

PRESSURE



**PRESSURE RESISTANT UP TO 100 BAR (1451 PSI)**

# EXTRA PRESSURE

## INDUCTIVE SENSORS

### KEY ADVANTAGES

- ✓ Pressure resistant up to 100 bar (1451 psi)
- ✓ Mechanically and chemically rugged
- ✓ Impervious: IP 68
- ✓ Gas-tight sensing face
- ✓ Miniature devices

| RANGE OVERVIEW    | Housing size | Classics | Extra Distance |
|-------------------|--------------|----------|----------------|
| EXTRA<br>PRESSURE | ∅ 3 mm       | p. 95    |                |
|                   | M5           | p. 95    |                |
|                   | ∅ 6.5 mm     |          | p. 95          |

FAMILY

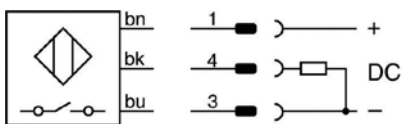
HOUSING SIZE MM

OPERATING DISTANCE MM

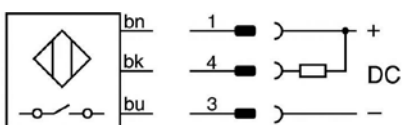
# INDUCTIVE

## WIRING DIAGRAMS

PNP NO



NPN NO



## DATA

Sensing face material

Operating pressure

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

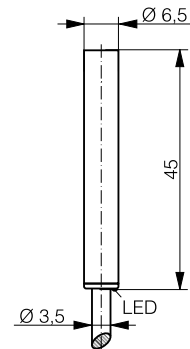
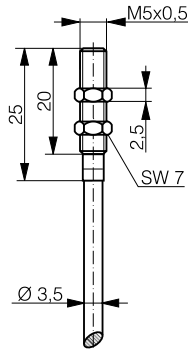
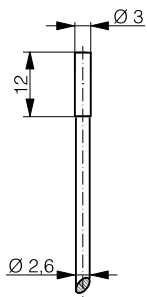
PNP NO

NPN NO

Other types available

# EXTRA PRESSURE

| CLASSICS | CLASSICS | EXTRA DISTANCE |
|----------|----------|----------------|
| Ø 3      | M5       | Ø 6.5          |
| 0.8      | 0.6      | 2.5            |



| Ceramic ZrO <sub>2</sub>       | Sapphire                       | Ceramic ZrO <sub>2</sub>       |
|--------------------------------|--------------------------------|--------------------------------|
| 200 bar                        | 20 bar                         | 20 bar                         |
| Stainless steel V2A            | Stainless steel V2A            | Stainless steel V2A            |
| PUR cable                      | PUR cable                      | PUR cable                      |
| IP 68                          | IP 68                          | IP 68                          |
| Embeddable                     | Embeddable                     | Embeddable                     |
| 8000 Hz                        | 5000 Hz                        | 1000 Hz                        |
| 10 ... 30 VDC                  | 10 ... 30 VDC                  | 10 ... 30 VDC                  |
| -25 ... +70°C / -13 ... +158°F | -25 ... +70°C / -13 ... +158°F | -25 ... +70°C / -13 ... +158°F |
| ≤ 100 mA                       | ≤ 200 mA                       | ≤ 200 mA                       |
| <b>DW-AD-623-03E-961</b>       | <b>DW-AD-603-M5E</b>           | <b>DW-AD-503-065E</b>          |
| <b>DW-AD-621-03E-961</b>       | <b>DW-AD-601-M5E</b>           | <b>DW-AD-501-065E</b>          |
| PNP NC, NPN NC                 | PNP NC, NPN NC                 | PNP NC, NPN NC                 |

Inductive

Photoelectric

Ultrasonic

Capacitive

Safety

RFID

Connectivity

Accessories

Glossary

Index



PRESSURE RESISTANT UP TO 500 BAR (7255 PSI)

# HIGH PRESSURE INDUCTIVE SENSORS

## KEY ADVANTAGES

- ✓ Highest operating (500 bar / 7255 psi) and peak pressure (1000 bar / 14510 psi) on the market
- ✓ Resistant to pressure cycles - 50 times longer lifetime under pressure than the market standard
- ✓ Gas-tight sensing face
- ✓ Large temperature range -25°C (-13°F) ... +100°C (+212°F)

| RANGE OVERVIEW           | Housing size | Extra Distance | Full Inox |
|--------------------------|--------------|----------------|-----------|
| <b>HIGH<br/>PRESSURE</b> | M5 / P5      | p. 99          |           |
|                          | M8 / P8      | p. 99          |           |
|                          | M12 / P12    | p. 99-101      | p. 101    |
|                          | M14 / P20    | p. 101-102     |           |

