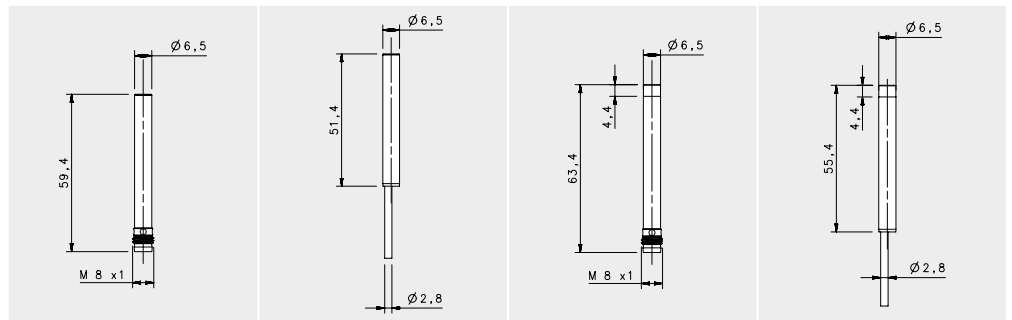


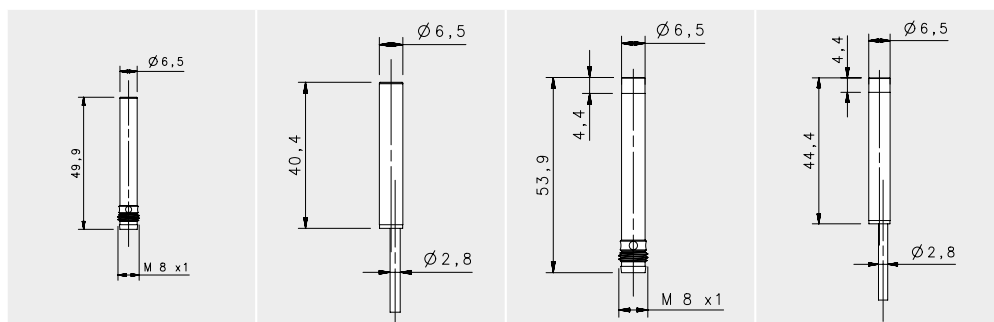
# BASIC M6.5



## STANDARD

|                                   |                |          |           | FLUSH                    |                          | NON FLUSH                |                          |
|-----------------------------------|----------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                   |                |          |           | M8 conn                  | cable                    | M8 conn                  | cable                    |
|                                   |                |          |           | 1,5 mm                   | 1,5 mm                   | 2 mm                     | 2 mm                     |
| <b>NOMINAL SWITCHING DISTANCE</b> |                |          |           |                          |                          |                          |                          |
| 10-30 Vdc                         | PNP/NPN NO-NC  | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                         | PNP NO         | 3 wires  | order No. | IS-65-A1-S1<br>95B066050 | IS-65-A1-03<br>95B064730 | IS-65-C1-S1<br>95B066210 | IS-65-C1-03<br>95B064890 |
| 10-30 Vdc                         | PNP NC         | 3 wires  | order No. | IS-65-A2-S1<br>95B066090 | IS-65-A2-03<br>95B064770 | IS-65-C2-S1<br>95B066250 | IS-65-C2-03<br>95B066300 |
| 10-30 Vdc                         | NPN NO         | 3 wires  | order No. | IS-65-A3-S1<br>95B064970 | IS-65-A3-03<br>95B064650 | IS-65-C3-S1<br>95B066130 | IS-65-C3-03<br>95B064810 |
| 10-30 Vdc                         | NPN NC         | 3 wires  | order No. | IS-65-A4-S1<br>95B066010 | IS-65-A4-03<br>95B064690 | IS-65-C4-S1<br>95B066170 | IS-65-C4-03<br>95B064850 |
| 10-30 Vdc                         | PNP NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                         | NPN NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                         | NO-NC          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc                    | NO             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc                    | NC             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac                        | NO             | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                         | Analog 0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier                   | NAMUR          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

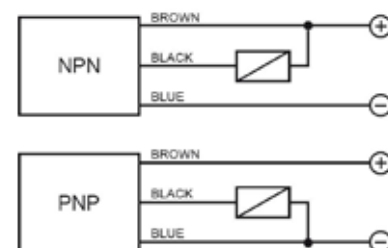
|                           |                                           |                                           |                                           |                                           |
|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| Residual Ripple           | < 10%                                     | < 10%                                     | < 10%                                     | < 10%                                     |
| Hysteresis                | < 10%                                     | < 10%                                     | < 10%                                     | < 10%                                     |
| Max. Output Current       | 200 mm                                    | 200 mA                                    | 200 mm                                    | 200 mA                                    |
| Min. Output Current       | ---                                       | ---                                       | ---                                       | ---                                       |
| Residual Current          | < 1,6 mA                                  | < 1,6 mA                                  | < 1,6 mA                                  | < 1,6 mA                                  |
| Voltage Drop              | < 1,2 V (I=100 mA)                        | < 1,2 V (I=100 mA)                        | < 1,2 V (I=100 mA)                        | < 1,2 V (I=100 mA)                        |
| Operation Led             | Yellow                                    | Yellow                                    | Yellow                                    | Yellow                                    |
| Switching Frequency       | 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                   | < 50 ms                                   | < 50 ms                                   |
| Repeatability             | < 3%                                      | < 3%                                      | < 3%                                      | < 3%                                      |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          |
| Protection Degree         | IP67                                      | IP67                                      | IP67                                      | IP67                                      |
| Cable Length              | ---                                       | 2 m                                       | ---                                       | 2 m                                       |
| Cable Section             | ---                                       | 3x 0,14 mm <sup>2</sup>                   | ---                                       | 3x 0,14 mm <sup>2</sup>                   |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Active Face               | LCP                                       | LCP                                       | LCP                                       | LCP                                       |
| Tightening torque         | ---                                       | ---                                       | ---                                       | ---                                       |
| Weight - Cable Output     | ---                                       | 80 g                                      | ---                                       | 80 g                                      |
| Weight - Connector Output | 40 g                                      | ---                                       | 40 g                                      | ---                                       |



## SHORT

| FLUSH                                     |                                           | NON FLUSH                                 |                                           |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| M8 conn                                   | cable                                     | M8 conn                                   | cable                                     |
| 1,5 mm                                    | 1,5 mm                                    | 2 mm                                      | 2 mm                                      |
| ---                                       | ---                                       | ---                                       | ---                                       |
| IS-65-B1-S1                               | IS-65-B1-03                               | IS-65-D1-S1                               | IS-65-D1-03                               |
| 95B066070                                 | 95B064750                                 | 95B066230                                 | 95B064910                                 |
| IS-65-B2-S1                               | IS-65-B2-03                               | IS-65-D2-S1                               | IS-65-D2-03                               |
| 95B066110                                 | 95B064790                                 | 95B066270                                 | 95B064950                                 |
| IS-65-B3-S1                               | IS-65-B3-03                               | IS-65-D3-S1                               | IS-65-D3-03                               |
| 95B064990                                 | 95B064670                                 | 95B066150                                 | 95B064830                                 |
| IS-65-B4-S1                               | IS-65-B4-03                               | IS-65-D4-S1                               | IS-65-D4-03                               |
| 95B066030                                 | 95B064710                                 | 95B066190                                 | 95B066190                                 |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| < 10%                                     | < 10%                                     | < 10%                                     | < 10%                                     |
| < 10%                                     | < 10%                                     | < 10%                                     | < 10%                                     |
| 200 mA                                    | 200 mA                                    | 200 mA                                    | 200 mA                                    |
| ---                                       | ---                                       | ---                                       | ---                                       |
| < 10 mA                                   | < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Yellow                                    | Yellow                                    | Yellow                                    | Yellow                                    |
| 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   |
| < 50 ms                                   | < 50 ms                                   | < 50 ms                                   | < 50 ms                                   |
| < 3%                                      | < 3%                                      | < 3%                                      | < 3%                                      |
| Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          |
| IP67                                      | IP67                                      | IP67                                      | IP67                                      |
| ---                                       | 2 m                                       | ---                                       | 2 m                                       |
| ---                                       | 3 x 0,14 mm <sup>2</sup>                  | ---                                       | 3 x 0,14 mm <sup>2</sup>                  |
| Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| LCP                                       | LCP                                       | LCP                                       | LCP                                       |
| ---                                       | ---                                       | ---                                       | ---                                       |
| ---                                       | 80 g                                      | ---                                       | 80 g                                      |
| 40 g                                      | ---                                       | 40 g                                      | ---                                       |

## 3 wires PNP or NPN

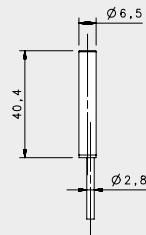
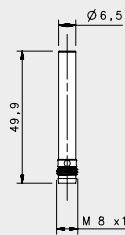


## M8 3 pole



| CONTACTS CONFIGURATION |                  |      |       |
|------------------------|------------------|------|-------|
| Available              | Contacts numbers |      |       |
|                        | 1                | 3    | 4     |
| NPV/PNP                | BROWN            | BLUE | BLACK |
|                        | +                | -    | NO/NC |

# BASIC M6.5



## SHORT X2

FLUSH

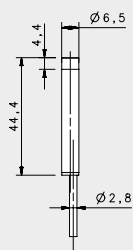
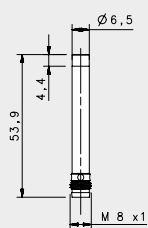
M8 conn

cable

### NOMINAL SWITCHING DISTANCE

|                 |                   |          |           | 2 mm                     | 2 mm                     |
|-----------------|-------------------|----------|-----------|--------------------------|--------------------------|
| 10-30 Vdc       | PNP/NPN<br>NO-NC  | 4 wires  | order No. | ---                      | ---                      |
| 10-30 Vdc       | PNP<br>NO         | 3 wires  | order No. | IS-65-G1-S1<br>95B066060 | IS-65-G1-03<br>95B064740 |
| 10-30 Vdc       | PNP<br>NC         | 3 wires  | order No. | IS-65-G2-S1<br>95B066100 | IS-65-G2-03<br>95B064780 |
| 10-30 Vdc       | NPN<br>NO         | 3 wires  | order No. | IS-65-G3-S1<br>95B064980 | IS-65-G3-03<br>95B064660 |
| 10-30 Vdc       | NPN<br>NC         | 3 wires  | order No. | IS-65-G4-S1<br>95B066020 | IS-65-G4-03<br>95B064700 |
| 10-30 Vdc       | PNP<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      |
| 10-30 Vdc       | NPN<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      |
| 10-30 Vdc       | NO-NC             | 2 wires  | order No. | ---                      | ---                      |
| 20-250 Vac/Vdc  | NO                | 2 wires  | order No. | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC                | 2 wires  | order No. | ---                      | ---                      |
| 20-250 Vac      | NO                | 2/3wires | order No. | ---                      | ---                      |
| 10-30 Vdc       | Analog<br>0-20 mA | 3 wires  | order No. | ---                      | ---                      |
| NAMUR amplifier | NAMUR             | 2 wires  | order No. | ---                      | ---                      |

