 30g/11 ms |

STANDARDS AND DIRECTIVES

| | |
|---|------------------------------|
| LOW-VOLTAGE SWITCHGEAR AND CONTROLGEAR | DIN EN IEC 60947-5-2:2021-04 |
|---|------------------------------|

APPROVALS



Q12B PLASTIC RECTANGULAR SERIES

DC 2-WIRE OUTPUT CABLE

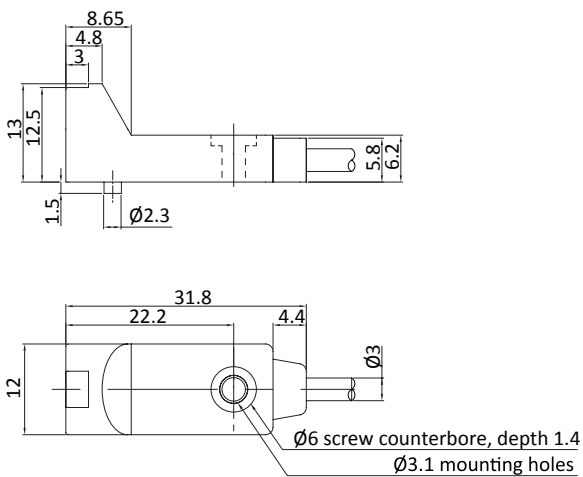
| Article number | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|----------------|-----------|-----------------------------|-----------------------------------|---------------------|------------|
| Ni4-Q12B-OD6L | non-flush | 4 mm | DC NO (WD1) | 800 Hz | see Fig. 1 |
| Ni4-Q12B-CD6L | non-flush | 4 mm | DC NC (WD2) | 800 Hz | see Fig. 1 |

DC 3-WIRE OUTPUT CABLE

| Article number | Mounting | Rated operating distance Sn | Switching output (wiring diagram) | Switching frequency | Dimensions |
|----------------|-----------|-----------------------------|-----------------------------------|---------------------|------------|
| Ni4-Q12B-OP6L | non-flush | 4 mm | PNP NO (WD7) | 800 Hz | see Fig. 1 |
| Ni4-Q12B-ON6L | non-flush | 4 mm | NPN NO (WD8) | 800 Hz | see Fig. 1 |
| Ni4-Q12B-CP6L | non-flush | 4 mm | PNP NC (WD9) | 800 Hz | see Fig. 1 |
| Ni4-Q12B-CN6L | non-flush | 4 mm | NPN NC (WD10) | 800 Hz | see Fig. 1 |

DIMENSIONS

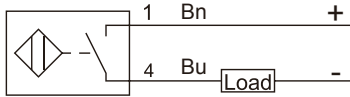
Fig. 1 Inductive sensor with cable (non-flush)



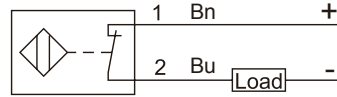
Q12B PLASTIC RECTANGULAR SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

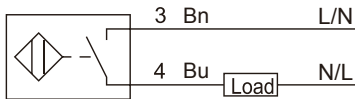
WD1 DC 2-wire NO



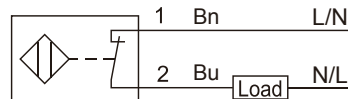
WD2 DC 2-wire NC



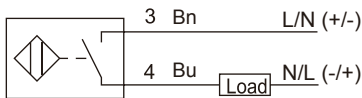
WD3 AC 2-wire NO



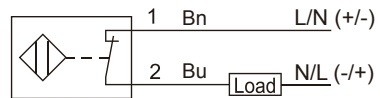
WD4 AC 2-wire NC



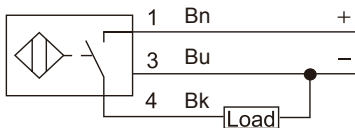
WD5 AC / DC 2-wire NO



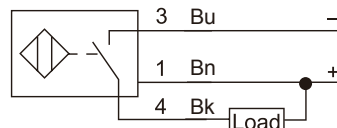
WD6 AC / DC 2-wire NC



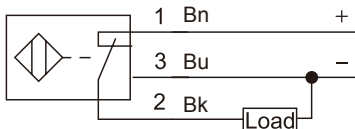
WD7 DC 3-wire PNP NO



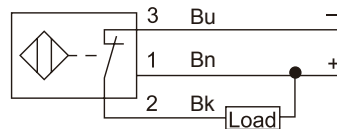
WD8 DC 3-wire NPN NO



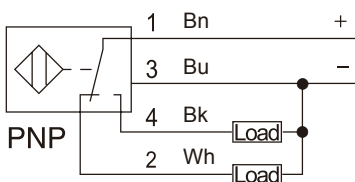
WD9 DC 3-wire PNP NC



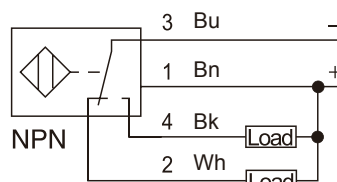
WD10 DC 3-wire NPN NC



WD11 DC 4-wire PNP NO + NC



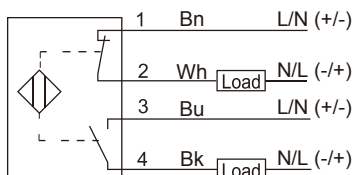
WD12 DC 4-wire NPN NO + NC



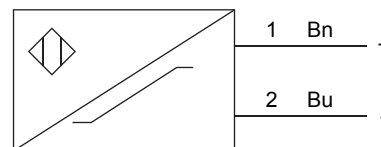
Q12B PLASTIC RECTANGULAR SERIES

WIRING DIAGRAMS (Note: 1 / 2 / 3 / 4 connector and terminals pin number Bn / Bu / Wh / Bk cable color)

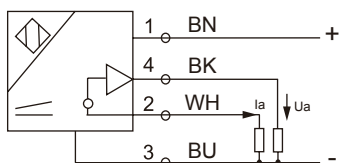
WD13 AC/DC 4-wire NO+NC



WD14 NAMUR 2-wire NC



WD15 DC 4-wire 0-10V+0-20mA



ELCO Industrie Automation GmbH
Benzstrasse 7
71720 Oberstenfeld
Deutschland
E-Mail: info@elco-automation.de



www.elco-automation.de

C+R Automations- GmbH

Nürberger Straße 45
90513 Zirndorf

Tel. +49 (0)911 656587-0
E-Mail: info@crautomation.de
www.crautomation.de