FAMILY

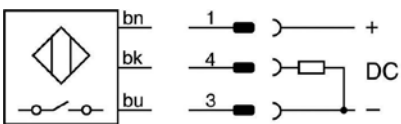
HOUSING SIZE

OPERATING DISTANCE MM

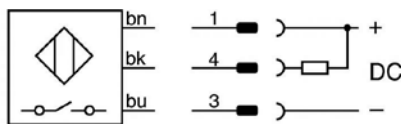
# INDUCTIVE

## WIRING DIAGRAMS

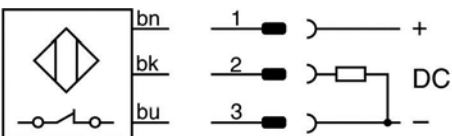
PNP NO



NPN NO



PNP NC



## DATA

Sensing face material

Operating pressure

Peak pressure

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

PNP NO

NPN NO

PNP NO ( $S_n = 1.5 \text{ mm}$ )

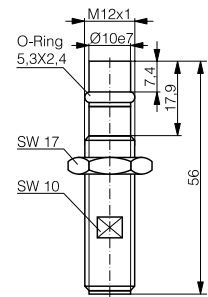
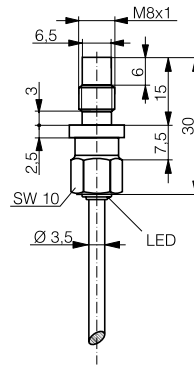
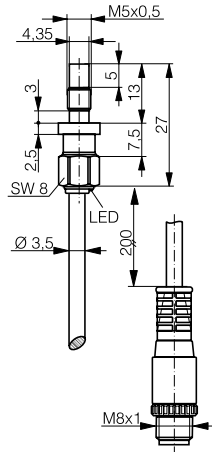
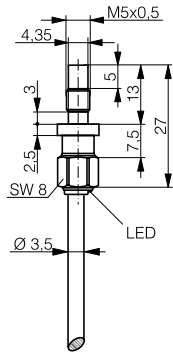
PNP NC ( $S_n = 1.5 \text{ mm}$ )

PNP NO ( $S_n = 2.5 \text{ mm}$ )

Other types available

# HIGH PRESSURE

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| M5 (P5)        | M5 (P5)        | M8 (P8)        | M12 (P12)      |
| 1              | 1              | 1.5            | 1.5 / 2.5      |



|               |
|---------------|
| Inductive     |
| Photoelectric |
| Ultrasonic    |
| Capacitive    |
| Safety        |
| RFID          |
| Connectivity  |
| Accessories   |
| Glossary      |
| Index         |