|                           |                                              |                                              |
|---------------------------|----------------------------------------------|----------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                          | 10-30 Vdc (-15/10%)                          |
| Residual Ripple           | < 10%                                        | < 10%                                        |
| Hysteresis                | < 10%                                        | < 10%                                        |
| Max. Output Current       | 200 mA                                       | 200 mA                                       |
| Min. Output Current       | ---                                          | ---                                          |
| Residual Current          | < 10 mA                                      | < 10 mA                                      |
| Voltage Drop              | < 1,2 V (I=100mA)                            | < 1,2 V (I=100mA)                            |
| Operation Led             | Yellow                                       | Yellow                                       |
| Switching Frequency       | 500 Hz                                       | 500 Hz                                       |
| Start Up Delay            | < 75 ms                                      | < 75 ms                                      |
| Repeatability             | < 3%                                         | < 3%                                         |
| Short Circuit Protection  | Present (self-resetting)                     | Present (self-resetting)                     |
| Electric Protection       | Against polarity reversal<br>inductive loads | Against polarity reversal<br>inductive loads |
| Temperature Limit         | (-25 ... +70 °C)                             | (-25 ... +70 °C)                             |
| Protection Degree         | IP67                                         | IP67                                         |
| Cable Length              | ---                                          | 2 m                                          |
| Cable Section             | ---                                          | 3 x 0,14 mm <sup>2</sup>                     |
| Housing Material          | Nickel-plated brass                          | Nickel-plated brass                          |
| Active face               | LCP                                          | LCP                                          |
| Tightening torque         | ---                                          | ---                                          |
| Weight - Cable Output     | ---                                          | 80 g                                         |
| Weight - Connector Output | 40 g                                         | ---                                          |



## SHORT X 2

NON FLUSH

M8 conn

3 mm

cable

3 mm

IS-65-H1-S1  
95B066220  
IS-65-H2-S1  
95B066260  
IS-65-H3-S1  
95B066140  
IS-65-H4-S1  
95B066180

IS-65-H1-03  
95B064900  
IS-65-H2-03  
95B064940  
IS-65-H3-03  
95B064820  
IS-65-H4-03  
95B064860

10-30 Vdc (-15/10%)

10-30 Vdc (-15/10%)

< 10%

< 10%

< 10%

< 10%

200 mA

200 mA

< 10 mA

< 10 mA

< 1,2 V (I=100mA)

< 1,2 V (I=100mA)

Yellow

Yellow

500 Hz

500 Hz

< 75 ms

< 75 ms

< 3%

< 3%

Present (self-resetting)

Present (self-resetting)

Against polarity reversal inductive loads

Against polarity reversal inductive loads

(-25 ... +70 °C)

(-25 ... +70 °C)

IP67

IP67

---

2 m

---

3 x 0,14 mm<sup>2</sup>

Nickel-plated brass

Nickel-plated brass

LCP

LCP

---

---

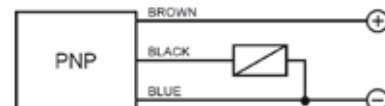
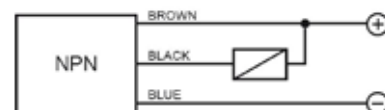
---

80 g

40 g

---

3 wires PNP or NPN



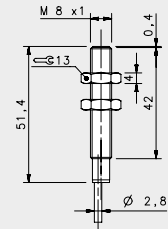
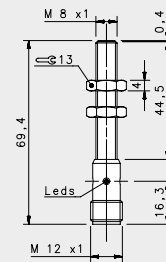
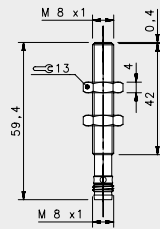
M8 3 pole



CONTACTS CONFIGURATION

| Available | Contacts numbers |      |       |
|-----------|------------------|------|-------|
|           | 1                | 3    | 4     |
|           | BROWN            | BLUE | BLACK |
| NPN/PNP   | +                | -    | NO/NC |

# BASIC M8



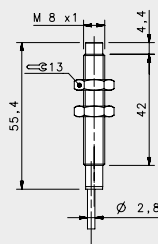
## STANDARD

### FLUSH

#### NOMINAL SWITCHING DISTANCE

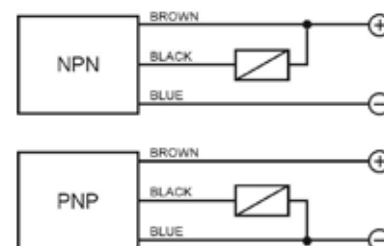
|                 |                |           |           | M8 conn                  | M12 conn                 | cable                    |
|-----------------|----------------|-----------|-----------|--------------------------|--------------------------|--------------------------|
|                 |                |           |           | 1,5 mm                   | 1,5 mm                   | 1,5 mm                   |
| 10-30 Vdc       | PNP/NPN NO-NC  | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | PNP NO         | 3 wires   | order No. | IS-08-A1-S1<br>95B061141 | IS-08-A1-S2<br>95B061131 | IS-08-A1-O3<br>95B061121 |
| 10-30 Vdc       | PNP NC         | 3 wires   | order No. | IS-08-A2-S1<br>95B061171 | IS-08-A2-S2<br>95B061161 | IS-08-A2-O3<br>95B061151 |
| 10-30 Vdc       | NPN NO         | 3 wires   | order No. | IS-08-A3-S1<br>95B061081 | IS-08-A3-S2<br>95B061071 | IS-08-A3-O3<br>95B061061 |
| 10-30 Vdc       | NPN NC         | 3 wires   | order No. | IS-08-A4-S1<br>95B061111 | IS-08-A4-S2<br>95B061101 | IS-08-A4-O3<br>95B061091 |
| 10-30 Vdc       | PNP NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC          | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NO             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO             | 2/3 wires | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog 0-20 mA | 3 wires   | order No. | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR          | 2 wires   | order No. | ---                      | ---                      | ---                      |

|                           |                                           |                                           |                                           |
|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| Residual Ripple           | < 10%                                     | < 10%                                     | < 10%                                     |
| Hysteresis                | < 10%                                     | < 10%                                     | < 10%                                     |
| Max. Output Current       | 200mA                                     | 200mA                                     | 200mA                                     |
| Min. Output Current       | ---                                       | ---                                       | ---                                       |
| Residual Current          | < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| Voltage Drop              | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Operation Led             | Yellow                                    | Yellow                                    | Yellow                                    |
| Switching Frequency       | 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                   | < 50 ms                                   |
| Repeatability             | < 3%                                      | < 3%                                      | < 3%                                      |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          |
| Protection Degree         | IP67                                      | IP67                                      | IP67                                      |
| Cable Length              | ---                                       | ---                                       | 2 m                                       |
| Cable Section             | ---                                       | ---                                       | 3x 0,14 mm <sup>2</sup>                   |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Active face               | LCP                                       | LCP                                       | LCP                                       |
| Tightening torque         | 4Nm                                       | 4Nm                                       | 4Nm                                       |
| Weight - Cable Output     | ---                                       | ---                                       | 80 g                                      |
| Weight - Connector Output | 35g                                       | 55g                                       | ---                                       |



**NON FLUSH**

3 wires PNP or NPN



M12 3 pole



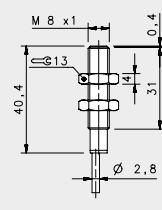
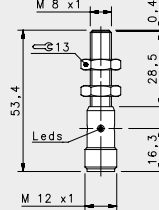
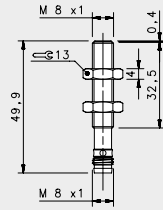
| CONTACTS CONFIGURATION |                  |   |   |       |
|------------------------|------------------|---|---|-------|
| Available              | Contacts numbers |   |   |       |
|                        | 1                | 2 | 3 | 4     |
| (NO or NC)             | +                |   | — | NO/NC |

M8 3 pole



| Available | Contacts numbers |           |            |
|-----------|------------------|-----------|------------|
|           | 1<br>BROWN       | 3<br>BLUE | 4<br>BLACK |
| NPN/PNP   | +                | —         | NO/NC      |

# BASIC M8



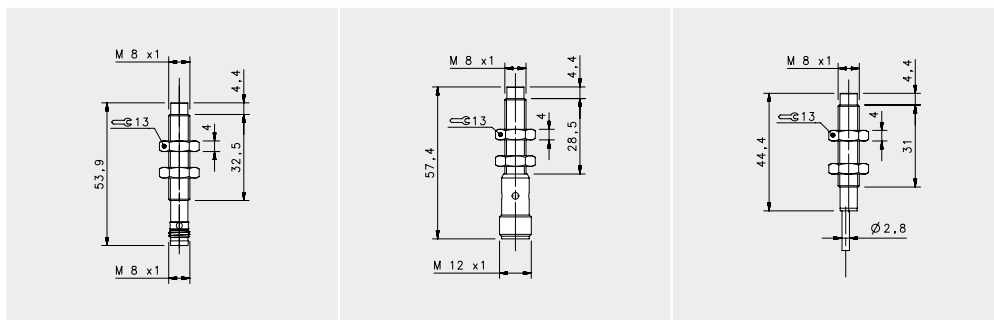
## SHORT

### FLUSH

#### NOMINAL SWITCHING DISTANCE

|                 |                |           |           | M8 conn                  | M12 conn                 | cable                    |
|-----------------|----------------|-----------|-----------|--------------------------|--------------------------|--------------------------|
|                 |                |           |           | 1,5 mm                   | 1,5 mm                   | 1,5 mm                   |
| 10-30 Vdc       | PNP/NPN NO-NC  | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | PNP NO         | 3 wires   | order No. | IS-08-B1-S1<br>95B066860 | IS-08-B1-S2<br>95B066590 | IS-08-B1-03<br>95B061921 |
| 10-30 Vdc       | PNP NC         | 3 wires   | order No. | IS-08-B2-S1<br>95B066890 | IS-08-B2-S2<br>95B066620 | IS-08-B2-03<br>95B061951 |
| 10-30 Vdc       | NPN NO         | 3 wires   | order No. | IS-08-B3-S1<br>95B066810 | IS-08-B3-S2<br>95B066530 | IS-08-B3-03<br>95B061861 |
| 10-30 Vdc       | NPN NC         | 3 wires   | order No. | IS-08-B4-S1<br>95B066830 | IS-08-B4-S2<br>95B066560 | IS-08-B4-03<br>95B061891 |
| 10-30 Vdc       | PNP NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC          | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NO             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO             | 2/3 wires | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog 0-20 mA | 3 wires   | order No. | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR          | 2 wires   | order No. | ---                      | ---                      | ---                      |

|                           |                                           |                                           |                                           |
|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| Residual Ripple           | < 10%                                     | < 10%                                     | < 10%                                     |
| Hysteresis                | < 10%                                     | < 10%                                     | < 10%                                     |
| Max. Output Current       | 200mA                                     | 200mA                                     | 200mA                                     |
| Min. Output Current       | ---                                       | ---                                       | ---                                       |
| Residual Current          | < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| Voltage Drop              | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Operation Led             | Yellow                                    | Yellow                                    | Yellow                                    |
| Switching Frequency       | 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                   | < 50 ms                                   |
| Repeatability             | < 3%                                      | < 3%                                      | < 3%                                      |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          |
| Protection Degree         | IP67                                      | IP67                                      | IP67                                      |
| Cable Length              | ---                                       | ---                                       | 2 m                                       |
| Cable Section             | ---                                       | ---                                       | 3 x 0,14 mm <sup>2</sup>                  |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Active face               | LCP                                       | LCP                                       | LCP                                       |
| Tightening torque         | 4Nm                                       | 4Nm                                       | 4Nm                                       |
| Weight - Cable Output     | ---                                       | ---                                       | 80 g                                      |
| Weight - Connector Output | 35g                                       | 55g                                       | ---                                       |

