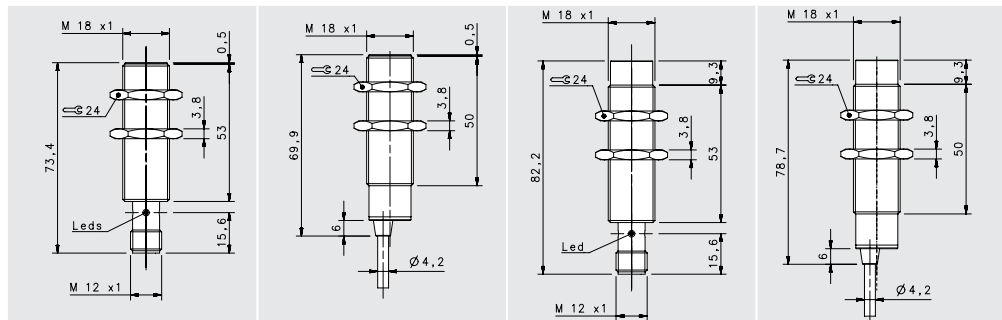


# BASIC M18



## STANDARD

### FLUSH

### NON FLUSH

M12 conn

cable

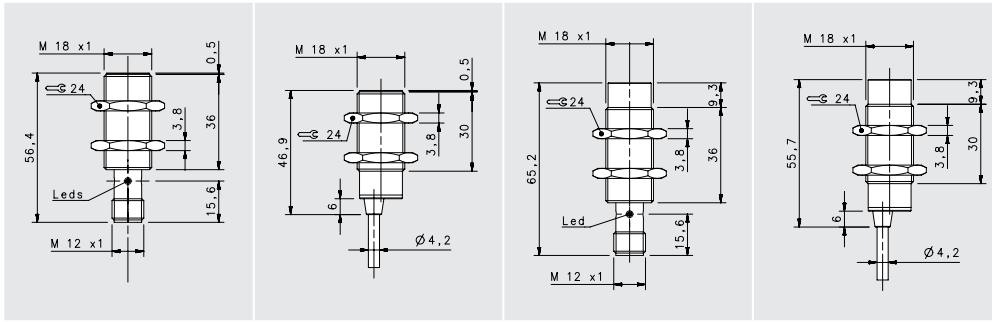
M12 conn

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. | ---                      | ---                      | ---                      | ---                      |

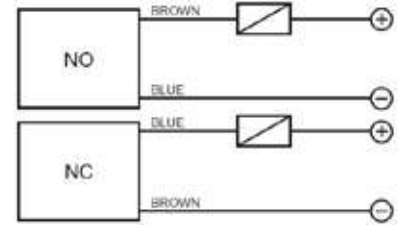
|                           |                                           |                                           |                                           |                                           |
|---------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| 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             | ---                                       | 2/3/4 x 0,25 mm²                          | ---                                       | 2/3/4 x 0,25 mm²                          |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Weight - Cable Output     | ---                                       | 145g                                      | ---                                       | 145g                                      |
| Weight - Connector Output | 95g                                       | ---                                       | 95g                                       | ---                                       |



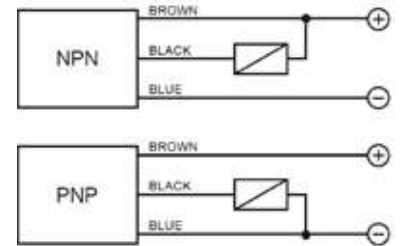
| SHORT       |             |             |             |
|-------------|-------------|-------------|-------------|
| FLUSH       |             | NON FLUSH   |             |
| M12 conn    | cable       | M12 conn    | cable       |
| 5 mm        | 5 mm        | 8 mm        | 8 mm        |
| ---         | ---         | ---         | ---         |
| IS-18-B1-S2 | IS-18-B1-03 | IS-18-D1-S2 | IS-18-D1-03 |
| 95B062151   | 95B062141   | 95B062551   | 95B062541   |
| IS-18-B2-S2 | IS-18-B2-03 | IS-18-D2-S2 | IS-18-D2-03 |
| 95B062171   | 95B062161   | 95B062571   | 95B062561   |
| IS-18-B3-S2 | IS-18-B3-03 | IS-18-D3-S2 | IS-18-D3-03 |
| 95B062111   | 95B062101   | 95B062511   | 95B062501   |
| IS-18-B4-S2 | IS-18-B4-03 | IS-18-D4-S2 | IS-18-D4-03 |
| 95B062131   | 95B062121   | 95B062531   | 95B062521   |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |
| ---         | ---         | ---         | ---         |

| 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                                   |
| < 1,8 V (I=100mA)                         | < 1,8 V (I=100mA)                         | < 1,8 V (I=100mA)                         | < 1,8 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 ... +60 °C)                          | (-25 ... +60 °C)                          | (-25 ... +60 °C)                          | (-25 ... +60 °C)                          |
| IP67                                      | IP67                                      | IP67                                      | IP67                                      |
| ---                                       | 2 m                                       | ---                                       | ---                                       |
| ---                                       | 3 x 0,25 mm <sup>2</sup>                  | ---                                       | 3 x 0,25 mm <sup>2</sup>                  |
| Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| ---                                       | 145g                                      | ---                                       | 145g                                      |
| 95g                                       | ---                                       | 95g                                       | ---                                       |

