

EXCELLENCE IN NORMAL ENVIRONMENTS

BASIC

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Exceptional price-performance ratio
- ✓ Excellent accuracy
- ✓ Outstanding temperature compensation
- ✓ Vibration and shock resistant
- ✓ Large operating distance ($2 \times S_n$)

| RANGE OVERVIEW | Housing size | Classics | Extra Distance |
|----------------|--------------|-----------------|----------------|
| BASIC | ∅ 6.5 mm | p. 27-31 | p. 31 |
| | M8 | p. 31-37, 39-40 | p. 38-41 |
| | C8 | p. 41-42 | p. 43 |
| | M12 | p. 43-47 | p. 46-50 |
| | M18 | p. 50-53 | p. 53-55 |
| | M30 | p. 55-56 | p. 57-59 |
| | C40 | p. 58-60 | |
| | C44 | p. 60-61 | |

FAMILY

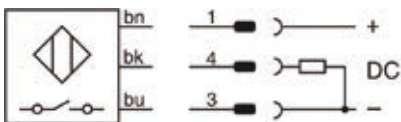
HOUSING SIZE MM

OPERATING DISTANCE MM

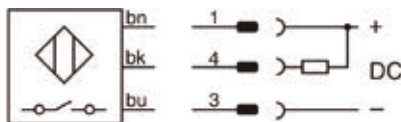
INDUCTIVE

WIRING DIAGRAMS

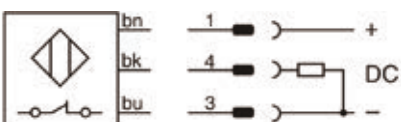
PNP NO



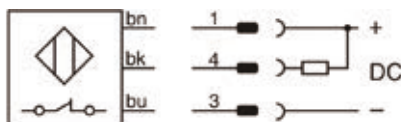
NPN NO



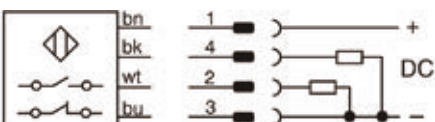
PNP NC



NPN NC



PNP Changeover



DATA

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

Description

Part reference

Description

Part reference

Description

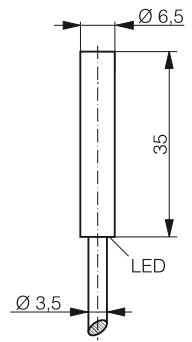
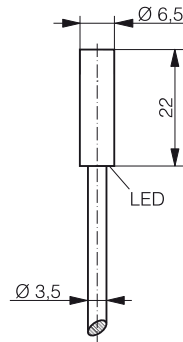
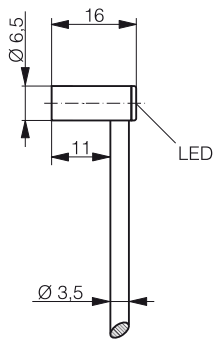
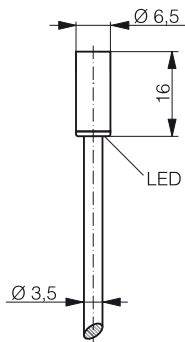
Part reference

Other types available

*Part reference change see p. 334

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| Ø 6.5 | Ø 6.5 | Ø 6.5 | Ø 6.5 |
| 1.5 | 1.5 | 1.5 | 1.5 |



Stainless steel V2A

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-065-120*

NPN NO

DW-AD-601-065-120*

PNP NC, NPN NC



Stainless steel V2A

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-065-400*

NPN NO, PNP NC, NPN NC



Stainless steel V2A

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-065-121

NPN NO, PNP NC, NPN NC



Stainless steel V2A

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-065

NPN NO

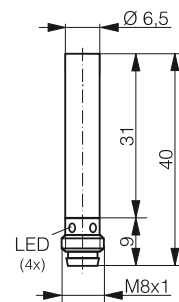
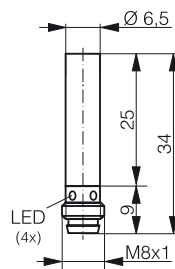
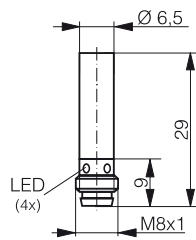
DW-AD-601-065

PNP NC, NPN NC, length 30 mm

BASIC

INDUCTIVE

| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE MM | Ø 6.5 | Ø 6.5 | Ø 6.5 |
| OPERATING DISTANCE MM | 1.5 | 1.5 | 1.5 |

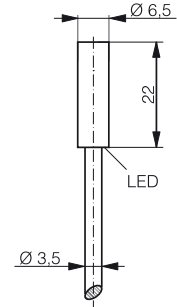
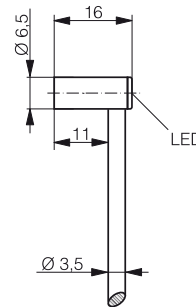
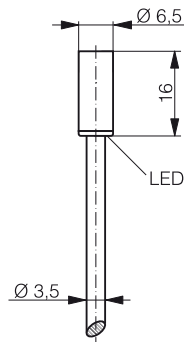
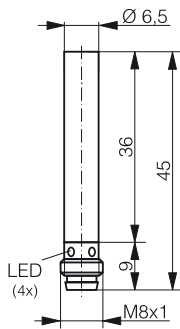


| DATA | | | |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | Connector S8 | Connector S8 | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-603-065-129* | DW-AS-603-065-123 | DW-AS-603-065-124 |
| Description | NPN NO | | |
| Part reference | DW-AS-601-065-129* | | |
| Description | PNP NC | | |
| Part reference | DW-AS-604-065-129* | | |
| Other types available | NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

*Part reference change see p. 334

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| Ø 6.5 | Ø 6.5 | Ø 6.5 | Ø 6.5 |
| 1.5 | 2 | 2 | 2 |

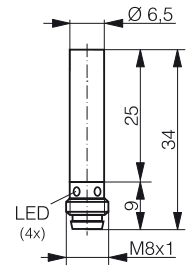
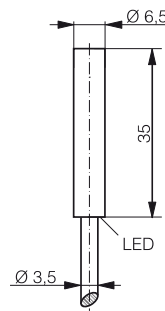
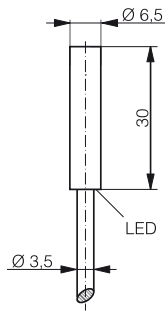





| | | | |
|------------------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connector S8 | PVC cable | PVC cable | PVC cable |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-603-065-001 | DW-AD-623-065-120 | DW-AD-623-065-400 | DW-AD-623-065-121 |
| | | NPN NO | NPN NO |
| | | DW-AD-621-065-400 | DW-AD-621-065-121 |
| | | | |
| NPN NO, PNP NC, NPN NC, connector S12 | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC | NPN NC |

BASIC

INDUCTIVE

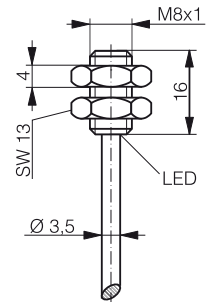
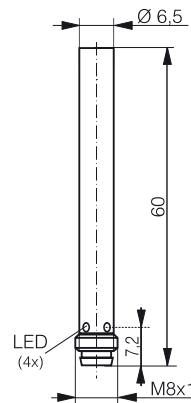
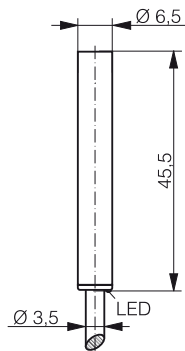
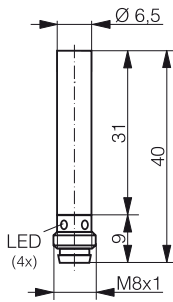
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE MM | Ø 6.5 | Ø 6.5 | Ø 6.5 |
| OPERATING DISTANCE MM | 2 | 2 | 2 |



| DATA |  |  |  |
|-----------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PVC cable | PVC cable | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-623-065-122 | DW-AD-623-065 | DW-AS-623-065-123 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC, |
| *Part reference change see p. 334 | | | length 29 mm |

BASIC

| CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE | CLASSICS |
|----------|----------------|----------------|----------|
| Ø 6.5 | Ø 6.5 | Ø 6.5 | M8 |
| 2 | 3 | 3 | 1.5 |



Stainless steel V2A

Connector S8

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AS-623-065-124

NPN NO, PNP NC, NPN NC,
length 45 mm, connector S12



Chrome-plated brass

PVC cable

IP 67

Quasi-embeddable

1000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-503-065

NPN NO

DW-AD-501-065

PNP NC, NPN NC



Chrome-plated brass

Connector S8

IP 67

Quasi-embeddable

1000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AS-503-065-001

NPN NO, PNP NC, NPN NC



Stainless steel V2A

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-M8-120*

NPN NO

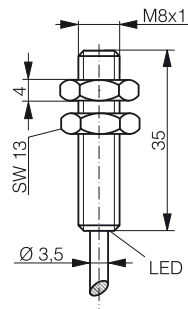
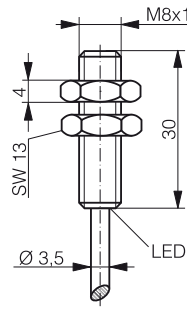
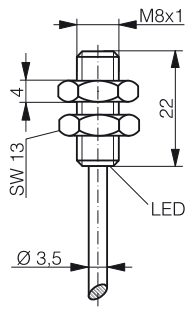
DW-AD-601-M8-120*




PNP NC, NPN NC

BASIC

INDUCTIVE

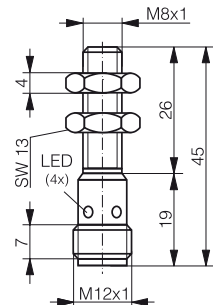
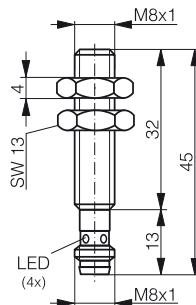
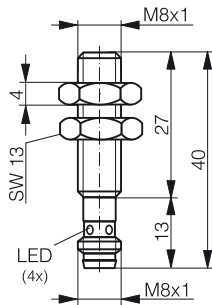
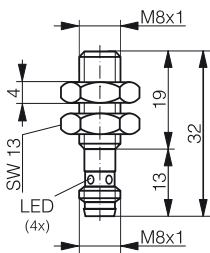
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE MM | M8 | M8 | M8 |
| OPERATING DISTANCE MM | 1.5 | 1.5 | 1.5 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PVC cable | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-603-M8-121 | DW-AD-603-M8-122 | DW-AD-603-M8 |
| Description | | NPN NO | NPN NO |
| Part reference | | DW-AD-601-M8-122 | DW-AD-601-M8 |
| Description | | | |
| Part reference | | | |
| Other types available | PNP NC, NPN NC | PNP NC, NPN NC | PNP NC, NPN NC |

BASIC

| | | | |
|----------|----------|----------|----------|
| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
| M8 | M8 | M8 | M8 |
| 1.5 | 1.5 | 1.5 | 1.5 |

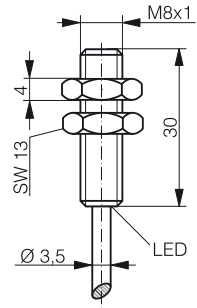
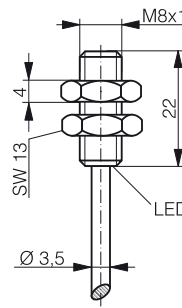
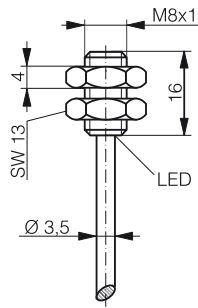





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connector S8 | Connector S8 | Connector S8 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-603-M8-123 | DW-AS-603-M8-124 | DW-AS-603-M8-001 | DW-AS-603-M8 |
| | | NPN NO | NPN NO |
| | | DW-AS-601-M8-001 | DW-AS-601-M8 |
| | | PNP NC | |
| | | DW-AS-604-M8-001 | |
| NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NC | PNP NC, NPN NC, length 39 mm |

BASIC

INDUCTIVE

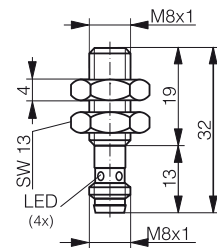
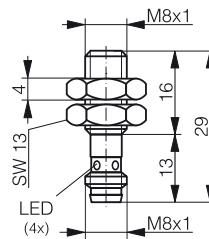
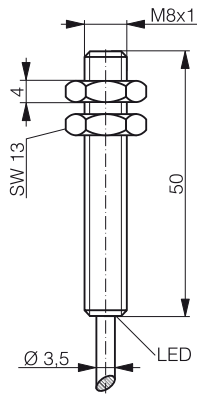
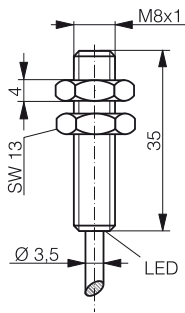
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE | M8 | M8 | M8 |
| OPERATING DISTANCE MM | 2 | 2 | 2 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PVC cable | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-623-M8-120 | DW-AD-623-M8-121 | DW-AD-623-M8-122 |
| Description | NPN NO | NPN NO | |
| Part reference | DW-AD-621-M8-120 | DW-AD-621-M8-121 | |
| Description | NPN NC | | |
| Part reference | DW-AD-622-M8-120 | | |
| Other types available | PNP NC | PNP NC | NPN NO, PNP NC, NPN NC |

BASIC

| | | | |
|----------|----------|----------|----------|
| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
| M8 | M8 | M8 | M8 |
| 2 | 2 | 2 | 2 |

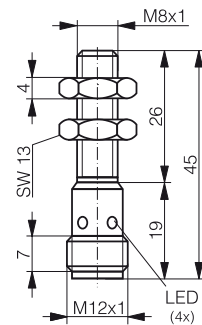
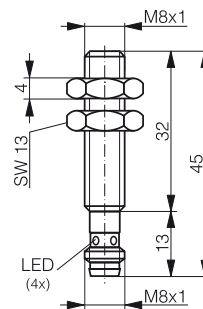
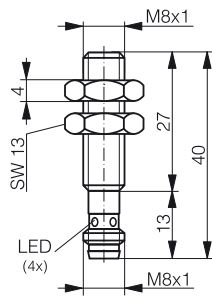