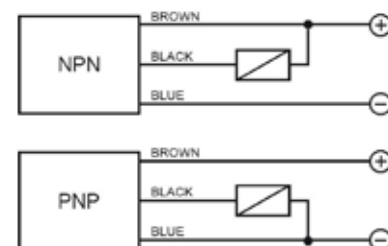


## SHORT

### NON FLUSH

| M8 conn                                   | M12 conn                                  | cable                                     |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| 2 mm                                      | 2 mm                                      | 2 mm                                      |
| ---                                       | ---                                       | ---                                       |
| IS-08-D1-S1                               | IS-08-D1-S2                               | IS-08-D1-O3                               |
| 95B066970                                 | 95B066700                                 | 95B062321                                 |
| IS-08-D2-S1                               | IS-08-D2-S2                               | IS-08-D2-O3                               |
| 95B067000                                 | 95B066720                                 | 95B062351                                 |
| IS-08-D3-S1                               | IS-08-D3-S2                               | IS-08-D3-O3                               |
| 95B066920                                 | 95B066650                                 | 95B066430                                 |
| IS-08-D4-S1                               | IS-08-D4-S2                               | IS-08-D4-O3                               |
| 95B066940                                 | 95B066670                                 | 95B062291                                 |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
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| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| < 10%                                     | < 10%                                     | < 10%                                     |
| < 10%                                     | < 10%                                     | < 10%                                     |
| 200mA                                     | 200mA                                     | 200mA                                     |
| ---                                       | ---                                       | ---                                       |
| < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Yellow                                    | Yellow                                    | Yellow                                    |
| 1000 Hz                                   | 1000 Hz                                   | 1000 Hz                                   |
| < 50 ms                                   | < 50 ms                                   | < 50 ms                                   |
| < 3%                                      | < 3%                                      | < 3%                                      |
| Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| (-25 ... +70 °C)                          | (-25 ... +70 °C)                          | (-25 ... +70 °C)                          |
| IP67                                      | IP67                                      | IP67                                      |
| ---                                       | ---                                       | 2 m                                       |
| ---                                       | ---                                       | 3 x 0,14 mm <sup>2</sup>                  |
| Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| LCP                                       | LCP                                       | LCP                                       |
| 4Nm                                       | 4Nm                                       | 4Nm                                       |
| ---                                       | ---                                       | 80 g                                      |
| 35g                                       | 55g                                       | ---                                       |

### 3 wires PNP or NPN



### M12 3 pole



| CONTACTS CONFIGURATION |                  |   |   |       |
|------------------------|------------------|---|---|-------|
| Available              | Contacts numbers |   |   |       |
| (NO or NC)             | 1                | 2 | 3 | 4     |
|                        | +                |   | - | NO/NC |

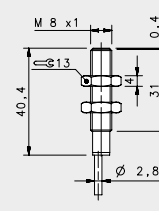
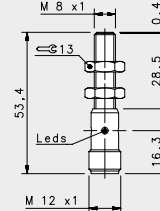
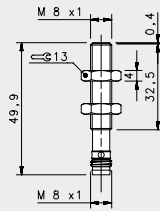
### M8 3 pole



| CONTACTS CONFIGURATION |                  |      |       |  |
|------------------------|------------------|------|-------|--|
| Available              | Contacts numbers |      |       |  |
|                        | 1                | 3    | 4     |  |
|                        | BROWN            | BLUE | BLACK |  |
| NPN/PNP                | +                | -    | NO/NC |  |



# BASIC M8



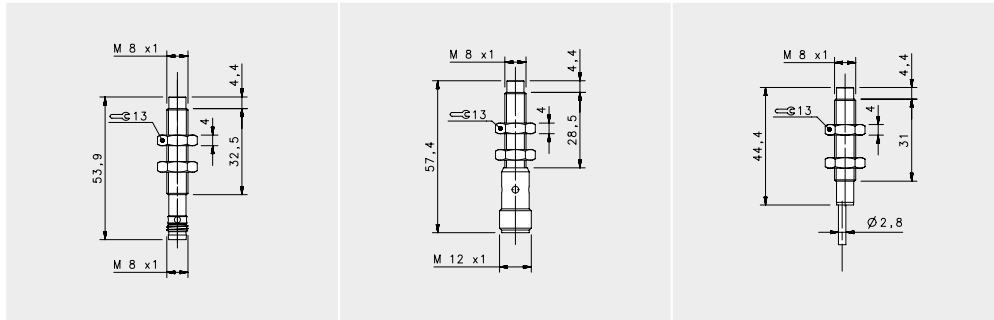
## SHORT X2

### FLUSH

#### NOMINAL SWITCHING DISTANCE

|                 |                |           |           | M8 conn                  | M12 conn                 | cable                    |
|-----------------|----------------|-----------|-----------|--------------------------|--------------------------|--------------------------|
|                 |                |           |           | 2 mm                     | 2 mm                     | 2 mm                     |
| 10-30 Vdc       | PNP/NPN NO-NC  | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | PNP NO         | 3 wires   | order No. | IS-08-G1-S1<br>95B066850 | IS-08-G1-S2<br>95B066580 | IS-08-G1-03<br>95B066370 |
| 10-30 Vdc       | PNP NC         | 3 wires   | order No. | IS-08-G2-S1<br>95B066880 | IS-08-G2-S2<br>95B066610 | IS-08-G2-03<br>95B066390 |
| 10-30 Vdc       | NPN NO         | 3 wires   | order No. | IS-08-G3-S1<br>95B066800 | IS-08-G3-S2<br>95B066520 | IS-08-G3-03<br>95B066330 |
| 10-30 Vdc       | NPN NC         | 3 wires   | order No. | IS-08-G4-S1<br>95B063131 | IS-08-G4-S2<br>95B066550 | IS-08-G4-03<br>95B066350 |
| 10-30 Vdc       | PNP NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NO-NC      | 4 wires   | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC          | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NO             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC             | 2 wires   | order No. | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO             | 2/3 wires | order No. | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog 0-20 mA | 3 wires   | order No. | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR          | 2 wires   | order No. | ---                      | ---                      | ---                      |

|                           |                                           |                                           |                                           |
|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| Residual Ripple           | < 10%                                     | < 10%                                     | < 10%                                     |
| Hysteresis                | < 10%                                     | < 10%                                     | < 10%                                     |
| Max. Output Current       | 200mA                                     | 200mA                                     | 200mA                                     |
| Min. Output Current       | ---                                       | ---                                       | ---                                       |
| Residual Current          | < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| Voltage Drop              | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Operation Led             | Yellow                                    | Yellow                                    | Yellow                                    |
| Switching Frequency       | 500 Hz                                    | 500 Hz                                    | 500 Hz                                    |
| Start Up Delay            | < 75 ms                                   | < 75 ms                                   | < 75 ms                                   |
| Repeatability             | < 3%                                      | < 3%                                      | < 3%                                      |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| Temperature Limit         | (-25 ... +60 °C)                          | (-25 ... +60 °C)                          | (-25 ... +70 °C)                          |
| Protection Degree         | IP67                                      | IP67                                      | IP67                                      |
| Cable Length              | ---                                       | ---                                       | 2 m                                       |
| Cable Section             | ---                                       | ---                                       | 3 x 0,14 mm <sup>2</sup>                  |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Active face               | LCP                                       | LCP                                       | LCP                                       |
| Tightening torque         | 4Nm                                       | 4Nm                                       | 4Nm                                       |
| Weight - Cable Output     | ---                                       | ---                                       | 80 g                                      |
| Weight - Connector Output | 35g                                       | 55g                                       | ---                                       |

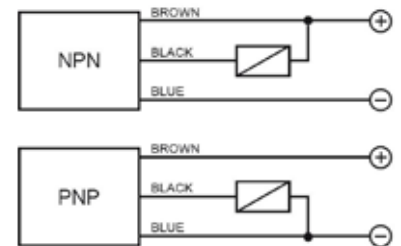


## SHORT X2

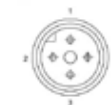
### NON FLUSH

| M8 conn                                   | M12 conn                                  | cable                                     |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| 3 mm                                      | 3 mm                                      | 3 mm                                      |
| ---                                       | ---                                       | ---                                       |
| IS-08-H1-S1                               | IS-08-H1-S2                               | IS-08-H1-03                               |
| 95B066960                                 | 95B066690                                 | 95B066480                                 |
| IS-08-H2-S1                               | IS-08-H2-S2                               | IS-08-H2-03                               |
| 95B066990                                 | 95B063301                                 | 95B066500                                 |
| IS-08-H3-S1                               | IS-08-H3-S2                               | IS-08-H3-03                               |
| 95B066910                                 | 95B066640                                 | 95B066420                                 |
| IS-08-H4-S1                               | IS-08-H4-S2                               | IS-08-H4-03                               |
| 95B063251                                 | 95B063241                                 | 95B066460                                 |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
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| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
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| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| ---                                       | ---                                       | ---                                       |
| 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                       |
| < 10%                                     | < 10%                                     | < 10%                                     |
| < 10%                                     | < 10%                                     | < 10%                                     |
| 200mA                                     | 200mA                                     | 200mA                                     |
| ---                                       | ---                                       | ---                                       |
| < 10 mA                                   | < 10 mA                                   | < 10 mA                                   |
| < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                         |
| Yellow                                    | Yellow                                    | Yellow                                    |
| 500 Hz                                    | 500 Hz                                    | 500 Hz                                    |
| < 75 ms                                   | < 75 ms                                   | < 75 ms                                   |
| < 3%                                      | < 3%                                      | < 3%                                      |
| Present (self-resetting)                  | Present (self-resetting)                  | Present (self-resetting)                  |
| Against polarity reversal inductive loads | Against polarity reversal inductive loads | Against polarity reversal inductive loads |
| (-25 ... +60 °C)                          | (-25 ... +60 °C)                          | (-25 ... +70 °C)                          |
| IP67                                      | IP67                                      | IP67                                      |
| ---                                       | ---                                       | 2 m                                       |
| ---                                       | ---                                       | 3 x 0,14 mm <sup>2</sup>                  |
| Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| LCP                                       | LCP                                       | LCP                                       |
| 4Nm                                       | 4Nm                                       | 4Nm                                       |
| ---                                       | ---                                       | 80 g                                      |
| 35g                                       | 55g                                       | ---                                       |