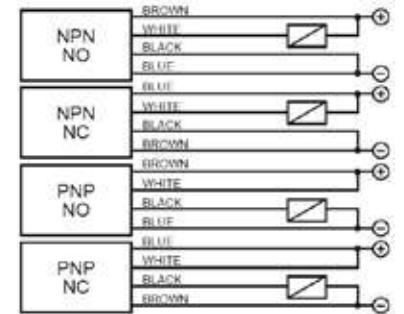
## 2 wires NO or NC



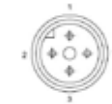
## 3 wires PNP or NPN



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



## M12 connector - connections



## 2 wires NO or NC

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

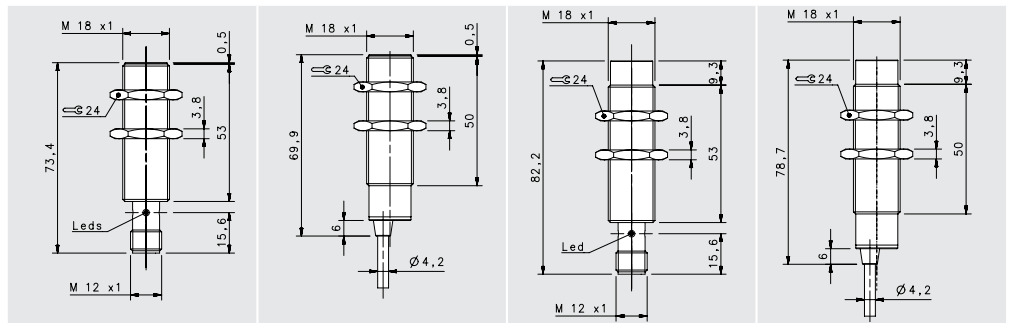
## 3 wires

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

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

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

# BASIC M18



## STANDARD X2

### FLUSH

### NON FLUSH

M12 conn

cable

M12 conn

cable

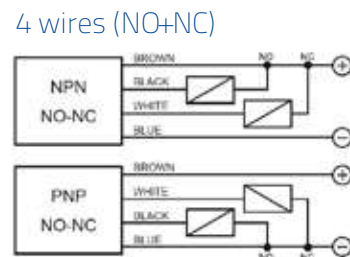
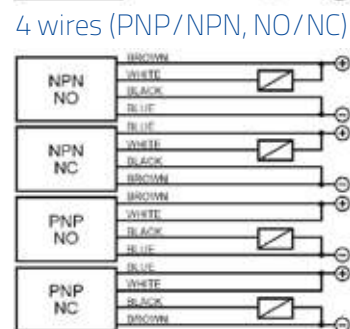
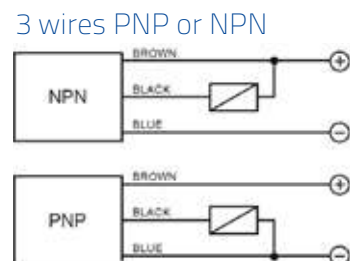
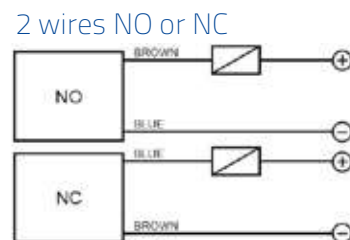
### NOMINAL SWITCHING DISTANCE

8 mm

14 mm

| 10-30 Vdc       | PNP/NPN 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 NO         | 3 wires  | order No. | IS-18-E1-S2<br>95B067050 |                          | IS-18-F1-S2<br>95B067040 |                          |
| 10-30 Vdc       | PNP NC         | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NO         | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 10-30 Vdc       | NPN NC         | 3 wires  | order No. | ---                      | ---                      | ---                      | ---                      |
| 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-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 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 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             | ---                                       | ---                                       | ---                                       | ---                                       |
| Housing Material          | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       | Nickel-plated brass                       |
| Weight - Cable Output     | ---                                       | ---                                       | 145g                                      | 145g                                      |
| Weight - Connector Output | 95g                                       | 95g                                       | ---                                       | ---                                       |

[illegible]

## M12 connector connections