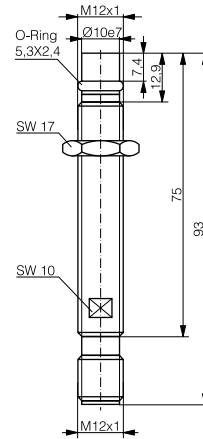
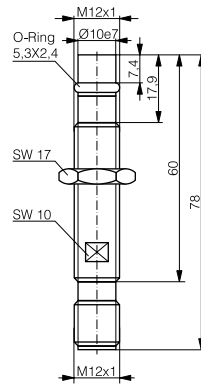
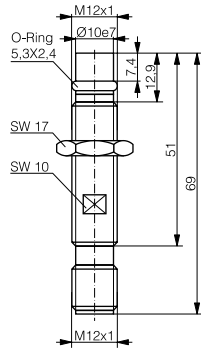
|                                 |                                 |                                 |                                |
|---------------------------------|---------------------------------|---------------------------------|--------------------------------|
|                                 |                                 |                                 |                                |
| Ceramic ZrO <sub>2</sub>        | Ceramic ZrO <sub>2</sub>        | Ceramic ZrO <sub>2</sub>        | Ceramic ZrO <sub>2</sub>       |
| 500 bar                         | 500 bar                         | 500 bar                         | 500 bar                        |
| 1000 bar                        | 1000 bar                        | 1000 bar                        | 1000 bar                       |
| Stainless steel V4A / AISI 316L | Stainless steel V4A / AISI 316L | Stainless steel V4A / AISI 316L | Stainless steel V2A            |
| PUR cable                       | PUR cable / Connector S8        | PUR cable                       | Connector S12                  |
| IP 68                           | IP 68                           | IP 68                           | IP 68                          |
| Embeddable                      | Embeddable                      | Embeddable                      | Embeddable                     |
| 1000 Hz                         | 1000 Hz                         | 800 Hz                          | 600 Hz                         |
| 10 ... 30 VDC                   | 10 ... 30 VDC                   | 10 ... 30 VDC                   | 10 ... 30 VDC                  |
| -25 ... +100°C / -13 ... +212°F | -25 ... +100°C / -13 ... +212°F | -25 ... +100°C / -13 ... +212°F | -25 ... +80°C / -13 ... +176°F |
| ≤ 200 mA                        | ≤ 200 mA                        | ≤ 200 mA                        | ≤ 200 mA                       |
| <b>DW-AD-503-P5</b>             | <b>DW-AV-503-P5-276</b>         | <b>DW-AD-503-P8</b>             |                                |
| <b>DW-AD-501-P5</b>             | <b>DW-AV-501-P5-276</b>         | <b>DW-AD-501-P8</b>             |                                |
|                                 |                                 |                                 | <b>DW-AS-503-P12-630</b>       |
|                                 |                                 |                                 | DW-AS-504-P12-630              |
|                                 |                                 |                                 | <b>DW-AS-523-P12-630</b>       |
| PNP NC, NPN NC                  | PNP NC, NPN NC                  | PNP NC, NPN NC                  | NPN NO, NPN NC                 |



# HIGH PRESSURE

INDUCTIVE

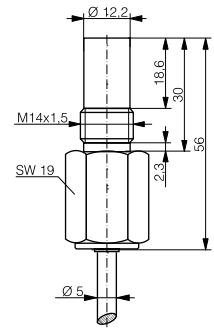
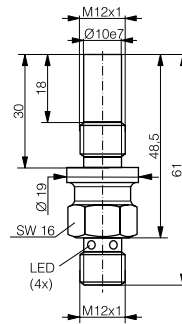
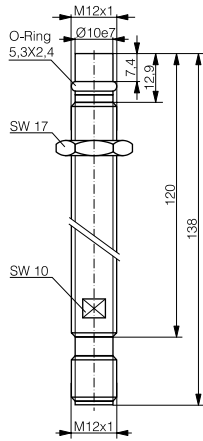
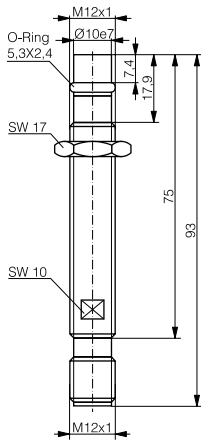
| FAMILY                | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------------|----------------|----------------|
| HOUSING SIZE          | M12 (P12)      | M12 (P12)      | M12 (P12)      |
| OPERATING DISTANCE MM | 1.5            | 1.5            | 1.5            |



| DATA                      |  |  |  |
|---------------------------|--|--|--|
| Sensing face material     | Ceramic ZrO <sub>2</sub>                     | Ceramic ZrO <sub>2</sub>                     | Ceramic ZrO <sub>2</sub>                     |
| Operating pressure        | 500 bar                                      | 500 bar                                      | 500 bar                                      |
| Peak pressure             | 1000 bar                                     | 1000 bar                                     | 1000 bar                                     |
| Housing material          | Stainless steel V2A                          | Stainless steel V2A                          | Stainless steel V2A                          |
| Connection                | Connector S12                                | Connector S12                                | Connector S12                                |
| Degree of protection      | IP 68  | IP 68  | IP 68  |
| Mounting                  | Embeddable                                   | Embeddable                                   | Embeddable                                   |
| Max. switching frequency  | 600 Hz                                       | 600 Hz                                       | 600 Hz                                       |
| Supply voltage range      | 10 ... 30 VDC                                | 10 ... 30 VDC                                | 10 ... 30 VDC                                |
| Ambient temperature range | -25 ... +80°C / -13 ... +176°F               | -25 ... +80°C / -13 ... +176°F               | -25 ... +80°C / -13 ... +176°F               |
| Output current            | ≤ 200 mA                                     | ≤ 200 mA                                     | ≤ 200 mA                                     |
| PNP NO                    | <b>DW-AS-503-P12</b>                         | <b>DW-AS-503-P12-627</b>                     | <b>DW-AS-503-P12-621</b>                     |
| NPN NO                    | <b>DW-AS-501-P12</b>                         | <b>DW-AS-501-P12-627</b>                     | <b>DW-AS-501-P12-621</b>                     |
| Other types available     | PNP NC, NPN NC,<br>2.5 mm operating distance | PNP NC, NPN NC,<br>2.5 mm operating distance | PNP NC, NPN NC,<br>2.5 mm operating distance |