### 3 wires PNP or NPN



### M12 3 pole



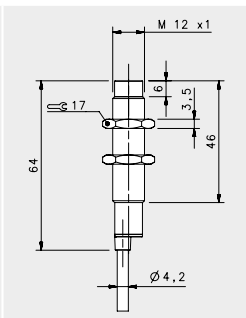
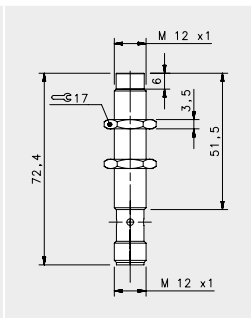
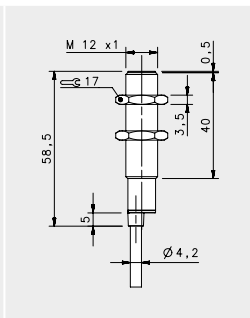
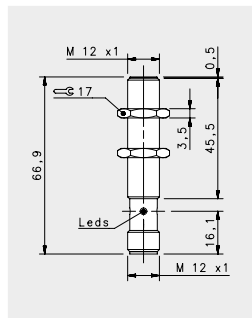
| CONTACTS CONFIGURATION |                  |   |   |       |
|------------------------|------------------|---|---|-------|
| Available              | Contacts numbers |   |   |       |
| (NO or NC)             | 1                | 2 | 3 | 4     |
|                        | +                |   | - | NO/NC |

### M8 3 pole



| CONTACTS CONFIGURATION |                  |      |       |       |
|------------------------|------------------|------|-------|-------|
| Available              | Contacts numbers |      |       |       |
|                        | 1                | 3    | 4     |       |
|                        | BROWN            | BLUE | BLACK |       |
| NPN/PNP                | +                | -    |       | NO/NC |

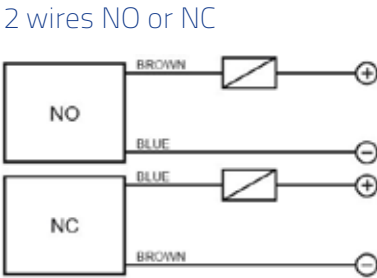
# BASIC M12



## STANDARD

|                            |                |          |           | FLUSH                    |                          | NON FLUSH                |                          |
|----------------------------|----------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
|                            |                |          |           | M12 conn                 | cable                    | M12 conn                 | cable                    |
| NOMINAL SWITCHING DISTANCE |                |          |           | 2 mm                     | 2 mm                     | 4 mm                     | 4 mm                     |
| 10-30 Vdc                  | PNP/NPN NO-NC  | 4 wires  | order No. | IS-12-A0-S2<br>95B064060 | IS-12-A0-03<br>95B064030 | IS-12-C0-S2<br>95B064080 | IS-12-C0-03<br>95B064040 |
| 10-30 Vdc                  | PNP NO         | 3 wires  | order No. | IS-12-A1-S2<br>95B061251 | IS-12-A1-03<br>95B061241 | IS-12-C1-S2<br>95B061651 | IS-12-C1-03<br>95B061641 |
| 10-30 Vdc                  | PNP NC         | 3 wires  | order No. | IS-12-A2-S2<br>95B061281 | IS-12-A2-03<br>95B061271 | IS-12-C2-S2<br>95B061681 | IS-12-C2-03<br>95B061671 |
| 10-30 Vdc                  | NPN NO         | 3 wires  | order No. | IS-12-A3-S2<br>95B061191 | IS-12-A3-03<br>95B061181 | IS-12-C3-S2<br>95B061591 | IS-12-C3-03<br>95B061581 |
| 10-30 Vdc                  | NPN NC         | 3 wires  | order No. | IS-12-A4-S2<br>95B061221 | IS-12-A4-03<br>95B061211 | IS-12-C4-S2<br>95B061621 | IS-12-C4-03<br>95B061611 |
| 10-30 Vdc                  | PNP NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NPN NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NO-NC          | 2 wires  | order No. | IS-12-A9-S2<br>95B063931 | IS-12-A9-03<br>95B064100 | IS-12-C9-S2<br>95B064140 | IS-12-C9-03<br>95B064110 |
| 20-250 Vac/Vdc             | NO             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc             | NC             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac                 | NO             | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | Analog 0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier            | NAMUR          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

|                           |                                           |                                                                                  |                                           |                                                                                  |
|---------------------------|-------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15%/10%)                      | 10-30 Vdc (-15%/10%)                                                             | 10-30 Vdc (-15%/10%)                      | 10-30 Vdc (-15%/10%)                                                             |
| Residual Ripple           | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Hysteresis                | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Max. Output Current       | 200mA; 100 mA (2wires)                    | 200mA; 100 mA (2wires)                                                           | 200mA; 100 mA (2wires)                    | 200mA; 100 mA (2wires)                                                           |
| Min. Output Current       | > 1,6 mA (2wires)                         | > 1,6 mA (2wires)                                                                | > 1,6 mA (2wires)                         | > 1,6 mA (2wires)                                                                |
| Residual Current          | < 10mA; < 1,6 mA (2wires)                 | < 10mA; < 1,6 mA (2wires)                                                        | < 10mA; < 1,6 mA (2wires)                 | < 10mA; < 1,6 mA (2wires)                                                        |
| Voltage Drop              | < 1,8V; < 6,5 V (2wires)                  | < 1,8V; < 6,5 V (2wires)                                                         | < 1,8V; < 6,5 V (2wires)                  | < 1,8V; < 6,5 V (2wires)                                                         |
| Operation Led             | Yellow                                    | Yellow                                                                           | Yellow                                    | Yellow                                                                           |
| Switching Frequency       | 1000 Hz/200 Hz (2 wires NO-NC)            | 1000 Hz/200 Hz (2 wires NO-NC)                                                   | 1000 Hz/200 Hz (2 wires NO-NC)            | 1000 Hz/200 Hz (2 wires NO-NC)                                                   |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                                                          | < 50 ms                                   | < 50 ms                                                                          |
| Repeatability             | < 3%                                      | < 3%                                                                             | < 3%                                      | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                                                         | Present (self-resetting)                  | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 |
| Protection Degree         | IP67                                      | IP67                                                                             | IP67                                      | IP67                                                                             |
| Cable Length              | ---                                       | 2 m                                                                              | ---                                       | 2 m                                                                              |
| Cable Section             | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                                                              | Nickel-plated brass                       | Nickel-plated brass                                                              |
| Active face               | LCP                                       | LCP                                                                              | LCP                                       | LCP                                                                              |
| Tightening torque         | 10Nm                                      | 10Nm                                                                             | 10Nm                                      | 10Nm                                                                             |
| Weight - Cable Output     | ---                                       | 110 g                                                                            | ---                                       | 110 g                                                                            |
| Weight - Connector Output | 60 g                                      | ---                                                                              | 60 g                                      | ---                                                                              |



The image shows two circuit diagrams for a common emitter transistor amplifier. The top diagram is for an NPN transistor. The emitter is connected to ground (0V). The base is connected to a voltage divider consisting of a 10kΩ resistor connected to +5V and a 1kΩ resistor connected to ground. The collector is connected to a 1kΩ resistor, which is then connected to +5V. The output is taken from the collector. The bottom diagram is for a PNP transistor. The emitter is connected to +5V. The base is connected to a voltage divider consisting of a 10kΩ resistor connected to +5V and a 1kΩ resistor connected to ground. The collector is connected to a 1kΩ resistor, which is then connected to ground. The output is taken from the collector.

| Transistor Type | Base Color | Emitter Color | Collector Color |
|-----------------|------------|---------------|-----------------|
| NPN NO          | BROWN      | WHITE         | BLACK           |
|                 | WHITE      | BLACK         | BLUE            |
|                 | BLUE       | BLUE          | BLUE            |
| NPN NC          | WHITE      | BLACK         | BROWN           |
|                 | BLACK      | BROWN         | BROWN           |
|                 | BROWN      | BROWN         | BROWN           |
| PNP NO          | WHITE      | BLACK         | BLUE            |
|                 | BLACK      | BLUE          | BLUE            |
|                 | BLUE       | BLUE          | BLUE            |
| PNP NC          | WHITE      | BLACK         | BROWN           |
|                 | BLACK      | BROWN         | BROWN           |
|                 | BROWN      | BROWN         | BROWN           |

Note: The collector is marked with a diagonal line in the symbol.

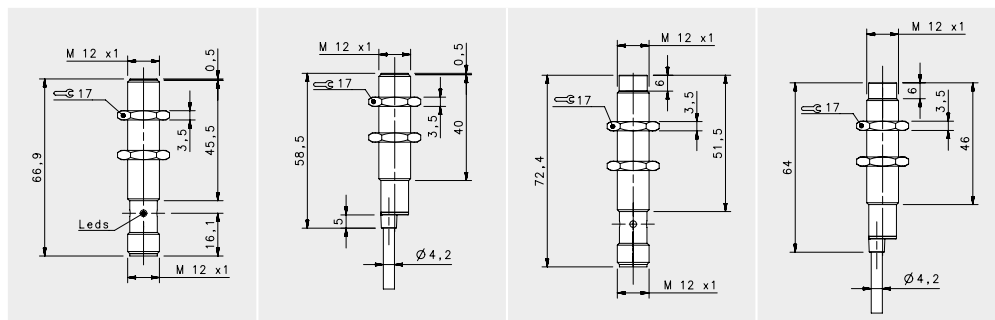
| Available | Contacts numbers |   |   |   |
|-----------|------------------|---|---|---|
|           | 1                | 2 | 3 | 4 |
| NO        | +                |   | — |   |
| NC        | —                |   | + |   |

| Available  | Contacts numbers |   |   |       |
|------------|------------------|---|---|-------|
|            | 1                | 2 | 3 | 4     |
| (NO or NC) | +                |   | — | NO/NC |

| Output | Contacts numbers |    |   |    |
|--------|------------------|----|---|----|
|        | 1                | 2  | 3 | 4  |
| NPN NO | +                | NO | — | —  |
| NPN NC | —                | NC | + | —  |
| PNP NO | +                | +  | — | NO |
| PNP NC | —                | +  | + | NC |