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| PVC cable | PVC cable | Connector S8 | Connector S8 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 5000 Hz | 5000 Hz | 5000 Hz | 5000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-623-M8 | DW-AD-623-M8-177 | DW-AS-623-M8-129 | DW-AS-623-M8-123 |
| NPN NO | | | NPN NO |
| DW-AD-621-M8 | | | DW-AS-621-M8-123 |
| | | | |
| PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC |

BASIC

INDUCTIVE

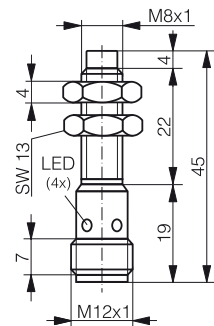
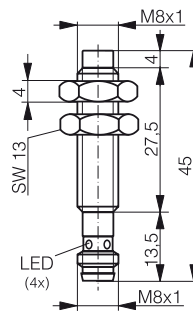
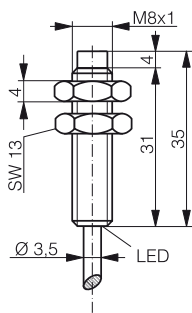
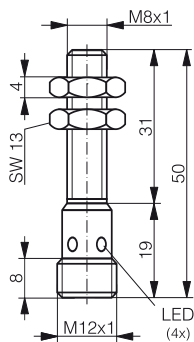
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE | M8 | M8 | M8 |
| OPERATING DISTANCE MM | 2 | 2 | 2 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | Connector S8 | Connector S8 | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-623-M8-124 | DW-AS-623-M8-001 | DW-AS-623-M8 |
| Description | NPN NO | NPN NO | NPN NO |
| Part reference | DW-AS-621-M8-124 | DW-AS-621-M8-001 | DW-AS-621-M8 |
| Description | | PNP NC | |
| Part reference | | DW-AS-624-M8-001 | |
| Other types available | PNP NC, NPN NC | NPN NC | PNP NC, NPN NC |

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M8 | M8 | M8 | M8 |
| 2 | 2.5 | 2.5 | 2.5 |

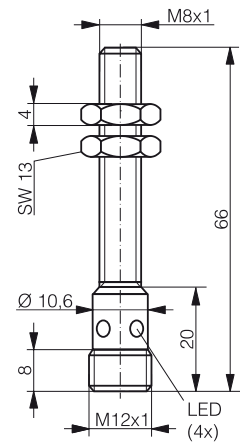
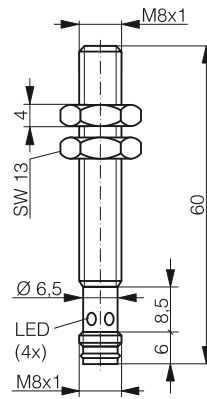
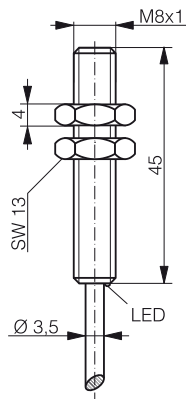





| | | | |
|----------------------------------|---------------------------------------|-----------------------------------------------|----------------------------------|
| | | | |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connector S12 | PVC cable | Connector S8 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Non-embeddable | Non-embeddable | Non-embeddable |
| 5000 Hz | 4500 Hz | 4500 Hz | 4500 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-623-M8-193 | DW-AD-613-M8 | DW-AS-613-M8-001 | DW-AS-613-M8 |
| | NPN NO | | |
| | DW-AD-611-M8 | | |
| | | | |
| NPN NO, PNP NC, NPN NC | PNP NC, NPN NC, lengths 22 & 30 mm | NPN NO, PNP NC, NPN NC, lengths 32 & 40 mm | NPN NO, PNP NC, NPN NC |

BASIC

INDUCTIVE

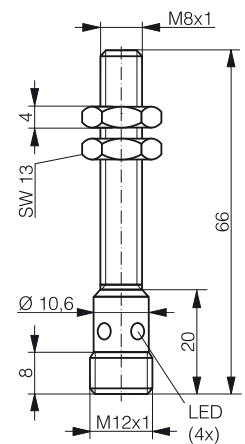
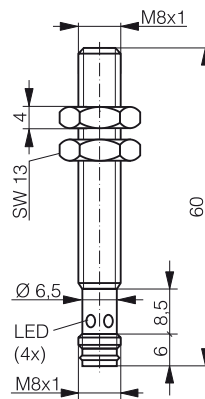
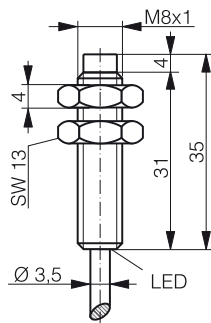
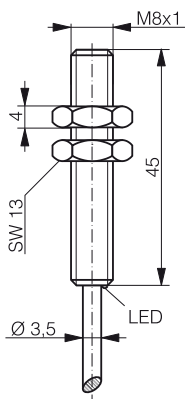
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------------|----------------|----------------|
| HOUSING SIZE | M8 | M8 | M8 |
| OPERATING DISTANCE MM | 3 | 3 | 3 |







| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Chrome-plated nickel silver | Chrome-plated nickel silver | Chrome-plated nickel silver |
| Connection | PVC cable | Connector S8 | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 1000 Hz | 1000 Hz | 1000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-503-M8 | DW-AS-503-M8-001 | DW-AS-503-M8 |
| Description | NPN NO | NPN NO | NPN NO |
| Part reference | DW-AD-501-M8 | DW-AS-501-M8-001 | DW-AS-501-M8 |
| Description | | PNP NC | |
| Part reference | | DW-AS-504-M8-001 | |
| Other types available | PNP NC, NPN NC, length 35 mm | NPN NC | PNP NC, NPN NC |

BASIC

| EXTRA DISTANCE | CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------|----------------|----------------|
| M8 | M8 | M8 | M8 |
| 4 | 4 | 4 | 4 |

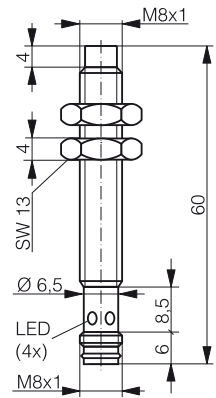
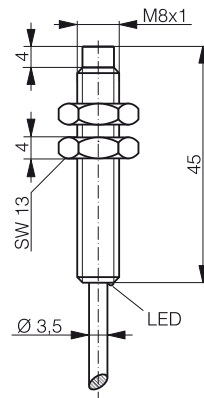
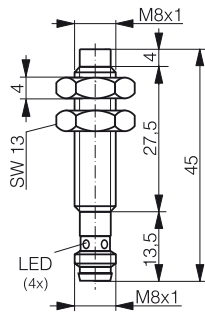





| | | | |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |
| Chrome-plated nickel silver | Stainless steel V2A | Chrome-plated nickel silver | Chrome-plated nickel silver |
| PVC cable | PVC cable | Connector S8 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Non-embeddable | Embeddable | Embeddable |
| 500 Hz | 3500 Hz | 500 Hz | 500 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-523-M8 | DW-AD-633-M8 | DW-AS-523-M8-001 | DW-AS-523-M8 |
| NPN NO | NPN NO | | |
| DW-AD-521-M8 | DW-AD-631-M8 | | |
| | | | |
| | | | |
| PNP NC, NPN NC, length 35 mm | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

INDUCTIVE

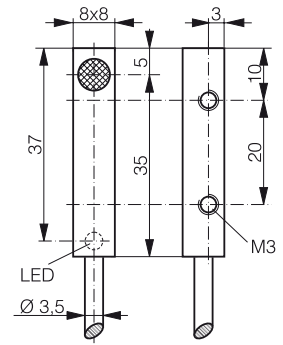
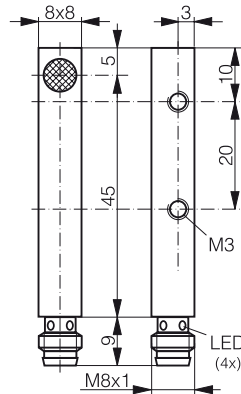
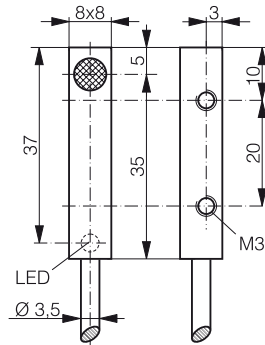
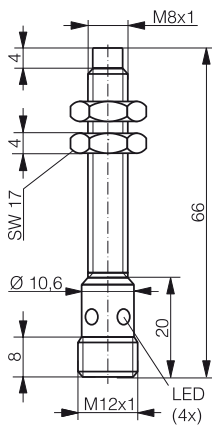
| FAMILY | CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------|----------------|----------------|
| HOUSING SIZE | M8 | M8 | M8 |
| OPERATING DISTANCE MM | 4 | 6 | 6 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Chrome-plated brass | Chrome-plated brass |
| Connection | Connector S8 | PVC cable | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Non-embeddable | Non-embeddable | Non-embeddable |
| Max. switching frequency | 3500 Hz | 500 Hz | 500 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-633-M8-001 | DW-AD-513-M8 | DW-AS-513-M8-001 |
| Description | | NPN NO | PNP NC |
| Part reference | | DW-AD-511-M8 | DW-AS-514-M8-001 |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC, length 35 mm | NPN NO, NPN NC |

BASIC

| EXTRA DISTANCE | CLASSICS | CLASSICS | CLASSICS |
|----------------|----------|----------|----------|
| M8 | □ 8 x 8 | □ 8 x 8 | □ 8 x 8 |
| 6 | 1.5 | 1.5 | 2 |



Chrome-plated brass

Connector S12

IP 67

Non-embeddable

500 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AS-513-M8

NPN NO

DW-AS-511-M8

PNP NC, NPN NC



Zamak

PVC cable

IP 67

Embeddable

3500 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AD-603-C8

PNP NC, NPN NO, NPN NC



Zamak

Connector S8

IP 67

Embeddable

3500 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

DW-AS-603-C8-001

PNP NC, NPN NO, NPN NC



Zamak

PVC cable

IP 67

Embeddable

5000 Hz

10 ... 30 VDC

-25 ... +70 °C / -13 ... +158 °F

≤ 200 mA

PNP NO

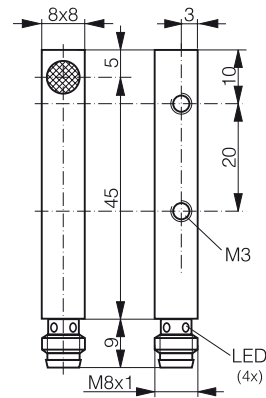
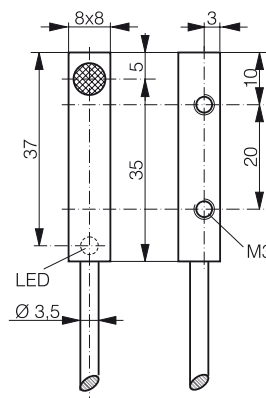
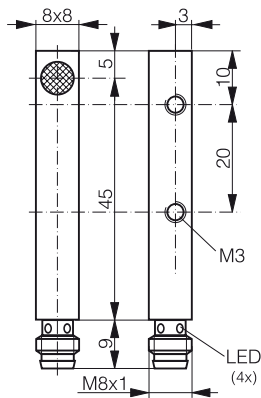
DW-AD-623-C8




PNP NC, NPN NO, NPN NC

BASIC

INDUCTIVE

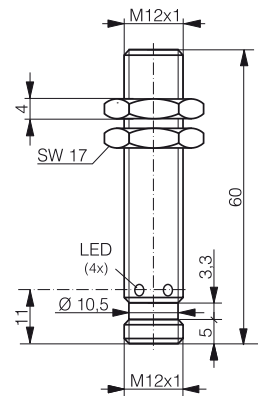
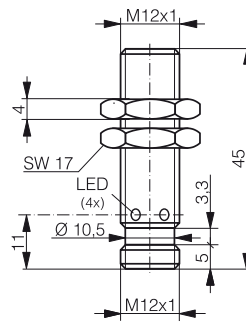
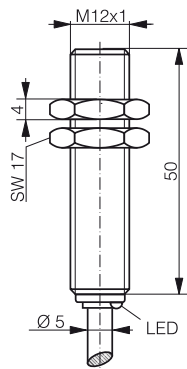
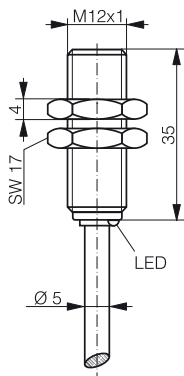
| FAMILY | CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------|----------------|----------------|
| HOUSING SIZE | □ 8 x 8 | □ 8 x 8 | □ 8 x 8 |
| OPERATING DISTANCE MM | 2 | 3 | 3 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Zamak | Zamak | Zamak |
| Connection | Connector S8 | PVC cable | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Quasi-embeddable | Quasi-embeddable |
| Max. switching frequency | 5000 Hz | 1000 Hz | 1000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-623-C8-001 | DW-AD-503-C8 | DW-AS-503-C8 |
| Description | | PNP NC | |
| Part reference | | DW-AD-504-C8 | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M12 | M12 | M12 | M12 |
| 2 | 2 | 2 | 2 |

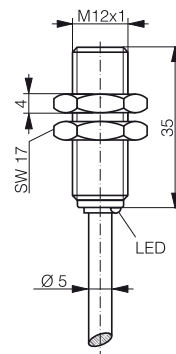
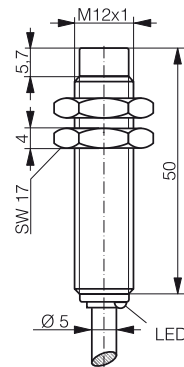
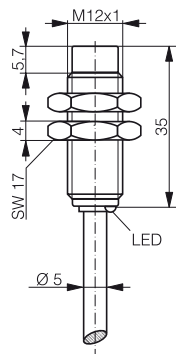