# HIGH PRESSURE

| EXTRA DISTANCE | EXTRA DISTANCE | FULL INOX | EXTRA DISTANCE |
|----------------|----------------|-----------|----------------|
| M12 (P12)      | M12 (P12)      | M12 (P12) | M14 (P20)      |
| 1.5            | 1.5            | 1.5       | 3              |



| Ceramic ZrO <sub>2</sub>                     | Ceramic ZrO <sub>2</sub>                     | Stainless steel V4A / AISI 316L | Ceramic ZrO <sub>2</sub>        |
|--|--|---------------------------------|---------------------------------|
| 500 bar                                      | 500 bar                                      | 500 bar                         | 500 bar                         |
| 1000 bar                                     | 1000 bar                                     | 800 bar                         | 1000 bar                        |
| Stainless steel V2A                          | Stainless steel V2A                          | Stainless steel V4A / AISI 316L | Stainless steel V4A / AISI 316L |
| Connector S12                                | Connector S12                                | Connector S12                   | PUR cable                       |
| IP 68  | IP 68  | IP 68 / IP 69K                  | IP 68                           |
| Embeddable                                   | Embeddable                                   | Embeddable                      | Embeddable                      |
| 600 Hz                                       | 600 Hz                                       | 850 Hz                          | 500 Hz                          |
| 10 ... 30 VDC                                | 10 ... 30 VDC                                | 10 ... 30 VDC                   | 10 ... 30 VDC                   |
| -25 ... +80°C / -13 ... +176°F               | -25 ... +80°C / -13 ... +176°F               | -25 ... +85°C / -13 ... +185°F  | -25 ... +80°C / -13 ... +176°F  |
| ≤ 200 mA                                     | ≤ 200 mA                                     | ≤ 200 mA                        | ≤ 200 mA                        |
| <b>DW-AS-503-P12-635</b>                     | <b>DW-AS-503-P12-622</b>                     | <b>DW-LS-703-P12G</b>           | <b>DW-AD-503-P20</b>            |
| <b>DW-AS-501-P12-635</b>                     | <b>DW-AS-501-P12-622</b>                     | <b>DW-LS-701-P12G</b>           | <b>DW-AD-501-P20</b>            |
| PNP NC, NPN NC,<br>2.5 mm operating distance | PNP NC, NPN NC,<br>2.5 mm operating distance | PNP NC, NPN NC                  | PNP NC, NPN NC                  |

|               |
|---------------|
| Inductive     |
| Photoelectric |
| Ultrasonic    |
| Capacitive    |
| Safety        |
| RFID          |
| Connectivity  |
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# HIGH PRESSURE

FAMILY

EXTRA DISTANCE

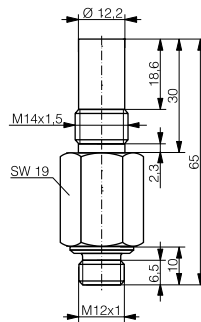
HOUSING SIZE

M14 (P20)

OPERATING DISTANCE MM

3

INDUCTIVE



## DATA

|                           |                                 |
|---------------------------|---------------------------------|
| Sensing face material     | Ceramic ZrO <sub>2</sub>        |
| Operating pressure        | 500 bar                         |
| Peak pressure             | 1000 bar                        |
| Housing material          | Stainless steel V4A / AISI 316L |
| Connection                | Connector S12                   |
| Degree of protection      | IP 68                           |
| Mounting                  | Embeddable                      |
| Max. switching frequency  | 500 Hz                          |
| Supply voltage range      | 10 ... 30 VDC                   |
| Ambient temperature range | -25 ... +80°C / -13 ... +176°F  |
| Output current            | ≤ 200 mA                        |
| PNP NO                    | <b>DW-AS-503-P20</b>            |
| NPN NO                    | <b>DW-AS-501-P20</b>            |
| Other types available     | PNP NC, NPN NC                  |