**DATALOGIC** 21

# BASIC M12



## STANDARD X2

### FLUSH

### NON FLUSH

M12 conn

cable

M12 conn

cable

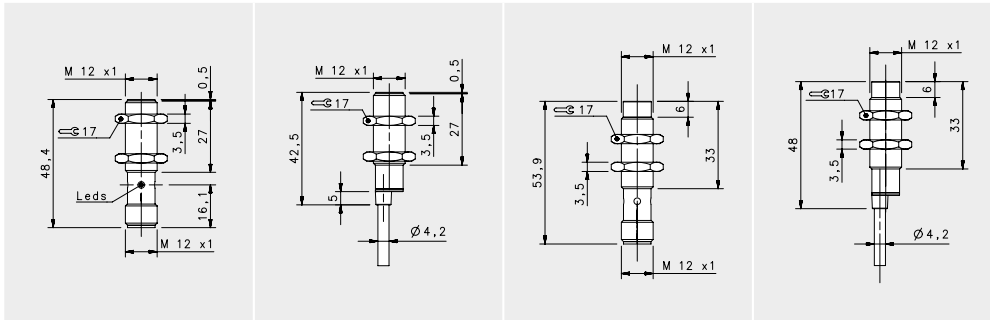
### NOMINAL SWITCHING DISTANCE

4 mm

8 mm

| 10-30 Vdc       | PNP/NPN<br>NO-NC  | 4 wires  | order No. | IS-12-E0-S2<br>95B067230 | IS-12-E0-03<br>95B067190 | IS-12-F0-S2<br>95B067250 | IS-12-F0-03<br>95B067210 |
|-----------------|-------------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10-30 Vdc       | PNP<br>NO         | 3 wires  | order No. | IS-12-E1-S2<br>95B067030 | IS-12-E1-03<br>95B067670 | IS-12-F1-S2<br>95B067020 | IS-12-F1-03<br>95B067740 |
| 10-30 Vdc       | PNP<br>NC         | 3 wires  | order No. | IS-12-E2-S2<br>95B067640 | IS-12-E2-03<br>95B067680 | IS-12-F2-S2<br>95B067710 | IS-12-F2-03<br>95B067750 |
| 10-30 Vdc       | NPN<br>NO         | 3 wires  | order No. | IS-12-E3-S2<br>95B067650 | IS-12-E3-03<br>95B067690 | IS-12-F3-S2<br>95B067720 | IS-12-F3-03<br>95B067760 |
| 10-30 Vdc       | NPN<br>NC         | 3 wires  | order No. | IS-12-E4-S2<br>95B067660 | IS-12-E4-03<br>95B067700 | IS-12-F4-S2<br>95B067730 | IS-12-F4-03<br>95B067770 |
| 10-30 Vdc       | PNP<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC             | 2 wires  | order No. | IS-12-E9-S2<br>95B067240 | IS-12-E9-03<br>95B067200 | IS-12-F9-S2<br>95B067260 | IS-12-F9-03<br>95B067220 |
| 20-250 Vac/Vdc  | NO                | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC                | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO                | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog<br>0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

| Nominal Voltage           | 10-30 Vdc (-15/10%)                          | 10-30 Vdc (-15/10%)                                                              | 10-30 Vdc (-15/10%)                          | 10-30 Vdc (-15/10%)                                                              |
|---------------------------|----------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------|
| Residual Ripple           | < 10%                                        | < 10%                                                                            | < 10%                                        | < 10%                                                                            |
| Hysteresis                | < 10%                                        | < 10%                                                                            | < 10%                                        | < 10%                                                                            |
| Max. Output Current       | 100 mA                                       | 100 mA                                                                           | 100 mA                                       | 100 mA                                                                           |
| Min. Output Current       | ---                                          | ---                                                                              | ---                                          | ---                                                                              |
| Residual Current          | < 10 mA                                      | < 10 mA                                                                          | < 10 mA                                      | < 10 mA                                                                          |
| Voltage Drop              | < 1,2 V (I=100mA)                            | < 1,2 V (I=100mA)                                                                | < 1,2 V (I=100mA)                            | < 1,2 V (I=100mA)                                                                |
| Operation Led             | Yellow                                       | Yellow                                                                           | Yellow                                       | Yellow                                                                           |
| Switching Frequency       | 500 Hz/200 Hz (2 wires NO-NC)                | 500 Hz/200 Hz (2 wires NO-NC)                                                    | 400 Hz/200 Hz (2 wires NO-NC)                | 400 Hz/200 Hz (2 wires NO-NC)                                                    |
| Start Up Delay            | < 75 ms                                      | < 75 ms                                                                          | < 75 ms                                      | < 75 ms                                                                          |
| Repeatability             | < 3%                                         | < 3%                                                                             | < 3%                                         | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                     | Present (self-resetting)                                                         | Present (self-resetting)                     | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal<br>inductive loads | Against polarity reversal<br>inductive loads                                     | Against polarity reversal<br>inductive loads | Against polarity reversal<br>inductive loads                                     |
| Temperature Limit         | (-25 ... +70 °C)                             | (-25 ... +70 °C)                                                                 | (-25 ... +70 °C)                             | (-25 ... +70 °C)                                                                 |
| Protection Degree         | IP67                                         | IP67                                                                             | IP67                                         | IP67                                                                             |
| Cable Length              | ---                                          | ---                                                                              | ---                                          | ---                                                                              |
| Cable Section             | ---                                          | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                          | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                          | Nickel-plated brass                                                              | Nickel-plated brass                          | Nickel-plated brass                                                              |
| Active face               | LCP                                          | LCP                                                                              | LCP                                          | LCP                                                                              |
| Tightening torque         | 10Nm                                         | 10Nm                                                                             | 10Nm                                         | 10Nm                                                                             |
| Weight - Cable Output     | ---                                          | ---                                                                              | ---                                          | ---                                                                              |
| Weight - Connector Output | 60 g                                         | 60 g                                                                             | 60 g                                         | 60 g                                                                             |

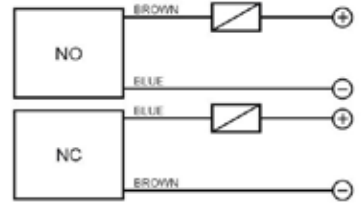


## SHORT X2

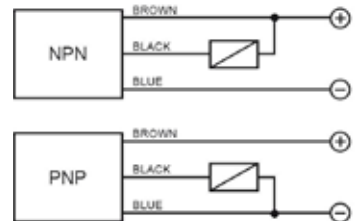
| FLUSH       |             | NON FLUSH   |             |
|-------------|-------------|-------------|-------------|
| M12 con     | cable       | M12 conn    | cable       |
| 4 mm        | 4 mm        | 8 mm        | 8 mm        |
| ---         | ---         | ---         | ---         |
| IS-12-G1-S2 | IS-12-G1-03 | IS-12-H1-S2 | IS-12-H1-03 |
| 95B063371   | 95B063361   | 95B063451   | 95B063441   |
| IS-12-G2-S2 | IS-12-G2-03 | IS-12-H2-S2 | IS-12-H2-03 |
| 95B063391   | 95B063381   | 95B063471   | 95B063461   |
| IS-12-G3-S2 | IS-12-G3-03 | IS-12-H3-S2 | IS-12-H3-03 |
| 95B063331   | 95B063321   | 95B063411   | 95B063401   |
| IS-12-G4-S2 | IS-12-G4-03 | IS-12-H4-S2 | IS-12-H4-03 |
| 95B063351   | 95B063341   | 95B063431   | 95B063421   |
| IS-12-G5-S2 | IS-12-G5-03 | IS-12-H5-S2 | IS-12-H5-03 |
| 95B062691   | 95B062681   | 95B062771   | 95B062761   |
| IS-12-G6-S2 | IS-12-G6-03 | IS-12-H6-S2 | IS-12-H6-03 |
| 95B062671   | 95B062661   | 95B062751   | 95B062741   |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |

|                                           |                                                      |                                           |                                                      |
|-------------------------------------------|------------------------------------------------------|-------------------------------------------|------------------------------------------------------|
| 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                  | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                  |
| < 10%                                     | < 10%                                                | < 10%                                     | < 10%                                                |
| < 10%                                     | < 10%                                                | < 10%                                     | < 10%                                                |
| 200 mA                                    | 200 mA                                               | 200 mA                                    | 200 mA                                               |
| > 1,6 mA (2wires ver.)                    | > 1,6 mA (2wires ver.)                               | > 1,6 mA (2wires ver.)                    | > 1,6 mA (2wires ver.)                               |
| < 10 mA                                   | < 10 mA                                              | < 10 mA                                   | < 10 mA                                              |
| < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                                    | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                                    |
| Yellow                                    | Yellow                                               | Yellow                                    | Yellow                                               |
| 500 Hz/200 Hz (4 wires NO-NC)             | 500 Hz/200 Hz (4 wires NO-NC)                        | 500 Hz/200 Hz (4 wires NO-NC)             | 500 Hz/200 Hz (4 wires NO-NC)                        |
| < 75 ms                                   | < 75 ms                                              | < 75 ms                                   | < 75 ms                                              |
| < 3%                                      | < 3%                                                 | < 3%                                      | < 3%                                                 |
| Present (self-resetting)                  | Present (self-resetting)                             | Present (self-resetting)                  | Present (self-resetting)                             |
| Against polarity reversal inductive loads | Against polarity reversal inductive loads            | Against polarity reversal inductive loads | Against polarity reversal inductive loads            |
| (-25 ... +70 °C)                          | (-25 ... +70 °C)                                     | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                     |
| IP67                                      | IP67                                                 | IP67                                      | IP67                                                 |
| ---                                       | 2 m                                                  | ---                                       | ---                                                  |
| ---                                       | 3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Nickel-plated brass                       | Nickel-plated brass                                  | Nickel-plated brass                       | Nickel-plated brass                                  |
| LCP                                       | LCP                                                  | LCP                                       | LCP                                                  |
| 10Nm                                      | 10Nm                                                 | 10Nm                                      | 10Nm                                                 |
| ---                                       | 110 g                                                | ---                                       | 110 g                                                |
| 60 g                                      | ---                                                  | 60 g                                      | ---                                                  |

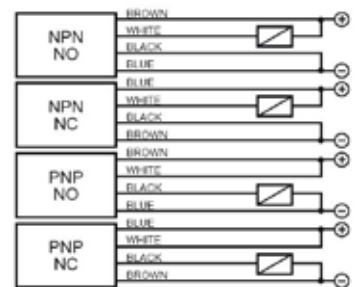
### 2 wires NO or NC



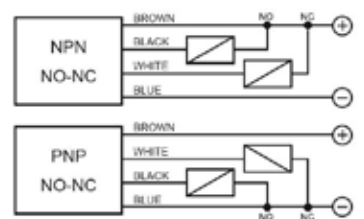
### 3 wires PNP or NPN



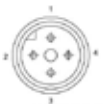
### 4 wires (PNP/NPN, NO/NC)



### 4 wires (NO+NC)



### M12 connector connections



### 2 wires NO or NC

| Available | CONTACTS CONFIGURATION |   |   |   |
|-----------|------------------------|---|---|---|
|           | Contacts numbers       |   |   |   |
| NO        | 1                      | 2 | 3 | 4 |
| NC        | +                      | — | + | — |

### 3 wires

| Available  | CONTACTS CONFIGURATION |   |   |       |
|------------|------------------------|---|---|-------|
|            | Contacts numbers       |   |   |       |
| (NO or NC) | 1                      | 2 | 3 | 4     |
|            | +                      | — | — | NO/NC |