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Nickel-plated brass | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| PVC cable | PVC cable | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 3000 Hz | 3000 Hz | 3000 Hz | 3000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-603-M12-120 | DW-AD-603-M12 | DW-AS-603-M12-120 | DW-AS-603-M12 |
| NPN NO | NPN NO | NPN NO | NPN NO |
| DW-AD-601-M12-120 | DW-AD-601-M12 | DW-AS-601-M12-120 | DW-AS-601-M12 |
| | | PNP NC | PNP NC |
| | | DW-AS-604-M12-120 | DW-AS-604-M12 |
| PNP NC, NPN NC | PNP NC, NPN NC | NPN NC | NPN NC |

BASIC

INDUCTIVE

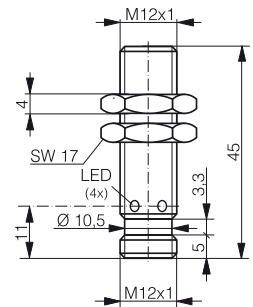
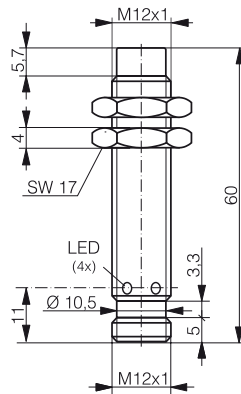
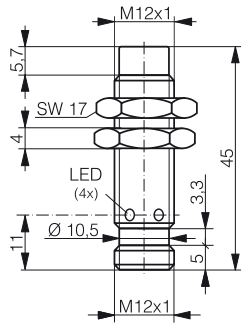
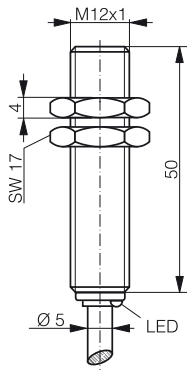
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE | M12 | M12 | M12 |
| OPERATING DISTANCE MM | 4 | 4 | 4 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connection | PVC cable | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Non-embeddable | Non-embeddable | Embeddable |
| Max. switching frequency | 2000 Hz | 2000 Hz | 2500 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-613-M12-120 | DW-AD-613-M12 | DW-AD-623-M12-120 |
| Description | NPN NO | NPN NO | |
| Part reference | DW-AD-611-M12-120 | DW-AD-611-M12 | |
| Description | | | |
| Part reference | | | |
| Other types available | PNP NC, NPN NC | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M12 | M12 | M12 | M12 |
| 4 | 4 | 4 | 4 |

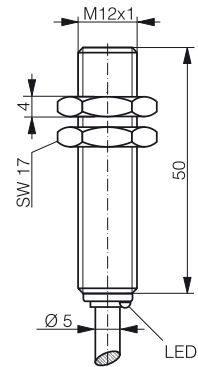
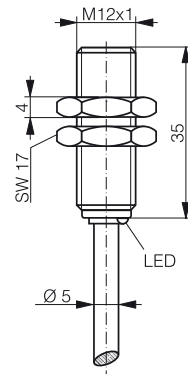
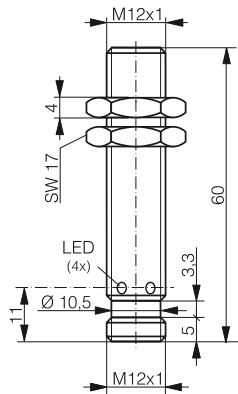





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | | | |
| Nickel-plated brass | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| PVC cable | Connector S12 | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Non-embeddable | Non-embeddable | Embeddable |
| 2500 Hz | 2000 Hz | 2000 Hz | 2500 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-623-M12 | DW-AS-613-M12-120 | DW-AS-613-M12 | DW-AS-623-M12-120 |
| NPN NO | | NPN NO | NPN NO |
| DW-AD-621-M12 | | DW-AS-611-M12 | DW-AS-621-M12-120 |
| | | PNP NC | PNP NC |
| | | DW-AS-614-M12 | DW-AS-624-M12-120 |
| PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NC | NPN NC |

BASIC

INDUCTIVE

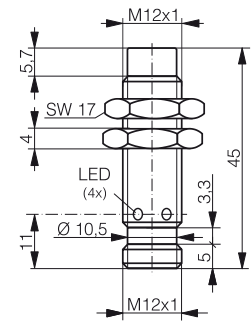
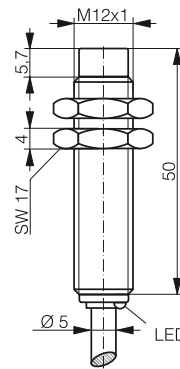
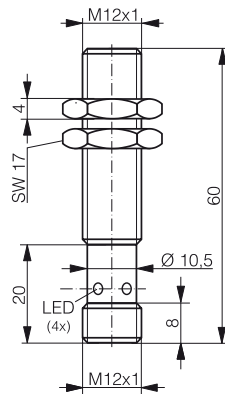
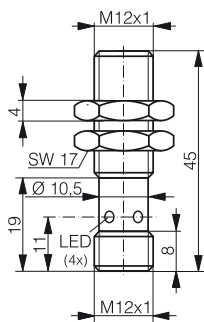
| FAMILY | CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------|----------------|----------------|
| HOUSING SIZE | M12 | M12 | M12 |
| OPERATING DISTANCE MM | 4 | 6 | 6 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Nickel-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | Connector S12 | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Quasi-embeddable | Quasi-embeddable |
| Max. switching frequency | 2500 Hz | 800 Hz | 800 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-623-M12 | DW-AD-503-M12-120 | DW-AD-503-M12 |
| Description | NPN NO | | NPN NO |
| Part reference | DW-AS-621-M12 | | DW-AD-501-M12 |
| Description | PNP NC | | |
| Part reference | DW-AS-624-M12 | | |
| Other types available | NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC |

BASIC

| EXTRA DISTANCE | EXTRA DISTANCE | CLASSICS | CLASSICS |
|----------------|----------------|----------|----------|
| M12 | M12 | M12 | M12 |
| 6 | 6 | 8 | 8 |

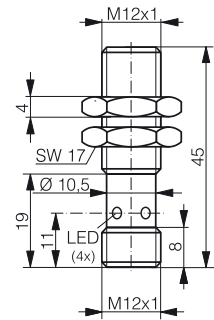
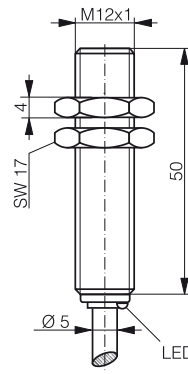
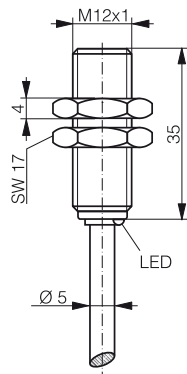





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Chrome-plated brass | Chrome-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connector S12 | Connector S12 | PVC cable | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Quasi-embeddable | Non-embeddable | Non-embeddable |
| 800 Hz | 800 Hz | 1,400 Hz | 1,400 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-503-M12-120 | DW-AS-503-M12 | DW-AD-633-M12 | DW-AS-633-M12-120 |
| NPN NO | NPN NO | NPN NO | NPN NO |
| DW-AS-501-M12-120 | DW-AS-501-M12 | DW-AD-631-M12 | DW-AS-631-M12-120 |
| | PNP NC | PNP NC | PNP NC |
| | DW-AS-504-M12 | DW-AD-634-M12 | DW-AS-634-M12-120 |
| PNP NC, NPN NC | NPN NC | NPN NC, length 35 mm | NPN NC, length 60 mm |

BASIC

INDUCTIVE

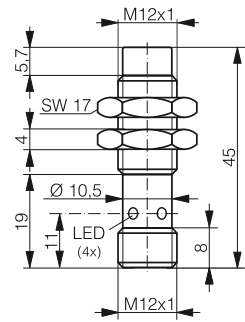
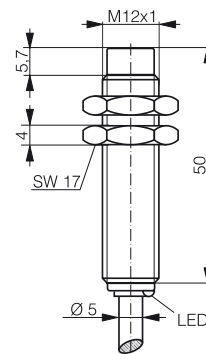
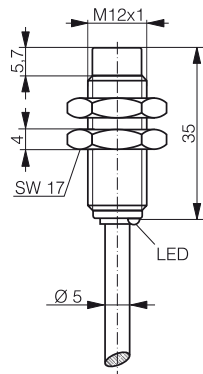
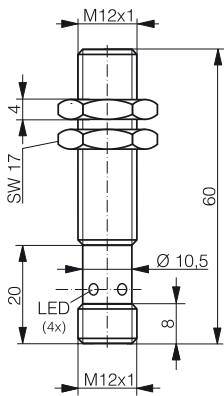
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------------|----------------|----------------|
| HOUSING SIZE | M12 | M12 | M12 |
| OPERATING DISTANCE MM | 8 | 8 | 8 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | PVC cable | PVC cable | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| Max. switching frequency | 400 Hz | 400 Hz | 400 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-523-M12-120 | DW-AD-523-M12 | DW-AS-523-M12-120 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| M12 | M12 | M12 | M12 |
| 8 | 10 | 10 | 10 |

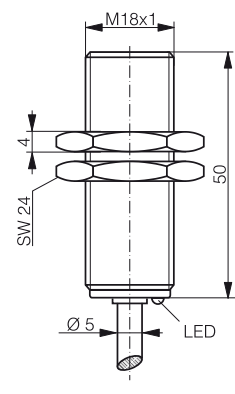
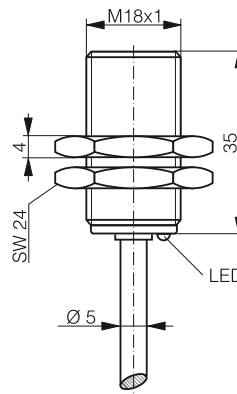
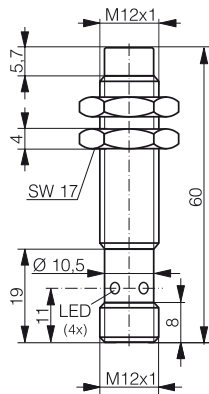





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connector S12 | PVC cable | PVC cable | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Non-embeddable | Non-embeddable | Non-embeddable |
| 400 Hz | 400 Hz | 400 Hz | 400 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-523-M12 | DW-AD-513-M12-120 | DW-AD-513-M12 | DW-AS-513-M12-120 |
| NPN NO | | NPN NO | |
| DW-AS-521-M12 | | DW-AD-511-M12 | |
| | | | |
| PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

INDUCTIVE

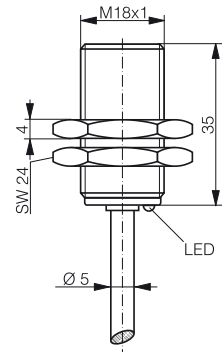
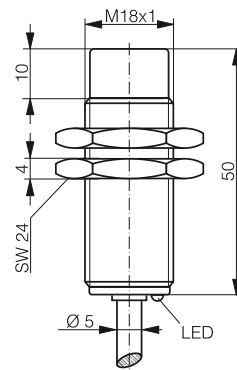
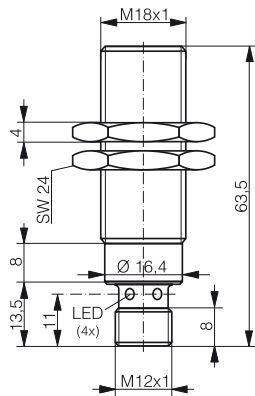
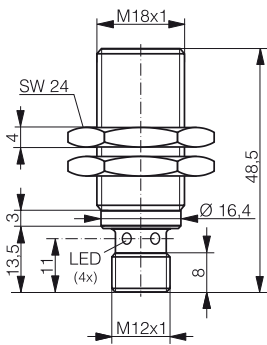
| FAMILY | EXTRA DISTANCE | CLASSICS | CLASSICS |
|-----------------------|----------------|----------|----------|
| HOUSING SIZE | M12 | M18 | M18 |
| OPERATING DISTANCE MM | 10 | 5 | 5 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Chrome-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connection | Connector S12 | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Non-embeddable | Embeddable | Embeddable |
| Max. switching frequency | 400 Hz | 2000 Hz | 2000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-513-M12 | DW-AD-603-M18-120 | DW-AD-603-M18 |
| Description | NPN NO | | NPN NO |
| Part reference | DW-AS-511-M12 | | DW-AD-601-M18 |
| Description | PNP NC | | PNP NC |
| Part reference | DW-AS-514-M12 | | DW-AD-604-M18 |
| Other types available | NPN NC | NPN NO, PNP NC, NPN NC | NPN NC |

BASIC

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M18 | M18 | M18 | M18 |
| 5 | 5 | 8 | 8 |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Nickel-plated brass | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connector S12 | Connector S12 | PVC cable | PVC cable |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Non-embeddable | Quasi-embeddable |
| 2000 Hz | 2000 Hz | 2000 Hz | 1500 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-603-M18-120 | DW-AS-603-M18-002 | DW-AD-613-M18 | DW-AD-623-M18-120 |
| | NPN NO | NPN NO | |
| | DW-AS-601-M18-002 | DW-AD-611-M18 | |
| | PNP NC | | |
| | DW-AS-604-M18-002 | | |
| NPN NO, PNP NC, NPN NC | NPN NC | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

FAMILY

CLASSICS

CLASSICS

CLASSICS

HOUSING SIZE

M18

M18

M18

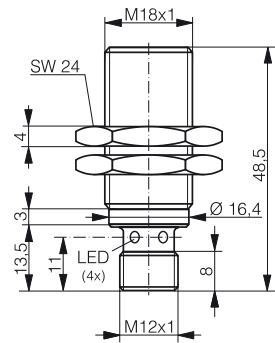
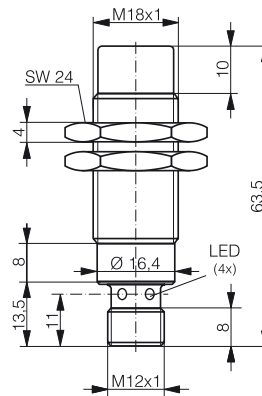
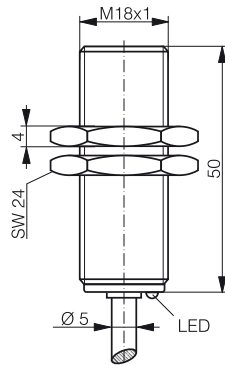
OPERATING DISTANCE MM