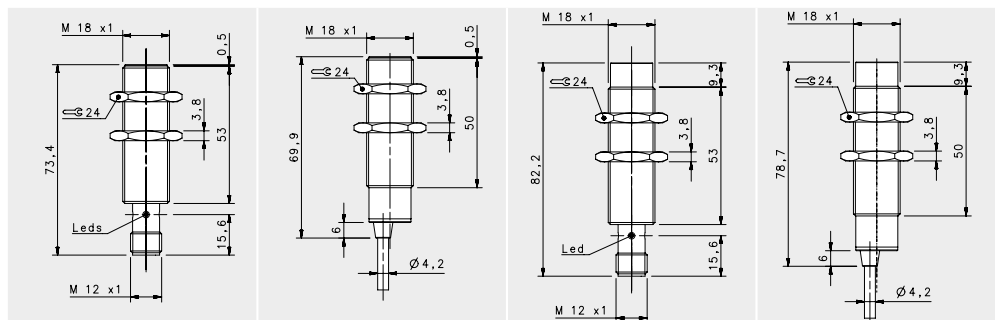
### 4 wires (PNP/NPN, NO/NC)

| Output | CONTACTS CONFIGURATION |    |   |    |
|--------|------------------------|----|---|----|
|        | Contacts numbers       |    |   |    |
| NPN NO | 1                      | 2  | 3 | 4  |
| NPN NC | +                      | NO | — | —  |
| PNP NO | —                      | NC | + | —  |
| PNP NC | —                      | +  | — | NO |
|        | —                      | +  | + | NC |

### 4 wires (NO+NC)

| Available | Contacts numbers |    |   |    |
|-----------|------------------|----|---|----|
|           | 1                | 2  | 3 | 4  |
| (NO + NC) | +                | NC | — | NO |

# BASIC M18



## STANDARD

### FLUSH

### NON FLUSH

M12 conn

cable

M12 conn

cable

### NOMINAL SWITCHING DISTANCE

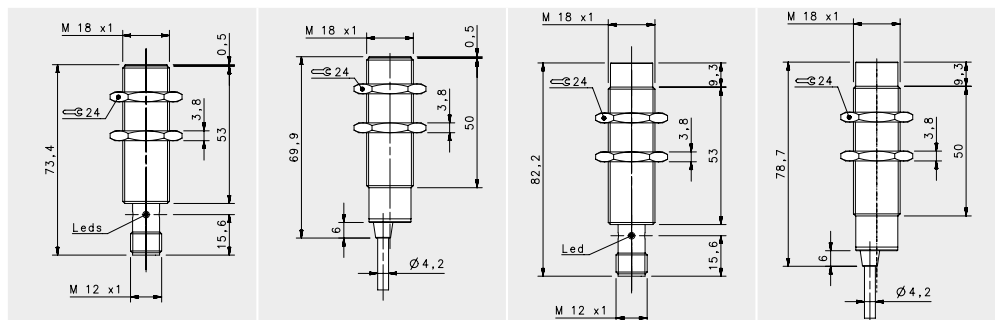
|                 |                |          |           | 5 mm                     | 5 mm                     | 8 mm                     | 8 mm                     |
|-----------------|----------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10-30 Vdc       | PNP/NPN NO-NC  | 4 wires  | order No. | IS-18-A0-S2<br>95B064260 | IS-18-A0-O3<br>95B064230 | IS-18-C0-S2<br>95B064280 | IS-18-C0-O3<br>95B064240 |
| 10-30 Vdc       | PNP NO         | 3 wires  | order No. | IS-18-A1-S2<br>95B061351 | IS-18-A1-O3<br>95B061341 | IS-18-C1-S2<br>95B061751 | IS-18-C1-O3<br>95B061741 |
| 10-30 Vdc       | PNP NC         | 3 wires  | order No. | IS-18-A2-S2<br>95B061371 | IS-18-A2-O3<br>95B061361 | IS-18-C2-S2<br>95B061771 | IS-18-C2-O3<br>95B061761 |
| 10-30 Vdc       | NPN NO         | 3 wires  | order No. | IS-18-A3-S2<br>95B061311 | IS-18-A3-O3<br>95B061301 | IS-18-C3-S2<br>95B061711 | IS-18-C3-O3<br>95B061701 |
| 10-30 Vdc       | NPN NC         | 3 wires  | order No. | IS-18-A4-S2<br>95B061331 | IS-18-A4-O3<br>95B061321 | IS-18-C4-S2<br>95B061731 | IS-18-C4-O3<br>95B061721 |
| 10-30 Vdc       | PNP NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC          | 2 wires  | order No. | IS-18-A9-S2<br>95B063941 | IS-18-A9-O3<br>95B064300 | IS-18-C9-S2<br>95B064340 | IS-18-C9-O3<br>95B064310 |
| 20-250 Vac/Vdc  | NO             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO             | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog 0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

|                           |                                           |                                                                                  |                                           |                                                                                  |
|---------------------------|-------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                                              | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                                              |
| Residual Ripple           | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Hysteresis                | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Max. Output Current       | 200 mA                                    | 200 mA                                                                           | 200 mA                                    | 200 mA                                                                           |
| Min. Output Current       | > 1,6 mA (2wires ver.)                    | > 1,6 mA (2wires ver.)                                                           | > 1,6 mA (2wires ver.)                    | > 1,6 mA (2wires ver.)                                                           |
| Residual Current          | < 10 mA                                   | < 10 mA                                                                          | < 10 mA                                   | < 10 mA                                                                          |
| Voltage Drop              | < 1,8V; < 6,5 V (2wires ver.)             | < 1,8V; < 6,5 V (2wires ver.)                                                    | < 1,8V; < 6,5 V (2wires ver.)             | < 1,8V; < 6,5 V (2wires ver.)                                                    |
| Operation Led             | Yellow                                    | Yellow                                                                           | Yellow                                    | Yellow                                                                           |
| Switching Frequency       | 1000 Hz/200 Hz (2 wires NO-NC)            | 1000 Hz/200 Hz (2 wires NO-NC)                                                   | 1000 Hz/200 Hz (2 wires NO-NC)            | 1000 Hz/200 Hz (2 wires NO-NC)                                                   |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                                                          | < 50 ms                                   | < 50 ms                                                                          |
| Repeatability             | < 3%                                      | < 3%                                                                             | < 3%                                      | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                                                         | Present (self-resetting)                  | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        |
| Temperature Limit         | (-25 ... +60 °C)                          | (-25 ... +60 °C)                                                                 | (-25 ... +60 °C)                          | (-25 ... +60 °C)                                                                 |
| Protection Degree         | IP67                                      | IP67                                                                             | IP67                                      | IP67                                                                             |
| Cable Length              | ---                                       | 2 m                                                                              | ---                                       | 2 m                                                                              |
| Cable Section             | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                                                              | Nickel-plated brass                       | Nickel-plated brass                                                              |
| Active face               | LCP                                       | LCP                                                                              | LCP                                       | LCP                                                                              |
| Tightening torque         | 30Nm                                      | 30Nm                                                                             | 30Nm                                      | 30Nm                                                                             |
| Weight - Cable Output     | ---                                       | 145g                                                                             | ---                                       | 145g                                                                             |
| Weight - Connector Output | 95g                                       | ---                                                                              | 95g                                       | ---                                                                              |





# BASIC M18



## STANDARD X2

### FLUSH

### NON FLUSH

M12 conn

cable

M12 conn

cable

### NOMINAL SWITCHING DISTANCE

8 mm

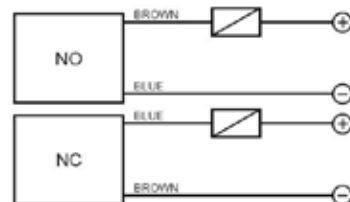
14 mm

| 10-30 Vdc       | PNP/NPN<br>NO-NC  | 4 wires  | order No. | IS-18-E0-S2<br>95B067310 | IS-18-E0-O3<br>95B067270 | IS-18-F0-S2<br>95B067330 | IS-18-F0-O3<br>95B067290 |
|-----------------|-------------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
| 10-30 Vdc       | PNP<br>NO         | 3 wires  | order No. | IS-18-E1-S2<br>95B067050 | IS-18-E1-O3<br>95B067810 | IS-18-F1-S2<br>95B067040 | IS-18-F1-O3<br>95B067880 |
| 10-30 Vdc       | PNP<br>NC         | 3 wires  | order No. | IS-18-E2-S2<br>95B067780 | IS-18-E2-O3<br>95B067820 | IS-18-F2-S2<br>95B067850 | IS-18-F2-O3<br>95B067890 |
| 10-30 Vdc       | NPN<br>NO         | 3 wires  | order No. | IS-18-E3-S2<br>95B067790 | IS-18-E3-O3<br>95B067830 | IS-18-F3-S2<br>95B067860 | IS-18-F3-O3<br>95B067900 |
| 10-30 Vdc       | NPN<br>NC         | 3 wires  | order No. | IS-18-E4-S2<br>95B067800 | IS-18-E4-O3<br>95B067840 | IS-18-F4-S2<br>95B067870 | IS-18-F4-O3<br>95B067910 |
| 10-30 Vdc       | PNP<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN<br>NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NO-NC             | 2 wires  | order No. | IS-18-E9-S2<br>95B067320 | IS-18-E9-O3<br>95B067280 | IS-18-F9-S2<br>95B067340 | IS-18-F9-O3<br>95B067300 |
| 20-250 Vac/Vdc  | NO                | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc  | NC                | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac      | NO                | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | Analog<br>0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier | NAMUR             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

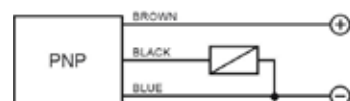
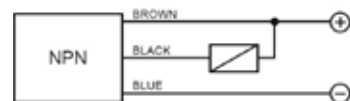
| Nominal Voltage           | 10-30 Vdc (-15/10%)                          | 10-30 Vdc (-15/10%)                                                              | 10-30 Vdc (-15/10%)                          | 10-30 Vdc (-15/10%)                                                              |
|---------------------------|----------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------------------------|
| Residual Ripple           | < 10%                                        | < 10%                                                                            | < 10%                                        | < 10%                                                                            |
| Hysteresis                | < 10%                                        | < 10%                                                                            | < 10%                                        | < 10%                                                                            |
| Max. Output Current       | 200 mA                                       | 200 mA                                                                           | 200 mA                                       | 200 mA                                                                           |
| Min. Output Current       | ---                                          | ---                                                                              | ---                                          | ---                                                                              |
| Residual Current          | < 10 mA                                      | < 10 mA                                                                          | < 10 mA                                      | < 10 mA                                                                          |
| Voltage Drop              | < 1,2 V (I=100mA)                            | < 1,2 V (I=100mA)                                                                | < 1,2 V (I=100mA)                            | < 1,2 V (I=100mA)                                                                |
| Operation Led             | Yellow                                       | Yellow                                                                           | Yellow                                       | Yellow                                                                           |
| Switching Frequency       | 400 Hz                                       | 400 Hz                                                                           | 100 Hz                                       | 100 Hz                                                                           |
| Start Up Delay            | < 50 ms                                      | < 50 ms                                                                          | < 50 ms                                      | < 50 ms                                                                          |
| Repeatability             | < 3%                                         | < 3%                                                                             | < 3%                                         | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                     | Present (self-resetting)                                                         | Present (self-resetting)                     | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal<br>inductive loads | Against polarity reversal<br>inductive loads                                     | Against polarity reversal<br>inductive loads | Against polarity reversal<br>inductive loads                                     |
| Temperature Limit         | (-25 ... +70 °C)                             | (-25 ... +70 °C)                                                                 | (-25 ... +70 °C)                             | (-25 ... +70 °C)                                                                 |
| Protection Degree         | IP67                                         | IP67                                                                             | IP67                                         | IP67                                                                             |
| Cable Length              | ---                                          | ---                                                                              | ---                                          | ---                                                                              |
| Cable Section             | ---                                          | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                          | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                          | Nickel-plated brass                                                              | Nickel-plated brass                          | Nickel-plated brass                                                              |
| Active face               | LCP                                          | LCP                                                                              | LCP                                          | LCP                                                                              |
| Tightening torque         | 30Nm                                         | 30Nm                                                                             | 30Nm                                         | 30Nm                                                                             |
| Weight - Cable Output     | ---                                          | ---                                                                              | 145g                                         | 145g                                                                             |
| Weight - Connector Output | 95g                                          | 95g                                                                              | ---                                          | ---                                                                              |