8

8

8

INDUCTIVE



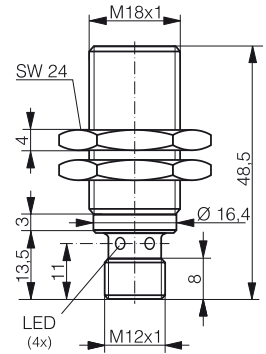
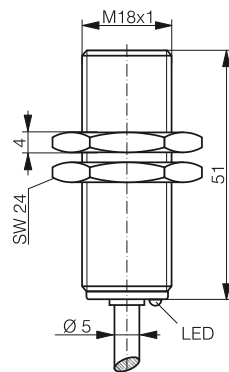
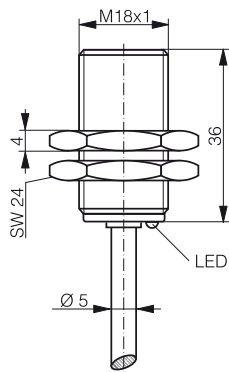
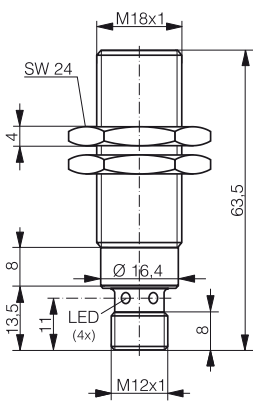
DATA



| | | | |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|
| Housing material | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connection | PVC cable | Connector S12 | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Non-embeddable | Embeddable |
| Max. switching frequency | 1500 Hz | 2000 Hz | 1500 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-623-M18 | DW-AS-613-M18-002 | DW-AS-623-M18-120 |
| Description | | PNP NC | |
| Part reference | | DW-AS-614-M18-002 | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

| CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------|----------------|----------------|----------------|
| M18 | M18 | M18 | M18 |
| 8 | 12 | 12 | 12 |

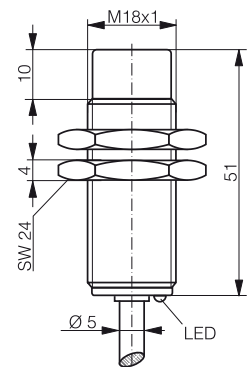
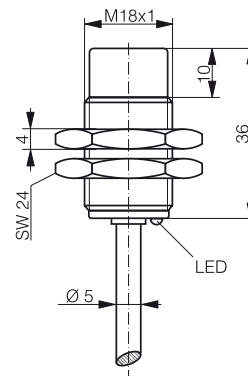
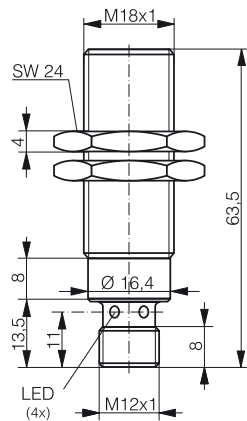





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Nickel-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connector S12 | PVC cable | PVC cable | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| 1500 Hz | 500 Hz | 500 Hz | 500 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-623-M18-002 | DW-AD-503-M18-120 | DW-AD-503-M18 | DW-AS-503-M18-120 |
| PNP NC | | NPN NO | |
| DW-AS-624-M18-002 | | DW-AD-501-M18 | |
| | | | |
| NPN NC, NPN NO | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

INDUCTIVE

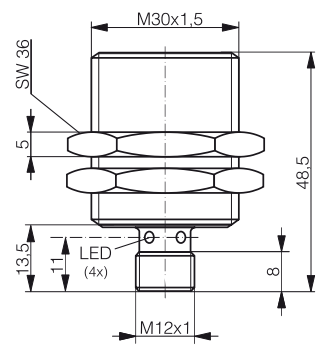
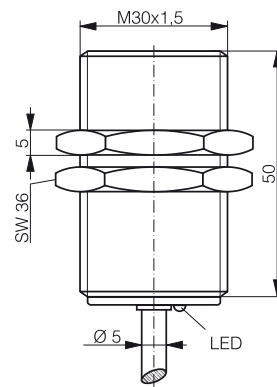
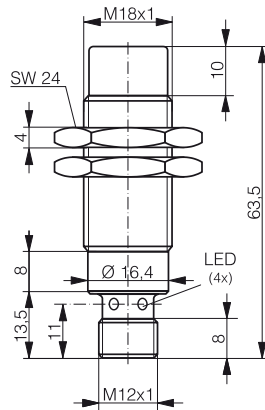
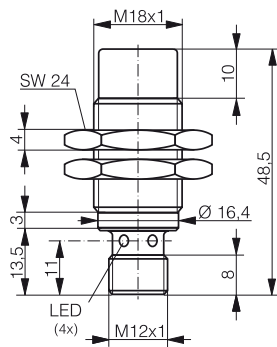
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------------|----------------|----------------|
| HOUSING SIZE | M18 | M18 | M18 |
| OPERATING DISTANCE MM | 12 | 20 | 20 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | Connector S12 | PVC cable | PVC cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Non-embeddable | Non-embeddable |
| Max. switching frequency | 500 Hz | 200 Hz | 200 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-503-M18-002 | DW-AD-513-M18-120 | DW-AD-513-M18 |
| Description | NPN NO | | NPN NO |
| Part reference | DW-AS-501-M18-002 | | DW-AD-511-M18 |
| Description | PNP NC | | PNP NC |
| Part reference | DW-AS-504-M18-002 | | DW-AD-514-M182 |
| Other types available | NPN NC | NPN NO, PNP NC, NPN NC | NPN NC |

BASIC

| EXTRA DISTANCE | EXTRA DISTANCE | CLASSICS | CLASSICS |
|----------------|----------------|----------|----------|
| M18 | M18 | M30 | M30 |
| 20 | 20 | 10 | 10 |

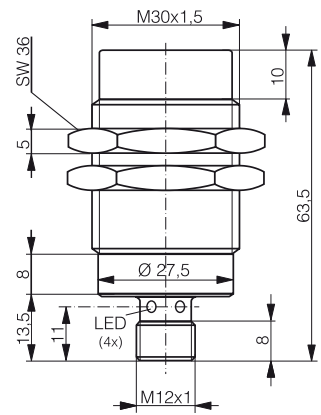
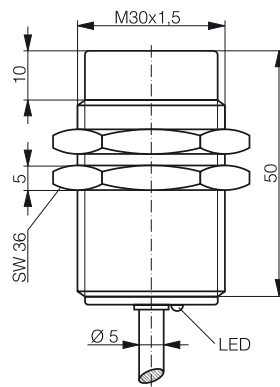
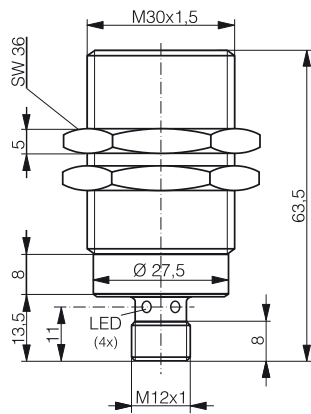





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Chrome-plated brass | Chrome-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connector S12 | Connector S12 | PVC cable | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Non-embeddable | Non-embeddable | Embeddable | Embeddable |
| 200 Hz | 200 Hz | 1200 Hz | 1200 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-513-M18-120 | DW-AS-513-M18-002 | DW-AD-603-M30 | DW-AS-603-M30-120 |
| | NPN NO | | |
| | DW-AS-511-M18-002 | | |
| | PNP NC | | |
| | DW-AS-514-M18-002 | | |
| NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

INDUCTIVE

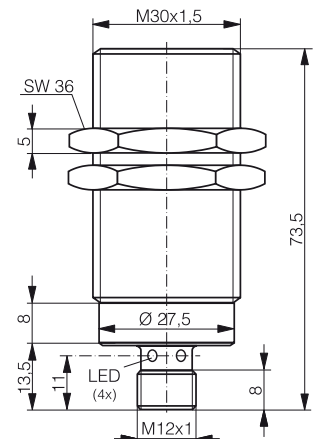
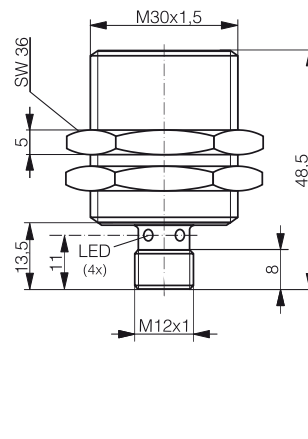
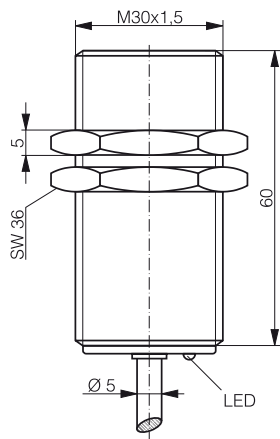
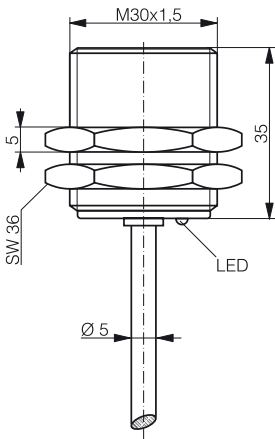
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE | M30 | M30 | M30 |
| OPERATING DISTANCE MM | 10 | 15 | 15 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| Connection | Connector S12 | PVC cable | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Non-embeddable | Non-embeddable |
| Max. switching frequency | 1200 Hz | 700 Hz | 700 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-603-M30-002 | DW-AD-613-M30 | DW-AS-613-M30-002 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

BASIC

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| M30 | M30 | M30 | M30 |
| 22 | 22 | 22 | 22 |

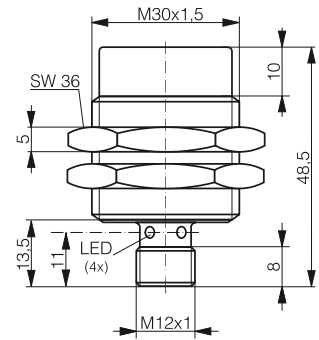
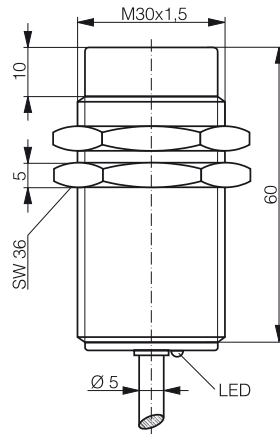
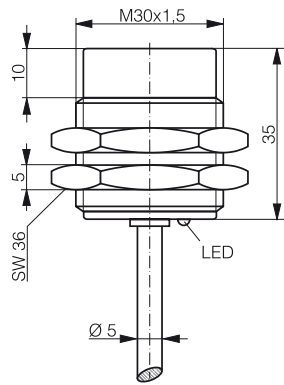





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| PVC cable | PVC cable | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| 200 Hz | 200 Hz | 200 Hz | 200 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-503-M30-120 | DW-AD-503-M30 | DW-AS-503-M30-120 | DW-AS-503-M30-002 |
| | NPN NO | | NPN NO |
| | DW-AD-501-M30 | | DW-AS-501-M30-002 |
| | PNP NC | | PNP NC |
| | DW-AD-504-M30 | | DW-AS-504-M30-002 |
| NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC | NPN NC |

BASIC

INDUCTIVE

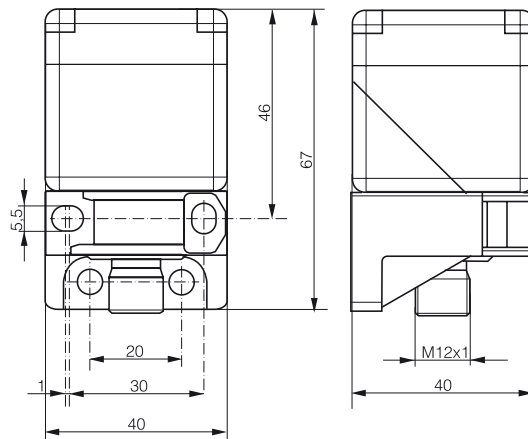
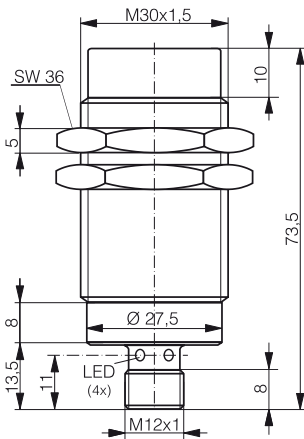
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------------|----------------|----------------|
| HOUSING SIZE | M30 | M30 | M30 |
| OPERATING DISTANCE MM | 40 | 40 | 40 |







| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | PVC cable | PVC cable | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Non-embeddable | Non-embeddable | Non-embeddable |
| Max. switching frequency | 100 Hz | 100 Hz | 100 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-513-M30-120 | DW-AD-513-M30 | DW-AS-513-M30-120 |
| Description | | NPN NO | |
| Part reference | | DW-AD-511-M30 | |
| Description | | | |
| Part reference | | | |
| Other types available | PNP NC, NPN NC, NPN NC | NPN NO, PNP NC | NPN NO, PNP NC, NPN NC |

BASIC

| EXTRA DISTANCE | CLASSICS | CLASSICS | CLASSICS |
|----------------|-----------|-----------|-----------|
| M30 | □ 40 x 40 | □ 40 x 40 | □ 40 x 40 |
| 40 | 15 | 20 | 30 |



|  |  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Chrome-plated brass | PA GF | PA GF | PA GF |
| Connector S12 | Connector S12 | Connector S12 | Connector S12 |
| IP 67 | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Non-embeddable | Embeddable | Embeddable | Non-embeddable |
| 100 Hz | 100 Hz | 100 Hz | 100 Hz |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +85 °C / -13 ... +185 °F | -25 ... +85 °C / -13 ... +185 °F | -25 ... +85 °C / -13 ... +185 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP Changeover | PNP Changeover | PNP Changeover |
| DW-AS-513-M30-002 | DW-AS-60A-C44 | DW-AS-62A-C44 | DW-AS-61A-C44 |
| NPN NO | | | |
| DW-AS-511-M30-002 | | | |
| PNP NC | | | |
| DW-AS-514-M30-002 | | | |
| NPN NC | - | - | - |

BASIC

FAMILY

CLASSICS

CLASSICS

HOUSING SIZE

□ 40 x 40

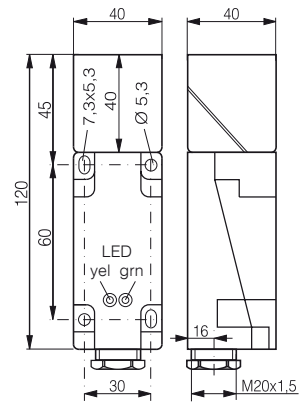
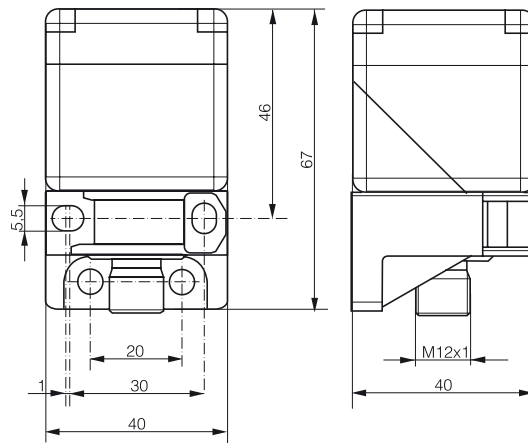
□ 40 x 120

OPERATING DISTANCE MM

40

15

INDUCTIVE



Sensing face can be rotated to 5 different sides.

DATA



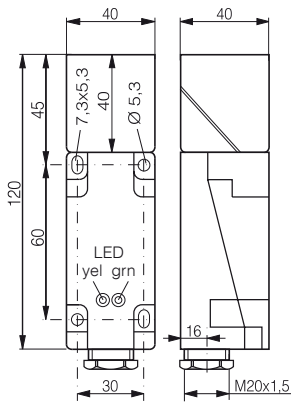
| | | |
|---------------------------|----------------------------------|----------------------------------|
| Housing material | PA GF | PBTP |
| Connection | Connector S12 | Screw terminal |
| Degree of protection | IP 68 / IP 69K | IP 65 |
| Mounting | Non-embeddable | Embeddable |
| Max. switching frequency | 100 Hz | 100 Hz |
| Supply voltage range | 10 ... 30 VDC | 15 ... 34 VDC |
| Ambient temperature range | -25 ... +85 °C / -13 ... +185 °F | -25 ... +85 °C / -13 ... +185 °F |
| Output current | ≤ 200 mA | ≤ 200 mA / ≤ 150 mA |
| Description | PNP Changeover | PNP NO |
| Part reference | DW-AS-63A-C44 | DW-AD-603-C40 |
| Description | | |
| Part reference | | |
| Description | | |
| Part reference | | |
| Other types available | - | NPN NO |

BASIC

CLASSICS

□ 40 x 120

40



Sensing face can be rotated to 5 different sides.



PBTP

Screw terminal

IP 65

Non-embeddable

20 Hz

10 ... 65 VDC

-25 ... +85 °C / -13 ... +185 °F

≤ 300 mA

PNP NO

DW-AD-613-C40*

NPN NO, PNP NC, NPN NC

* NO/NC switchable

FULL FUNCTIONALITY, SMALLEST SIZE

MINIATURE

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Smallest self-contained inductive sensors on the market
- ✓ Miniature sensors are ideal for mounting where space is limited
- ✓ Outstanding temperature stability from -25°C (-13°F) to +70°C (+158°F)
- ✓ High switching frequency up to 5000 Hz
- ✓ Light weight of the sensor
- ✓ Electronics vacuum potted for optimum long-term reliability under high stress

RANGE OVERVIEW

Housing size

Classics

Extra Distance

MINIATURE

∅ 3 mm

p. 65-66

M4

p. 66-67

∅ 4 mm

p. 67-68

p. 69

M5

p. 69-70

p. 70

C5

p. 71

FAMILY

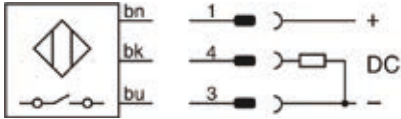
HOUSING SIZE MM

OPERATING DISTANCE MM

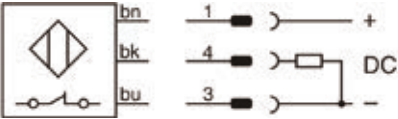
INDUCTIVE

WIRING DIAGRAMS

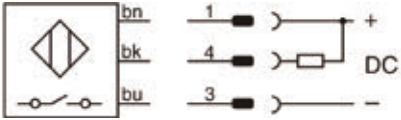
PNP NO



PNP NC



NPN NO

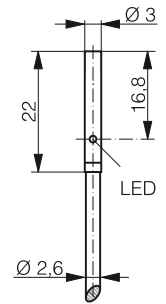
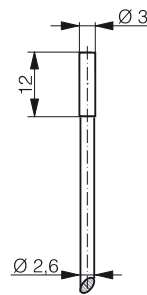
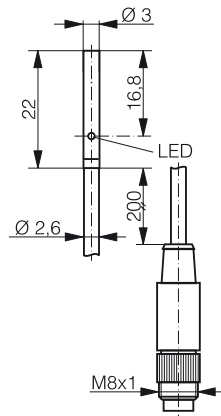
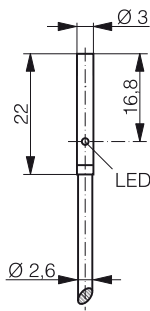


DATA

| |
|-----------------------------------|
| Housing material |
| Connection |
| Degree of protection |
| Mounting |
| Max. switching frequency |
| Supply voltage range |
| Ambient temperature range |
| Output current |
| Description |
| Part reference |
| Description |
| Part reference |
| Description |
| Part reference |
| Other types available |
| *Part reference change see p. 334 |

MINIATURE

| | | | |
|----------|----------|----------|----------|
| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
| Ø 3 | Ø 3 | Ø 3 | Ø 3 |
| 0.6 | 0.6 | 1 | 1 |

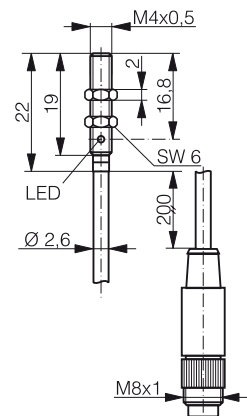
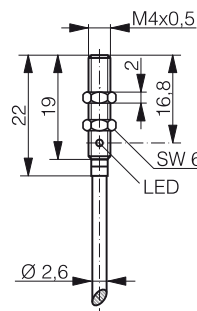
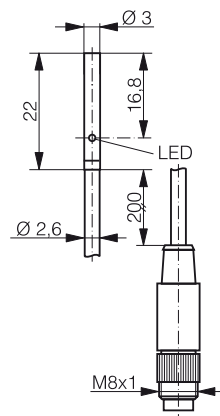





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | | | |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| PUR cable | PUR cable / Connector S8 | PUR cable | PUR cable |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 5000 Hz | 5000 Hz | 8000 Hz | 3000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 100 mA | ≤ 100 mA | ≤ 100 mA | ≤ 100 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-603-03* | DW-AV-603-03-276* | DW-AD-623-03-960 | DW-AD-623-03 |
| NPN NO | | | NPN NO |
| DW-AD-601-03* | | | DW-AD-621-03 |
| PNP NC | | | |
| DW-AD-604-03* | | | |
| NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC |

MINIATURE

INDUCTIVE

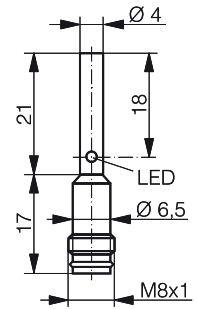
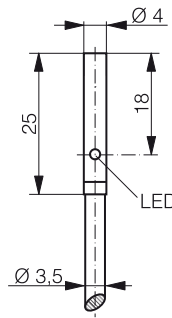
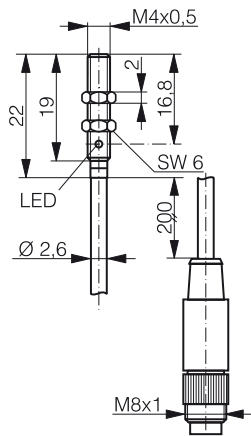
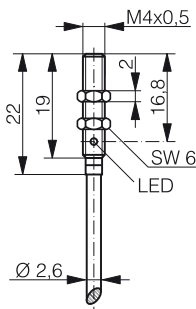
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE MM | Ø 3 | M4 | M4 |
| OPERATING DISTANCE MM | 1 | 0.6 | 0.6 |



| DATA |  |  |  |
|-----------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PUR cable / Connector S8 | PUR cable | PUR cable / Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 3000 Hz | 5000 Hz | 5000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 100 mA | ≤ 100 mA | ≤ 100 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AV-623-03-276 | DW-AD-603-M4* | DW-AV-603-M4-276* |
| Description | | NPN NO | |
| Part reference | | DW-AD-601-M4* | |
| Description | | PNP NC | |
| Part reference | | DW-AD-604-M4* | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC |
| *Part reference change see p. 334 | | | |

MINIATURE

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M4 | M4 | Ø 4 | Ø 4 |
| 1 | 1 | 0.8 | 0.8 |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| PUR cable | PUR cable / Connector S8 | PVC cable | Connector S8 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 3000 Hz | 3000 Hz | 5000 Hz | 5000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 100 mA | ≤ 100 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-623-M4 | DW-AV-623-M4-276 | DW-AD-603-04* | DW-AS-603-04* |
| NPN NO | NPN NO | NPN NO | |
| DW-AD-621-M4 | DW-AV-621-M4-276 | DW-AD-601-04* | |
| | | PNP NC | |
| | | DW-AD-604-04* | |
| PNP NC, NPN NC | PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC |

MINIATURE

FAMILY

CLASSICS

CLASSICS

CLASSICS

HOUSING SIZE MM

Ø 4

Ø 4

Ø 4

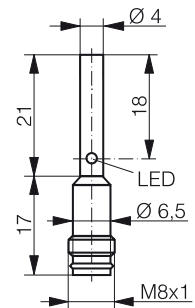
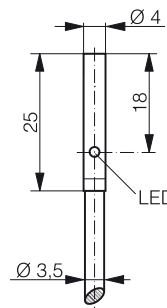
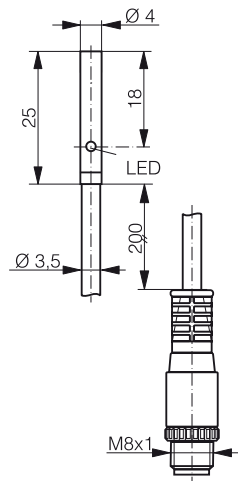
OPERATING DISTANCE MM

0.8

1.5

1.5

INDUCTIVE



DATA

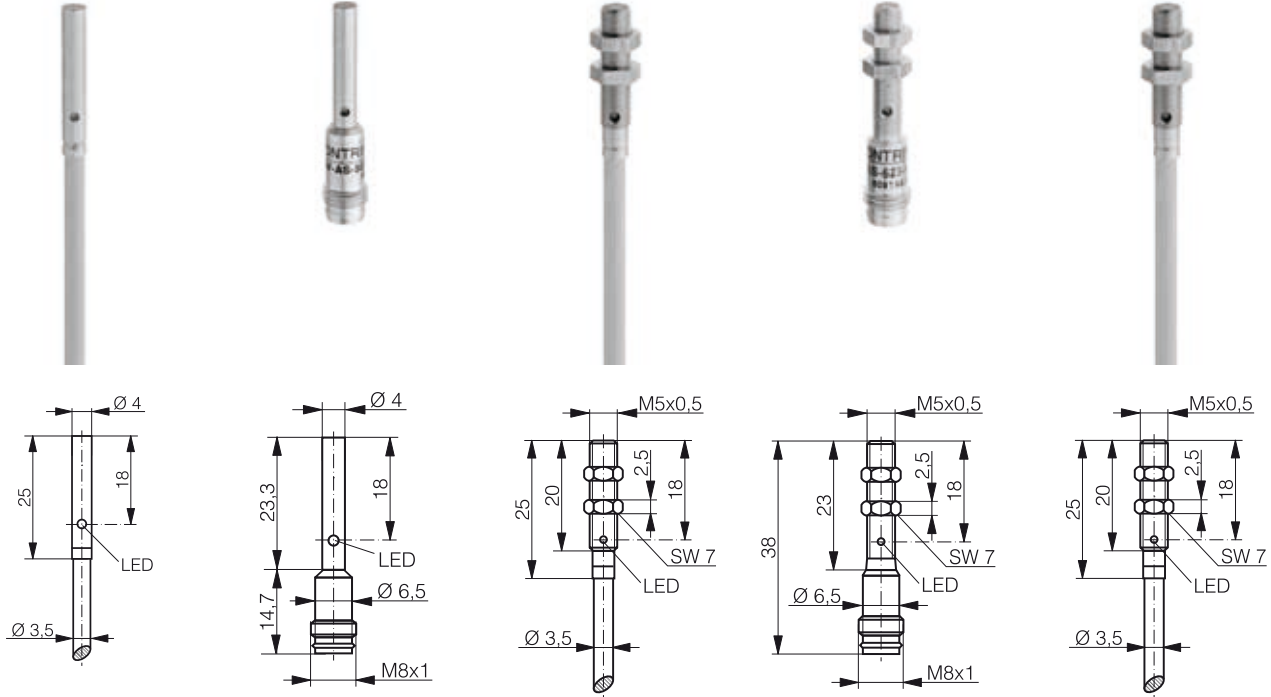


| | | | |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PVC cable / Connector S8 | PVC cable | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 5000 Hz | 3000 Hz | 3000 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AV-603-04-236* | DW-AD-623-04 | DW-AS-623-04 |
| Description | | NPN NO | |
| Part reference | | DW-AD-621-04 | |
| Description | | PNP NC | |
| Part reference | | DW-AD-624-04 | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC |

*Part reference change see p. 334

MINIATURE

| EXTRA DISTANCE | EXTRA DISTANCE | CLASSICS | CLASSICS | CLASSICS |
|----------------|----------------|----------|----------|----------|
| Ø 4 | Ø 4 | M5 | M5 | M5 |
| 2.5 | 2.5 | 0.8 | 0.8 | 1.5 |

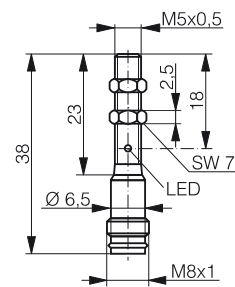
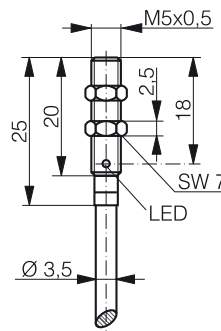
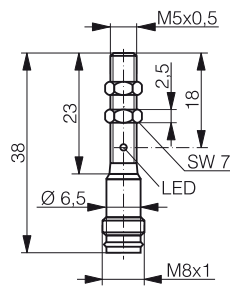





| | | | | |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| | | | | |
| Nickel silver | Nickel silver | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| PVC cable | Connector S8 | PVC cable | Connector S8 | PVC cable |
| IP 67 | IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable | Embeddable |
| 800 Hz | 800 Hz | 5000 Hz | 5000 Hz | 3000 Hz |
| 10 ... 30 VDC | 10 ... 30 VDC | 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 | -25...+70 °C /-13...+158 °F | -25...+70 °C /-13...+158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-503-04 | DW-AS-503-04 | DW-AD-603-M5* | DW-AS-603-M5* | DW-AD-623-M5 |
| NPN NO | NPN NO | NPN NO | PNP NC | NPN NO |
| DW-AD-501-04 | DW-AS-501-04 | DW-AD-601-M5* | DW-AS-604-M5* | DW-AD-621-M5 |
| | PNP NC | PNP NC | | PNP NC |
| | DW-AS-504-04 | DW-AD-604-M5* | | DW-AD-624-M5 |
| PNP NC, NPN NC | NPN NC | NPN NC | NPN NO, NPN NC | NPN NC |

MINIATURE

INDUCTIVE

| FAMILY | CLASSICS | EXTRA DISTANCE | EXTRA DISTANCE |
|-----------------------|----------|----------------|----------------|
| HOUSING SIZE MM | M5 | M5 | M5 |
| OPERATING DISTANCE MM | 1.5 | 2.5 | 2.5 |

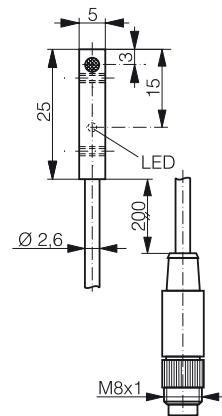
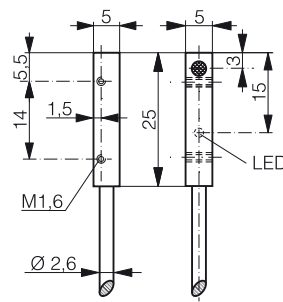
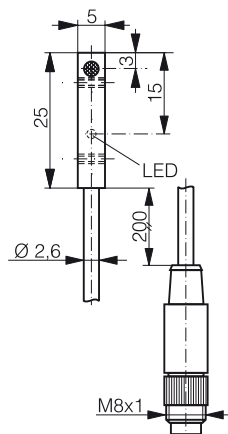
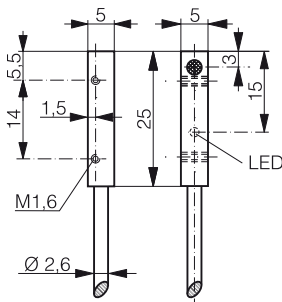


| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Nickel silver | Nickel silver |
| Connection | Connector S8 | PVC cable | Connector S8 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 3000 Hz | 800 Hz | 800 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-623-M5 | DW-AD-503-M5 | DW-AS-503-M5 |
| Description | NPN NO | NPN NO | NPN NO |
| Part reference | DW-AS-621-M5 | DW-AD-501-M5 | DW-AS-501-M5 |
| Description | PNP NC | PNP NC | PNP NC |
| Part reference | DW-AS-624-M5 | DW-AD-504-M5 | DW-AS-504-M5 |
| Other types available | NPN NC | NPN NC | NPN NC |

*Part reference change see p. 334

MINIATURE

| | | | |
|----------|----------|----------|----------|
| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
| □ 5 x 5 | □ 5 x 5 | □ 5 x 5 | □ 5 x 5 |
| 0.8 | 0.8 | 1.5 | 1.5 |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| | | | |
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| PUR cable | PUR cable / Connector S8 | PUR cable | PUR cable / Connector S8 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 5000 Hz | 5000 Hz | 3000 Hz | 3000 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-603-C5* | DW-AV-603-C5-276* | DW-AD-623-C5 | DW-AV-623-C5-276 |
| NPN NO | | NPN NO | |
| DW-AD-601-C5* | | DW-AD-621-C5 | |
| PNP NC | | PNP NC | |
| DW-AD-604-C5* | | DW-AD-624-C5 | |
| NPN NC | NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC |

EXTREME DURABILITY IN HARSH ENVIRONMENTS

EXTREME

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Mechanically and chemically extremely robust
- ✓ Corrosion resistant
- ✓ IP 68 and IP 69K, sea water resistant
- ✓ Pressure resistant up to 80 bar (1160 psi)

RANGE OVERVIEW

Housing size

Full Inox

EXTREME

M8

p. 75-76

M12

p. 76-78

M18

p. 78-80

M30

p. 80-81

FAMILY

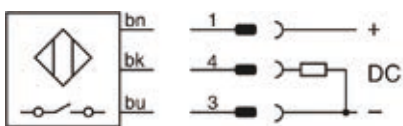
HOUSING SIZE

OPERATING DISTANCE MM

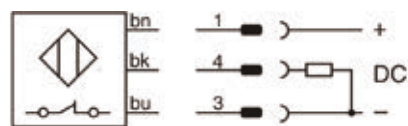
INDUCTIVE

WIRING DIAGRAMS

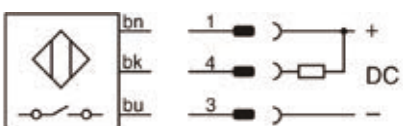
PNP NO



PNP NC



NPN NO



DATA

Sensing face material

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

Description

Part reference

Description

Part reference

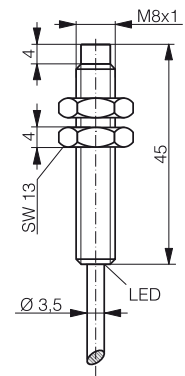
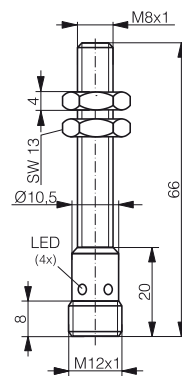
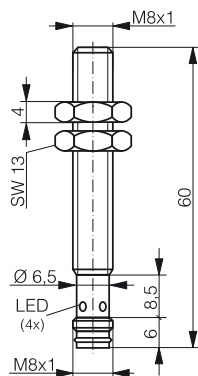
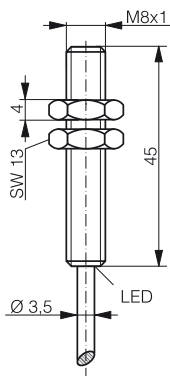
Description

Part reference

Other types available

EXTREME

| FULL INOX | FULL INOX | FULL INOX | FULL INOX |
|-----------|-----------|-----------|-----------|
| M8 | M8 | M8 | M8 |
| 3 | 3 | 3 | 6 |

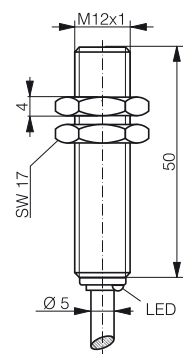
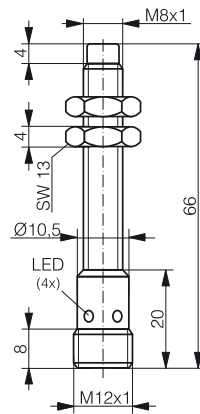
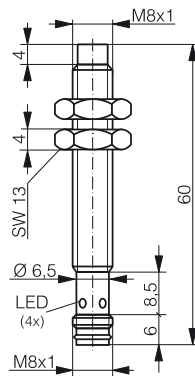





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| PUR cable | Connector S8 | Connector S12 | PUR cable |
| IP 68 | IP 67 | IP 67 | IP 68 |
| Embeddable | Embeddable | Embeddable | Non-embeddable |
| 1000 Hz | 1000 Hz | 1000 Hz | 700 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-703-M8 | DW-AS-703-M8-001 | DW-AS-703-M8 | DW-AD-713-M8 |
| NPN NO | NPN NO | NPN NO | NPN NO |
| DW-AD-701-M8 | DW-AS-701-M8-001 | DW-AS-701-M8 | DW-AD-711-M8 |
| PNP NC | | | PNP NC |
| DW-AD-704-M8 | | | DW-AD-714-M8 |
| NPN NC | PNP NC, NPN NC | PNP NC, NPN NC | NPN NC |

EXTREME

INDUCTIVE

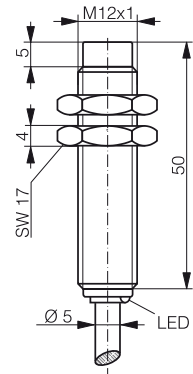
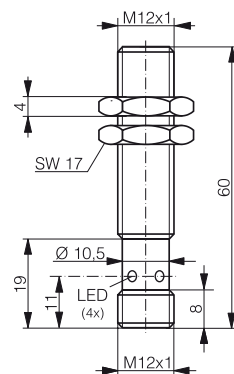
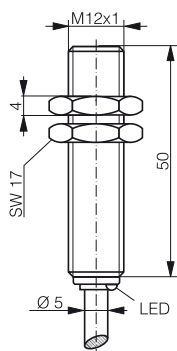
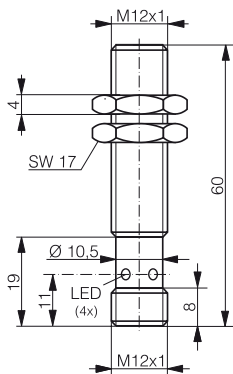
| FAMILY | FULL INOX | FULL INOX | FULL INOX |
|-----------------------|-----------|-----------|-----------|
| HOUSING SIZE | M8 | M8 | M12 |
| OPERATING DISTANCE MM | 6 | 6 | 2 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Sensing face material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | Connector S8 | Connector S12 | PUR cable |
| Degree of protection | IP 67 | IP 67 | IP 68 / IP 69K |
| Mounting | Non-embeddable | Non-embeddable | Embeddable |
| Max. switching frequency | 700 Hz | 700 Hz | 850 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-713-M8-001 | DW-AS-713-M8 | DW-AD-703-M12-303 |
| Description | | | NPN NO |
| Part reference | | | DW-AD-701-M12-303 |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC |

EXTREME

| | | | |
|-----------|-----------|-----------|-----------|
| FULL INOX | FULL INOX | FULL INOX | FULL INOX |
| M12 | M12 | M12 | M12 |
| 2 | 6 | 6 | 10 |

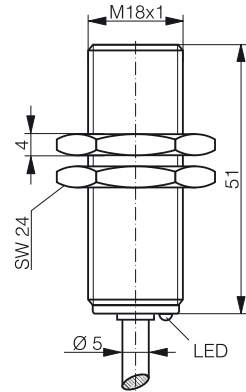
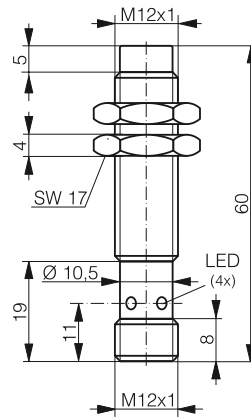
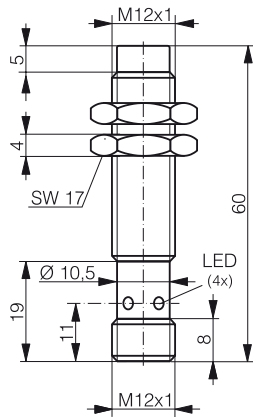





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connector S12 | PUR cable | Connector S12 | PUR cable |
| IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Embeddable | Embeddable | Embeddable | Non-embeddable |
| 850 Hz | 600 Hz | 600 Hz | 400 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-703-M12-303 | DW-AD-703-M12 | DW-AS-703-M12 | DW-AD-713-M12 |
| NPN NO | NPN NO | NPN NO | NPN NO |
| DW-AS-701-M12-303 | DW-AD-701-M12 | DW-AS-701-M12 | DW-AD-711-M12 |
| | | PNP NC | |
| | | DW-AS-704-M12 | |
| PNP NC, NPN NC | PNP NC, NPN NC | NPN NC | PNP NC, NPN NC |

EXTREME

INDUCTIVE

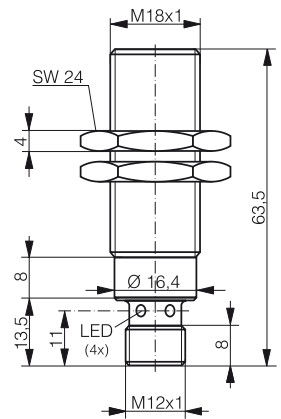
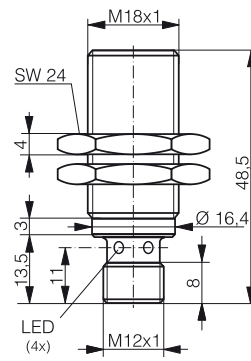
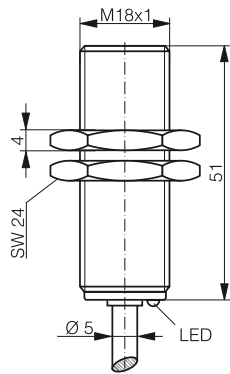
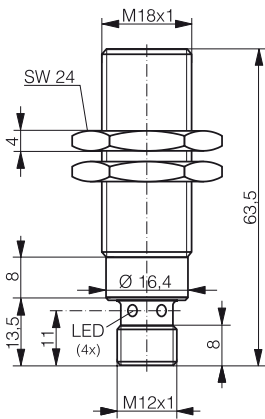
| FAMILY | FULL INOX | FULL INOX | FULL INOX |
|-----------------------|-----------|-----------|-----------|
| HOUSING SIZE | M12 | M12 | M18 |
| OPERATING DISTANCE MM | 10 | 15 | 5 |







| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Sensing face material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | Connector S12 | Connector S12 | PUR cable |
| Degree of protection | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Mounting | Non-embeddable | Non-embeddable | Embeddable |
| Max. switching frequency | 400 Hz | 220 Hz | 500 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-713-M12 | DW-AS-733-M12 | DW-AD-703-M18-303 |
| Description | NPN NO | | NPN NO |
| Part reference | DW-AS-711-M12 | | DW-AD-701-M18-303 |
| Description | | | |
| Part reference | | | |
| Other types available | PNP NC, NPN NC | NPN NO | PNP NC, NPN NC |