[illegible]

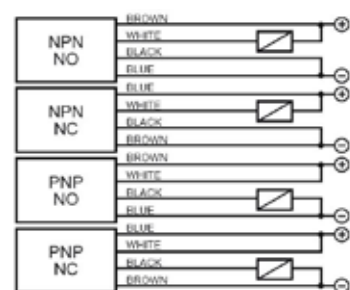
2 wires NO or NC



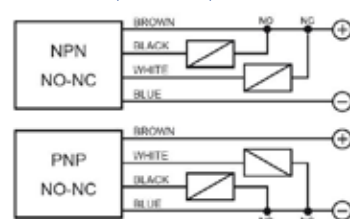
3 wires PNP or NPN



4 wires (PNP/NPN, NO/NC)



4 wires (NO+NC)



## M12 connector connections

2 wires NO or NC

| Available | Contacts numbers |   |   |   |
|-----------|------------------|---|---|---|
|           | 1                | 2 | 3 | 4 |
| NO        | +                |   | - |   |
| NC        | -                |   | + |   |

3 wires

| CONTACTS CONFIGURATION |                  |   |   |       |
|------------------------|------------------|---|---|-------|
| Available              | Contacts numbers |   |   |       |
|                        | 1                | 2 | 3 | 4     |
| (NO or NC)             | +                |   | — | NO/NC |

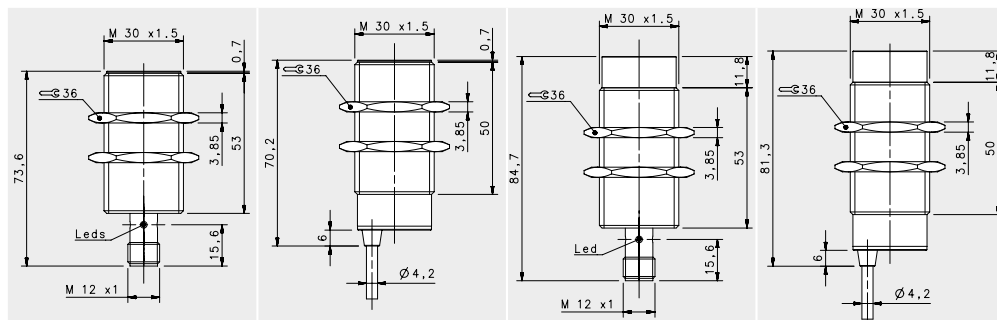
4 wires (PNP/NPN, NO/NC)

| Output | Contacts numbers |    |   |    |
|--------|------------------|----|---|----|
|        | 1                | 2  | 3 | 4  |
| NPN NO | +                | NO | - | -  |
| NPN NC | -                | NC | + | -  |
| PNP NO | +                | +  | - | NO |
| PNP NC | -                | +  | + | NC |

4 wires (NO+NC)

| Available | Contacts numbers |    |   |    |
|-----------|------------------|----|---|----|
|           | 1                | 2  | 3 | 4  |
| (NO + NC) | +                | NC | - | NO |

# BASIC M30



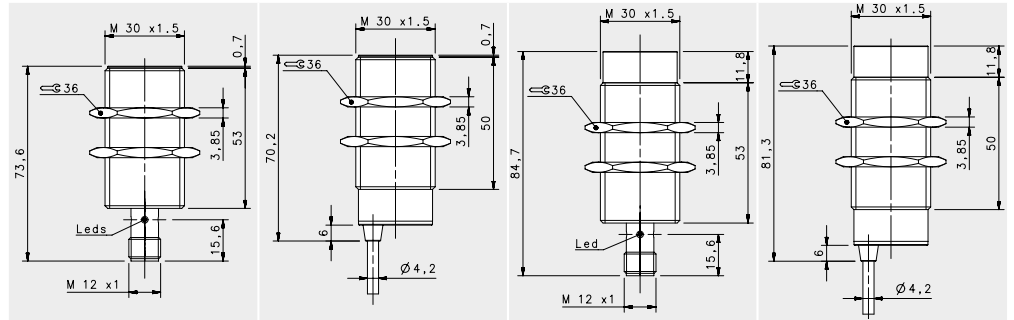
## STANDARD

|                            |                |          |           | FLUSH                    |                          | NON FLUSH                |                          |
|----------------------------|----------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
|                            |                |          |           | M12 conn                 | cable                    | M12 conn                 | cable                    |
| NOMINAL SWITCHING DISTANCE |                |          |           | 10 mm                    | 10 mm                    | 15 mm                    | 15 mm                    |
| 10-30 Vdc                  | PNP/NPN NO-NC  | 4 wires  | order No. | IS-30-A0-S2<br>95B064490 | IS-30-A0-03<br>95B064460 | IS-30-C0-S2<br>95B064510 | IS-30-C0-03<br>95B064470 |
| 10-30 Vdc                  | PNP NO         | 3 wires  | order No. | IS-30-A1-S2<br>95B061431 | IS-30-A1-03<br>95B061421 | IS-30-C1-S2<br>95B061831 | IS-30-C1-03<br>95B061821 |
| 10-30 Vdc                  | PNP NC         | 3 wires  | order No. | IS-30-A2-S2<br>95B061451 | IS-30-A2-03<br>95B061441 | IS-30-C2-S2<br>95B061851 | IS-30-C2-03<br>95B061841 |
| 10-30 Vdc                  | NPN NO         | 3 wires  | order No. | IS-30-A3-S2<br>95B061391 | IS-30-A3-03<br>95B061381 | IS-30-C3-S2<br>95B061791 | IS-30-C3-03<br>95B061781 |
| 10-30 Vdc                  | NPN NC         | 3 wires  | order No. | IS-30-A4-S2<br>95B061411 | IS-30-A4-03<br>95B061401 | IS-30-C4-S2<br>95B061811 | IS-30-C4-03<br>95B061801 |
| 10-30 Vdc                  | PNP NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NPN NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NO-NC          | 2 wires  | order No. | IS-30-A9-S2<br>95B064570 | IS-30-A9-03<br>95B064530 | IS-30-C9-S2<br>95B064590 | IS-30-C9-03<br>95B064550 |
| 20-250 Vac/Vdc             | NO             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc             | NC             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac                 | NO             | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | Analog 0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier            | NAMUR          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

|                           |                                           |                                                                                  |                                           |                                                                                  |
|---------------------------|-------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                                              | 10-30 Vdc (-15/10%)                       | 10-30 Vdc (-15/10%)                                                              |
| Residual Ripple           | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Hysteresis                | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Max. Output Current       | 200mA; 100 mA (2wires)                    | 200mA; 100 mA (2wires)                                                           | 200mA; 100 mA (2wires)                    | 200mA; 100 mA (2wires)                                                           |
| Min. Output Current       | > 1,6 mA (2wires)                         | > 1,6 mA (2wires)                                                                | > 1,6 mA (2wires)                         | > 1,6 mA (2wires)                                                                |
| Residual Current          | < 1,6 mA                                  | < 1,6 mA                                                                         | < 1,6 mA                                  | < 1,6 mA                                                                         |
| Voltage Drop              | < 1,8V; < 6,5 V (2wires)                  | < 1,8V; < 6,5 V (2wires)                                                         | < 1,8V; < 6,5 V (2wires)                  | < 1,8V; < 6,5 V (2wires)                                                         |
| Operation Led             | Yellow                                    | Yellow                                                                           | Yellow                                    | Yellow                                                                           |
| Switching Frequency       | 300 Hz/250 Hz (2 wires NO-NC)             | 300 Hz/250 Hz (2 wires NO-NC)                                                    | 300 Hz/250 Hz (2 wires NO-NC)             | 300 Hz/250 Hz (2 wires NO-NC)                                                    |
| Start Up Delay            | < 50 ms                                   | < 50 ms                                                                          | < 50 ms                                   | < 50 ms                                                                          |
| Repeatability             | < 3%                                      | < 3%                                                                             | < 3%                                      | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                                                         | Present (self-resetting)                  | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 |
| Protection Degree         | IP67                                      | IP67                                                                             | IP67                                      | IP67                                                                             |
| Cable Length              | ---                                       | 2 m                                                                              | ---                                       | 2 m                                                                              |
| Cable Section             | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                                                              | Nickel-plated brass                       | Nickel-plated brass                                                              |
| Active face               | LCP                                       | LCP                                                                              | LCP                                       | LCP                                                                              |
| Tightening torque         | 60Nm                                      | 60Nm                                                                             | 60Nm                                      | 60Nm                                                                             |
| Weight - Cable Output     | ---                                       | 210 g                                                                            | ---                                       | 210 g                                                                            |
| Weight - Connector Output | 170 g                                     | ---                                                                              | 170 g                                     | ---                                                                              |