EXTREME

| FULL INOX | FULL INOX | FULL INOX | FULL INOX |
|-----------|-----------|-----------|-----------|
| M18 | M18 | M18 | M18 |
| 5 | 10 | 10 | 10 |



|  |  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connector S12 | PUR cable | Connector S12 | Connector S12 |
| IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 500 Hz | 200 Hz | 200 Hz | 200 Hz |
| 10 ... 30 VDC | 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 | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-703-M18-303 | DW-AD-703-M18 | DW-AS-703-M18-120 | DW-AS-703-M18-002 |
| | NPN NO | | NPN NO |
| | DW-AD-701-M18 | | DW-AS-701-M18-002 |
| | PNP NC | | PNP NC |
| | DW-AD-704-M18 | | DW-AS-704-M18-002 |
| NPN NO, PNP NC, NPN NC | NPN NC | NPN NO, PNP NC, NPN NC | NPN NC |

EXTREME

FAMILY

FULL INOX

FULL INOX

FULL INOX

HOUSING SIZE

M18

M18

M30

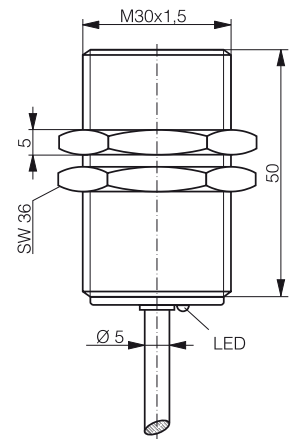
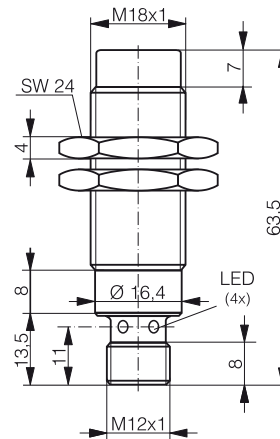
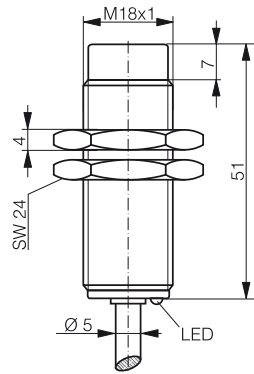
OPERATING DISTANCE MM

20

20

20

INDUCTIVE



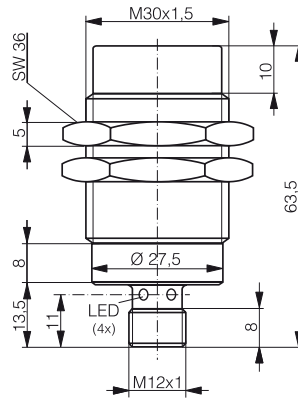
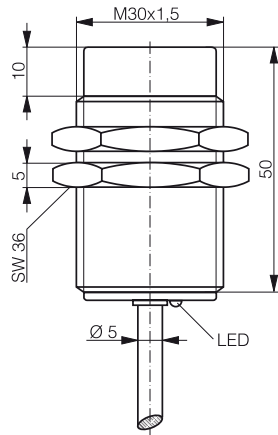
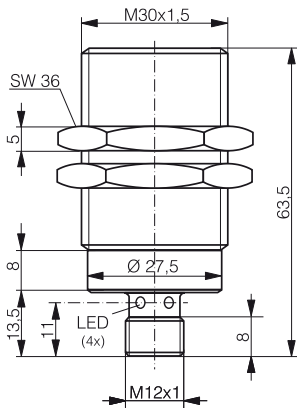
DATA



| | | | |
|---------------------------|----------------------------------|----------------------------------|----------------------------------|
| Sensing face material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Housing material | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Connection | PUR cable | Connector S12 | PUR cable |
| Degree of protection | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Mounting | Non-embeddable | Non-embeddable | Embeddable |
| Max. switching frequency | 200 Hz | 200 Hz | 100 Hz |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AD-713-M18 | DW-AS-713-M18-002 | DW-AD-703-M30 |
| Description | NPN NO | | PNP NC |
| Part reference | DW-AD-711-M18 | | DW-AD-704-M30 |
| Description | | | |
| Part reference | | | |
| Other types available | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, NPN NC |

EXTREME

| | | | |
|-----------|-----------|-----------|--|
| FULL INOX | FULL INOX | FULL INOX | |
| M30 | M30 | M30 | |
| 20 | 40 | 40 | |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|--|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | |
| Connector S12 | PUR cable | Connector S12 | |
| IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K | |
| Embeddable | Non-embeddable | Non-embeddable | |
| 100 Hz | 90 Hz | 90 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 | |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | |
| PNP NO | PNP NO | PNP NO | |
| DW-AS-703-M30-002 | DW-AD-713-M30 | DW-AS-713-M30-002 | |
| NPN NO | | | |
| DW-AS-701-M30-002 | | | |
| | | | |
| PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | |

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 PRESSURE

∅ 3 mm

p. 85

M5

p. 85

∅ 6.5 mm

p. 85

FAMILY

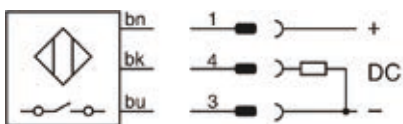
HOUSING SIZE MM

OPERATING DISTANCE MM

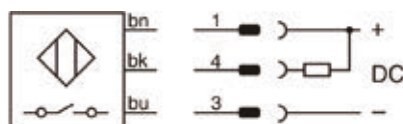
INDUCTIVE

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

Description

Part reference

Description

Part reference

Description

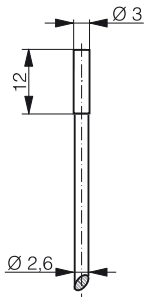
Part reference

Other types available

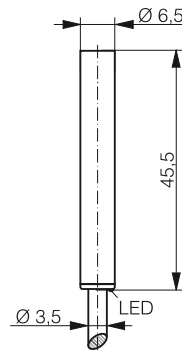
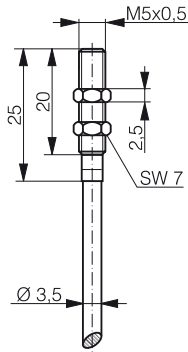
*Part reference change see p. 334

EXTRA PRESSURE

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



IO-Link



| Ceramic ZrO ₂ | Sapphire | Ceramic ZrO ₂ | |
|----------------------------------|----------------------------------|----------------------------------|--|
| 200 bar | 20 bar | 20 bar | |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | |
| PUR cable | PUR cable | PUR cable | |
| IP 68 / IP 69K | 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 | |
| PNP NO | PNP NO | NPN NO | |
| DW-AD-623-03E-961 | DW-AD-603-M5E* | DW-AD-501-065E | |
| | | | |
| | | | |
| NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NO, PNP NC, NPN NC | |

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 higher 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 |
|--------------------------|--------------|----------------|-----------|
| HIGH PRESSURE | M5 / P5 | p. 89 | |
| | M8 / P8 | p. 89 | |
| | M12 / P12 | p. 89-91 | p. 91 |
| | M14 / P20 | p. 91 | |

FAMILY

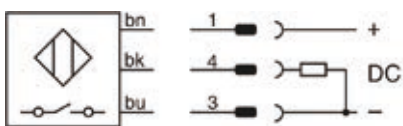
HOUSING SIZE

OPERATING DISTANCE MM

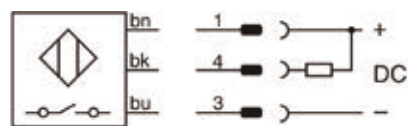
INDUCTIVE

WIRING DIAGRAMS

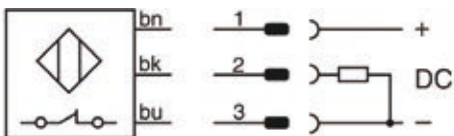
PNP NO



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

Description

Part reference

Description

Part reference

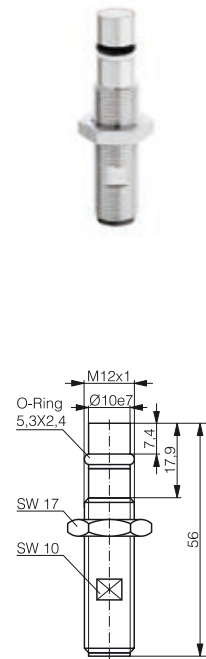
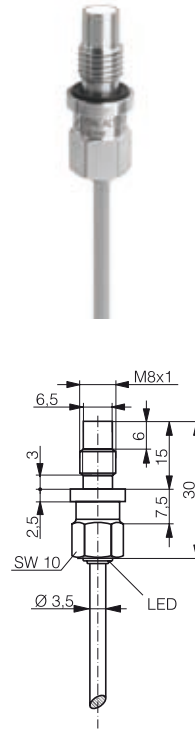
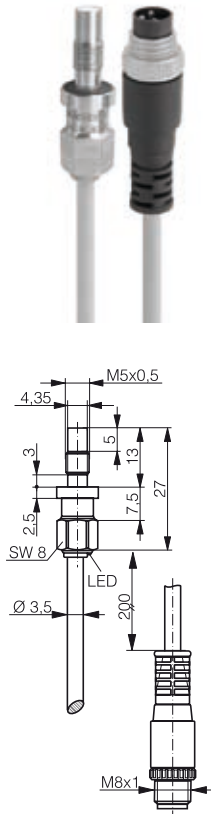
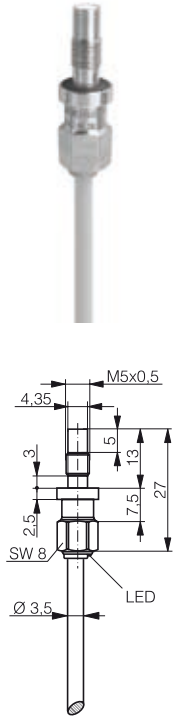
Description

Part reference

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 |



| | | | |
|-----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| Ceramic ZrO ₂ | Ceramic ZrO ₂ | Ceramic ZrO ₂ | Ceramic ZrO ₂ |
| 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 |
| PNP NO | PNP NO | PNP NO | PNP NO (S _n = 1,5 mm) |
| DW-AD-503-P5 | DW-AV-503-P5-276 | DW-AD-503-P8 | DW-AS-503-P12-630 |
| | | | PNP NC (S _n = 1,5 mm) |
| | | | DW-AS-504-P12-630 |
| | | | PNP NO (S _n = 2,5 mm) |
| | | | DW-AS-523-P12-630 |
| NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | NPN NO, NPN NC |

HIGH PRESSURE

FAMILY

EXTRA DISTANCE

EXTRA DISTANCE

EXTRA DISTANCE

HOUSING SIZE

M12 (P12)

M12 (P12)

M12 (P12)

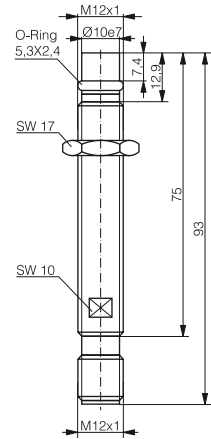
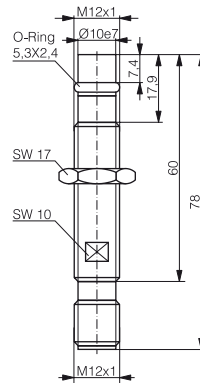
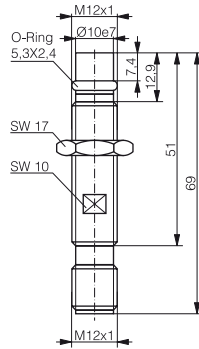
OPERATING DISTANCE MM

1.5

1.5

1.5

INDUCTIVE



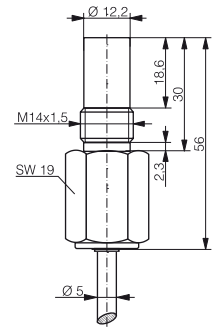
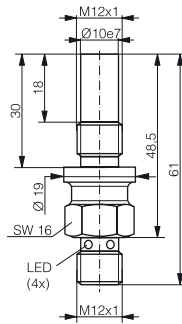
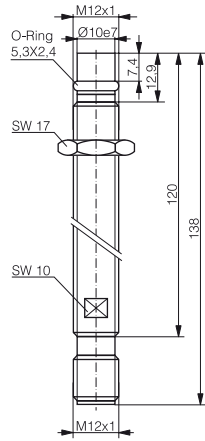
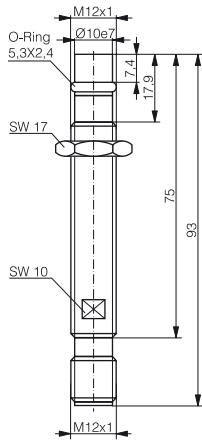
DATA



| | | | |
|---------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| Sensing face material | Ceramic ZrO ₂ | Ceramic ZrO ₂ | Ceramic ZrO ₂ |
| 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 |
| Description | PNP NO | PNP NO | PNP NO |
| Part reference | DW-AS-503-P12 | DW-AS-503-P12-627 | DW-AS-503-P12-621 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC, 2,5 mm operating distance | NPN NO, PNP NC, NPN NC, 2,5 mm operating distance | NPN NO, PNP NC, NPN NC, 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 ₂ | Ceramic ZrO ₂ | Stainless steel V4A / AISI 316L | Ceramic ZrO ₂ |
| 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 ... +70 °C / -13 ... +158 °F | -25 ... +80 °C / -13 ... +176 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AS-503-P12-635 | DW-AS-503-P12-622 | DW-LS-703-P12G | DW-AD-503-P20 |
| | | | |
| | | | |
| NPN NO, PNP NC, NPN NC, 2,5 mm operating distance | NPN NO, PNP NC, NPN NC, 2,5 mm operating distance | NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