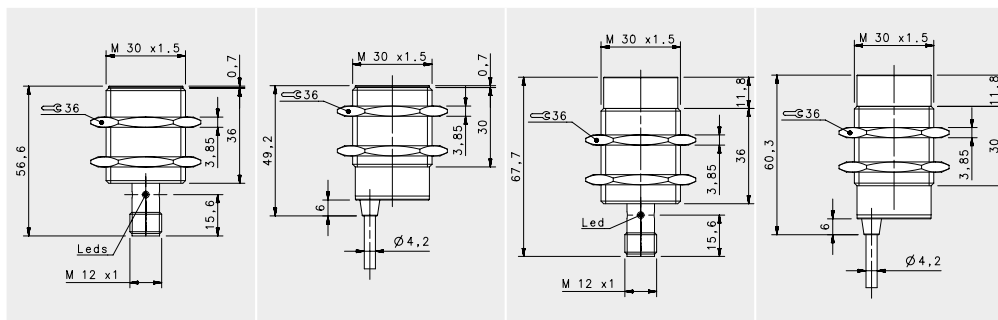
# BASIC M30



## STANDARD X2

|                            |                |          |           | FLUSH                    |                          | NON-FLUSH                |                          |
|----------------------------|----------------|----------|-----------|--------------------------|--------------------------|--------------------------|--------------------------|
|                            |                |          |           | M12 conn                 | cable                    | M12 conn                 | cable                    |
| NOMINAL SWITCHING DISTANCE |                |          |           | 15mm                     | 15mm                     | 20 mm                    | 20 mm                    |
| 10-30 Vdc                  | PNP/NPN NO-NC  | 4 wires  | order No. | IS-30-E0-S2<br>95B067390 | IS-30-E0-03<br>95B067350 | IS-30-F0-S2<br>95B067410 | IS-30-F0-03<br>95B067370 |
| 10-30 Vdc                  | PNP NO         | 3 wires  | order No. | IS-30-E1-S2<br>95B067060 | IS-30-E1-03<br>95B067950 | IS-30-F1-S2<br>95B067990 | IS-30-F1-03<br>95B068030 |
| 10-30 Vdc                  | PNP NC         | 3 wires  | order No. | IS-30-E2-S2<br>95B067920 | IS-30-E2-03<br>95B067960 | IS-30-F2-S2<br>95B068000 | IS-30-F2-03<br>95B068040 |
| 10-30 Vdc                  | NPN NO         | 3 wires  | order No. | IS-30-E3-S2<br>95B067930 | IS-30-E3-03<br>95B067970 | IS-30-F3-S2<br>95B068010 | IS-30-F3-03<br>95B068050 |
| 10-30 Vdc                  | NPN NC         | 3 wires  | order No. | IS-30-E4-S2<br>95B067940 | IS-30-E4-03<br>95B067980 | IS-30-F4-S2<br>95B068020 | IS-30-F4-03<br>95B068060 |
| 10-30 Vdc                  | PNP NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NPN NO-NC      | 4 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | NO-NC          | 2 wires  | order No. | IS-30-E9-S2<br>95B067400 | IS-30-E9-03<br>95B067360 | IS-30-F9-S2<br>95B067420 | IS-30-F9-03<br>95B067380 |
| 20-250 Vac/Vdc             | NO             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac/Vdc             | NC             | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 20-250 Vac                 | NO             | 2/3wires | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc                  | Analog 0-20 mA | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| NAMUR amplifier            | NAMUR          | 2 wires  | order No. | ---                      | ---                      | ---                      | ---                      |

|                           |                                           |                                                                                  |                                           |                                                                                  |
|---------------------------|-------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------|
| Nominal Voltage           | 10-30 Vdc (-15/+10%)                      | 10-30 Vdc (-15/+10%)                                                             | 10-30 Vdc (-15/+10%)                      | 10-30 Vdc (-15/+10%)                                                             |
| Residual Ripple           | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Hysteresis                | < 10%                                     | < 10%                                                                            | < 10%                                     | < 10%                                                                            |
| Max. Output Current       | 200 mA                                    | 200 mA                                                                           | 200 mA                                    | 200 mA                                                                           |
| Min. Output Current       | ---                                       | ---                                                                              | ---                                       | ---                                                                              |
| Residual Current          | < 10 mA                                   | < 10 mA                                                                          | < 10 mA                                   | < 10 mA                                                                          |
| Voltage Drop              | < 6,5 V (I=100mA)                         | < 6,5 V (I=100mA)                                                                | < 6,5 V (I=100mA)                         | < 6,5 V (I=100mA)                                                                |
| Operation Led             | Yellow                                    | Yellow                                                                           | Yellow                                    | Yellow                                                                           |
| Switching Frequency       | 200 Hz/100 Hz (2 wires NO-NC)             | 200 Hz/100 Hz (2 wires NO-NC)                                                    | 200 Hz/100 Hz (2 wires NO-NC)             | 200 Hz/100 Hz (2 wires NO-NC)                                                    |
| Start Up Delay            | < 75 ms                                   | < 75 ms                                                                          | < 75 ms                                   | < 75 ms                                                                          |
| Repeatability             | < 3%                                      | < 3%                                                                             | < 3%                                      | < 3%                                                                             |
| Short Circuit Protection  | Present (self-resetting)                  | Present (self-resetting)                                                         | Present (self-resetting)                  | Present (self-resetting)                                                         |
| Electric Protection       | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        | Against polarity reversal inductive loads | Against polarity reversal inductive loads                                        |
| Temperature Limit         | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                                                 |
| Protection Degree         | IP67                                      | IP67                                                                             | IP67                                      | IP67                                                                             |
| Cable Length              | ---                                       | ---                                                                              | ---                                       | ---                                                                              |
| Cable Section             | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 2 x 0,34 mm <sup>2</sup><br>3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                                                              | Nickel-plated brass                       | Nickel-plated brass                                                              |
| Active face               | LCP                                       | LCP                                                                              | LCP                                       | LCP                                                                              |
| Tightening torque         | 60Nm                                      | 60Nm                                                                             | 60Nm                                      | 60Nm                                                                             |
| Weight - Cable Output     | ---                                       | ---                                                                              | ---                                       | ---                                                                              |
| Weight - Connector Output | 170 g                                     | 170 g                                                                            | 170 g                                     | 170 g                                                                            |

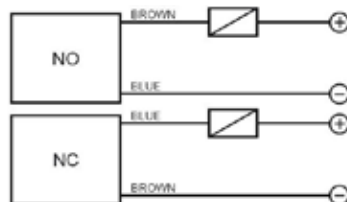


## SHORT X2

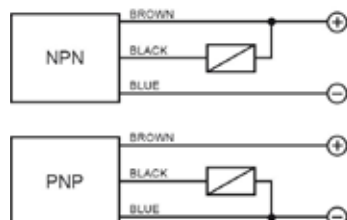
| FLUSH       |             | NON FLUSH   |             |
|-------------|-------------|-------------|-------------|
| M12 conn    | cable       | M12 conn    | cable       |
| 15mm        | 15mm        | 20 mm       | 20 mm       |
| ---         | ---         | ---         | ---         |
| IS-30-G1-S2 | IS-30-G1-03 | IS-30-H1-S2 | IS-30-H1-03 |
| 95B063691   | 95B063681   | 95B063771   | 95B063761   |
| IS-30-G2-S2 | IS-30-G2-03 | IS-30-H2-S2 | IS-30-H2-03 |
| 95B063711   | 95B063701   | 95B063791   | 95B063781   |
| IS-30-G3-S2 | IS-30-G3-03 | IS-30-H3-S2 | IS-30-H3-03 |
| 95B063651   | 95B063641   | 95B063731   | 95B063721   |
| IS-30-G4-S2 | IS-30-G4-03 | IS-30-H4-S2 | IS-30-H4-03 |
| 95B063671   | 95B063661   | 95B063751   | 95B063741   |
| IS-30-G5-S2 | IS-30-G5-03 | IS-30-H5-S2 | IS-30-H5-03 |
| 95B063831   | 95B063821   | 95B064450   | 95B064420   |
| IS-30-G6-S2 | IS-30-G6-03 | IS-30-H6-S2 | IS-30-H6-03 |
| 95B064430   | 95B064400   | 95B064440   | 95B064410   |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |

| 10-30 Vdc (-15/+10%)                      | 10-30 Vdc (-15/+10%)                                 | 10-30 Vdc (-15/+10%)                      | 10-30 Vdc (-15/+10%)                                 |
|-------------------------------------------|------------------------------------------------------|-------------------------------------------|------------------------------------------------------|
| < 10%                                     | < 10%                                                | < 10%                                     | < 10%                                                |
| < 10%                                     | < 10%                                                | < 10%                                     | < 10%                                                |
| 200 mA                                    | 200 mA                                               | 200 mA                                    | 200 mA                                               |
| ---                                       | ---                                                  | ---                                       | ---                                                  |
| < 10 mA                                   | < 10 mA                                              | < 10 mA                                   | < 10 mA                                              |
| < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                                    | < 1,2 V (I=100mA)                         | < 1,2 V (I=100mA)                                    |
| Yellow                                    | Yellow                                               | Yellow                                    | Yellow                                               |
| 200 Hz                                    | 200 Hz                                               | 200 Hz                                    | 200 Hz                                               |
| < 75 ms                                   | < 75 ms                                              | < 75 ms                                   | < 75 ms                                              |
| < 3%                                      | < 3%                                                 | < 3%                                      | < 3%                                                 |
| Present (self-resetting)                  | Present (self-resetting)                             | Present (self-resetting)                  | Present (self-resetting)                             |
| Against polarity reversal inductive loads | Against polarity reversal inductive loads            | Against polarity reversal inductive loads | Against polarity reversal inductive loads            |
| (-25 ... +70 °C)                          | (-25 ... +70 °C)                                     | (-25 ... +70 °C)                          | (-25 ... +70 °C)                                     |
| IP67                                      | IP67                                                 | IP67                                      | IP67                                                 |
| ---                                       | 2 m                                                  | ---                                       | 2 m                                                  |
| ---                                       | 3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> | ---                                       | 3 x 0,14 mm <sup>2</sup><br>4 x 0,25 mm <sup>2</sup> |
| Nickel-plated brass                       | Nickel-plated brass                                  | Nickel-plated brass                       | Nickel-plated brass                                  |
| LCP                                       | LCP                                                  | LCP                                       | LCP                                                  |
| 60Nm                                      | 60Nm                                                 | 60Nm                                      | 60Nm                                                 |
| ---                                       | 210 g                                                | ---                                       | 210 g                                                |
| 170 g                                     | ---                                                  | 170 g                                     | ---                                                  |

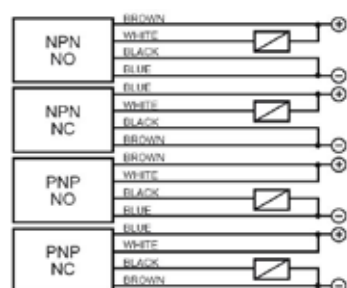
## 2 wires NO or NC



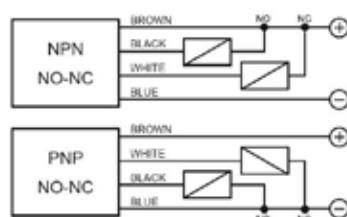
## 3 wires PNP or NPN



## 4 wires (PNP/NPN, NO/NC)



## 4 wires (NO+NC)



## M12 connector connections

## 2 wires NO or NC

| Available | CONTACTS CONFIGURATION |   |   |   |
|-----------|------------------------|---|---|---|
|           | Contacts numbers       |   |   |   |
| NO        | 1                      | 2 | 3 | 4 |
| NC        | +                      | — | + | — |

## 3 wires

| Available  | CONTACTS CONFIGURATION |   |   |       |
|------------|------------------------|---|---|-------|
|            | Contacts numbers       |   |   |       |
| (NO or NC) | 1                      | 2 | 3 | 4     |
|            | +                      | — | — | NO/NC |

## 4 wires (PNP/NPN, NO/NC)

| Output | CONTACTS CONFIGURATION |    |   |    |
|--------|------------------------|----|---|----|
|        | Contacts numbers       |    |   |    |
| NPN NO | 1                      | 2  | 3 | 4  |
| NPN NC | +                      | NO | — | —  |
| PNP NO | +                      | +  | — | NO |
| PNP NC | —                      | +  | + | NC |

## 4 wires (NO+NC)

| Available | Contacts numbers |    |   |    |
|-----------|------------------|----|---|----|
|           | 1                | 2  | 3 | 4  |
| (NO + NC) | +                | NC | — | NO |