HIGH PRESSURE

FAMILY

EXTRA DISTANCE

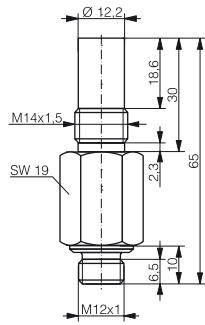
HOUSING SIZE

M14 (P20)

OPERATING DISTANCE MM

3

INDUCTIVE



DATA



| | |
|---------------------------|----------------------------------|
| Sensing face material | Ceramic ZrO ₂ |
| 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 |
| Description | PNP NO |
| Part reference | DW-AS-503-P20 |
| Description | NPN NO |
| Part reference | DW-AS-501-P20 |
| Description | |
| Part reference | |
| Other types available | PNP NC, NPN NC |

TEMPERATURE RESISTANT UP TO 120°C (248°F)

EXTRA TEMPERATURE INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Temperature resistant up to 120°C (248°F)
- ✓ Excellent long term reliability
- ✓ Outstanding accuracy

| RANGE OVERVIEW | Housing size | Classics |
|------------------------------|--------------|----------|
| EXTRA TEMPERATURE | M5 | p. 97 |
| | M8 | p. 97 |
| | M12 | p. 97 |
| | M18 | p. 97 |

FAMILY

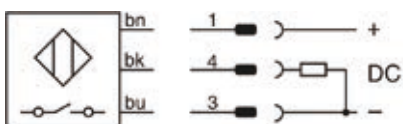
HOUSING SIZE

OPERATING DISTANCE MM

INDUCTIVE

WIRING DIAGRAMS

PNP NO



DATA

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

Description

Part reference

Description

Part reference

Description

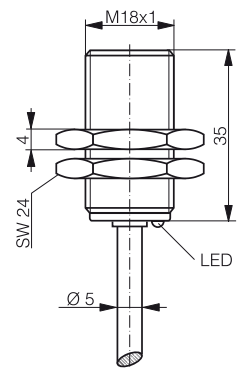
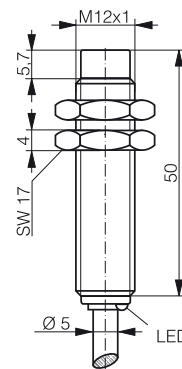
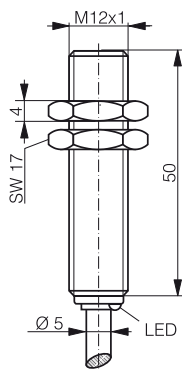
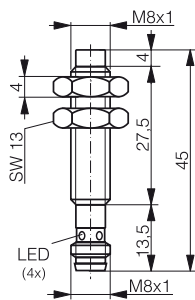
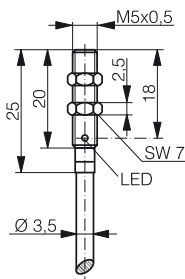
Part reference

Other types available

*Part reference change see p. 334

EXTRA TEMPERATURE

| CLASSICS | CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|----------|
| M5 | M8 | M12 | M12 | M18 |
| 0.8 | 4 | 2 | 4 | 5 |



| | | | | |
|-----------------------------|---------------------------|-----------------------------|-----------------------------|-----------------------------|
| Stainless steel V2A | Stainless steel V2A | Nickel-plated brass | Nickel-plated brass | Nickel-plated brass |
| Silicone cable 2 m | Connector S8 | PVC cable 6 m | PVC cable 5 m | PUR cable 2 m |
| IP 67 | IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Non-embeddable | Embeddable | Non-embeddable | Embeddable |
| 5000 Hz | 3500 Hz | 3000 Hz | 2000 Hz | 2000 Hz |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| -25...+120 °C/-13...+248 °F | 0...+80 °C/+32 ...+176 °F | -25...+100 °C/-13...+212 °F | -25...+100 °C/-13...+212 °F | -40...+100 °C/-40...+212 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO | PNP NO |
| DW-AD-603-M5-735* | DW-AS-633-M8-732 | DW-AD-603-M12-734 | DW-AD-613-M12-733 | DW-AD-603-M18-718 |
| | | | | |
| | | | | |
| | | | | |
| NPN NO | - | - | - | - |

TEMPERATURE RESISTANT UP TO 230°C (446°F)



HIGH TEMPERATURE INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Models with external electronics for temperatures of up to +230°C (+446°F)
- ✓ Models with integrated electronics for temperatures of up to +180°C (+356°F)
- ✓ Excellent long term reliability

| RANGE OVERVIEW | Housing size | Classics |
|-----------------------------|--------------|----------|
| HIGH TEMPERATURE | M8 | p. 101 |
| | M12 | p. 101 |
| | M18 | p. 101 |
| | M30 | p. 101 |
| | M50 | p. 102 |

FAMILY

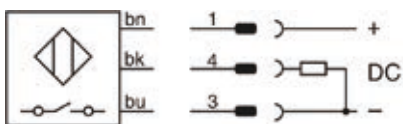
HOUSING SIZE

OPERATING DISTANCE MM

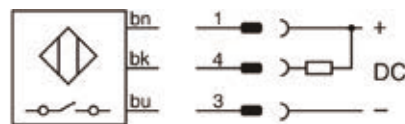
INDUCTIVE

WIRING DIAGRAMS

PNP NO



NPN NO

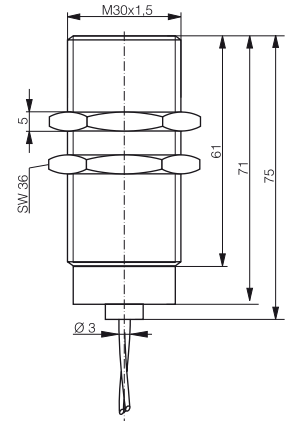
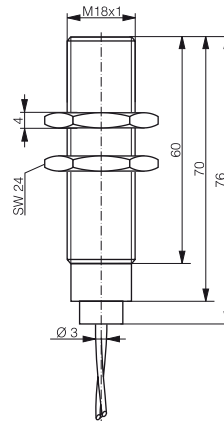
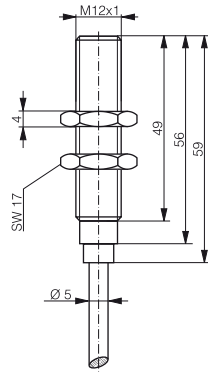
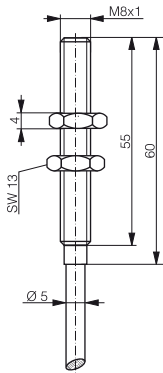


DATA

- Amplifier
- Housing material
- Connection
- Degree of protection
- Mounting
- Max. switching frequency
- Supply voltage range
- Ambient temperature range
- Output current
- Description
- Part reference
- Description
- Part reference
- Description
- Part reference
- Other types available

HIGH TEMPERATURE

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| M8 | M12 | M18 | M30 |
| 2 | 3 | 5 | 10 |



| | | | |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------|---------------------------------|
| Built-in | Built-in | Built-in | Built-in |
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Stainless steel V2A |
| Silicone cable 2 m | Silicone cable 2 m | Teflon cable 2 m | Teflon cable 2 m |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 600 Hz | 500 Hz | 400 Hz | 200 Hz |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| 0 ... +140 °C / +32 ... +280 °F | 0 ... +150 °C / +32 ... +300 °F | 0 ... +180 °C / +32 ... +350 °F | 0 ... +180 °C / +32 ... +350 °F |
| 120 mA ($\leq 100^{\circ}\text{C}$) / 80 mA ($> 100^{\circ}\text{C}$) | 120 mA ($\leq 100^{\circ}\text{C}$) / 70 mA ($> 100^{\circ}\text{C}$) | ≤ 150 mA | ≤ 150 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-HD-623-M8-100 | DW-HD-603-M12-200 | DW-HD-603-M18-310 | DW-HD-603-M30-310 |
| NPN NO | | NPN NO | |
| DW-HD-621-M8-100 | | DW-HD-601-M18-310 | |
| | | | |
| PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | PNP NC, NPN NC | NPN NO, PNP NC, NPN NC |

HIGH TEMPERATURE

FAMILY

CLASSICS

CLASSICS

HOUSING SIZE

M50

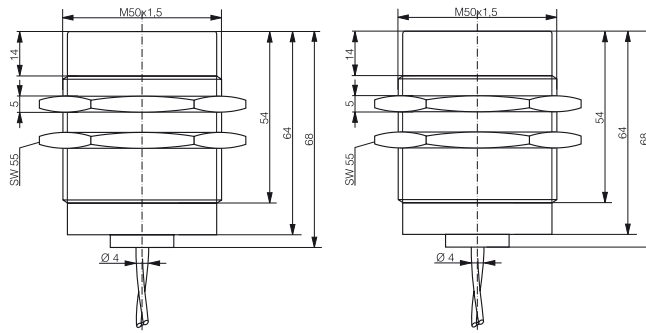
M50

OPERATING DISTANCE MM

25

25

INDUCTIVE



DATA



| | | |
|---------------------------|------------------------------------|------------------------------------|
| Amplifier | In cable | In cable |
| Housing material | Stainless steel V2A | Stainless steel V2A |
| Connection | Teflon cable 5 m | Teflon cable 20 m |
| Degree of protection | IP 67 | IP 67 |
| Mounting | Non-embeddable | Non-embeddable |
| Max. switching frequency | 150 Hz | 150 Hz |
| Supply voltage range | 10 ... 30 VDC (amplifier) | 10 ... 30 VDC (amplifier) |
| Ambient temperature range | -40 ... +230 °C / -40 ... +440 °F | 0 ... +230 °C / +32 ... +440 °F |
| Output current | ≤ 200 mA (amplifier) | ≤ 200 mA (amplifier) |
| Description | PNP NO | PNP NO |
| Part reference | DW-HD-613-M50-511 | DW-HD-613-M50-503 |
| Description | | |
| Part reference | | |
| Description | | |
| Part reference | | |
| Other types available | For other cable lengths please ask | For other cable lengths please ask |

ECOLAB APPROVED FOR HARSHTEST
CLEANING PROCESSES

WASHDOWN

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Corrosion resistant
- ✓ Food safe
- ✓ Mechanically and chemically rugged
- ✓ Full Inox housing
- ✓ IP 68 / IP 69K protection
- ✓ One-piece full-metal housing

RANGE OVERVIEW

Housing size

Full Inox

WASHDOWN

M12

p. 107

M18

p. 107

M30

p. 108

FAMILY

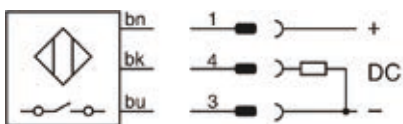
HOUSING SIZE

OPERATING DISTANCE MM

INDUCTIVE

WIRING DIAGRAMS

PNP NO



DATA

Operating pressure

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

Description

Part reference

Description

Part reference

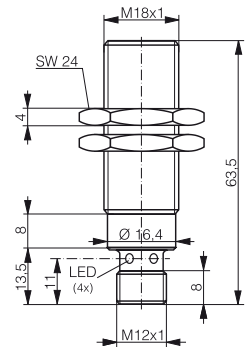
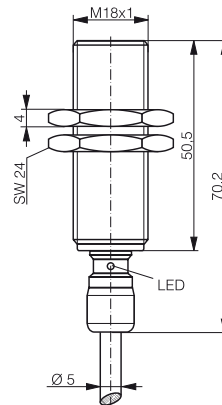
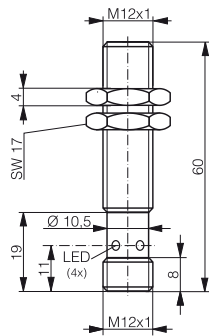
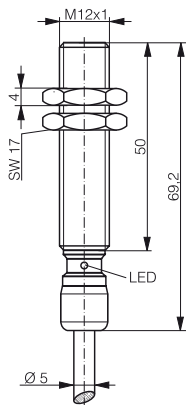
Description

Part reference

Other types available

WASHDOWN

| FULL INOX | FULL INOX | FULL INOX | FULL INOX |
|-----------|-----------|-----------|-----------|
| M12 | M12 | M18 | M18 |
| 6 | 6 | 10 | 10 |

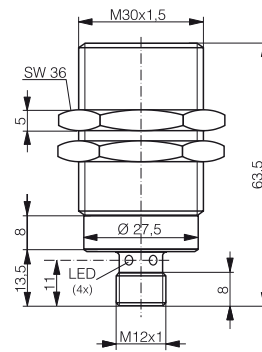
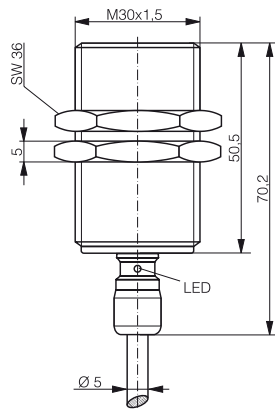




| | | | |
|-------------------------------------------|-------------------------------------------|-------------------------------------------|-------------------------------------------|
| 80 bar | 80 bar | 60 bar | 60 bar |
| Stainless steel V4A/AISI 316L | Stainless steel V4A/AISI 316L | Stainless steel V4A/AISI 316L | Stainless steel V4A/AISI 316L |
| TPE-S cable | Connector S12 | TPE-S cable | Connector S12 |
| IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K | IP 68 / IP 69K |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 600 Hz | 600 Hz | 300 Hz | 300 Hz |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| -25 ... +85 °C / -13 ... +176 °F | -25 ... +85 °C / -13 ... +176 °F | -25 ... +85 °C / -13 ... +176 °F | -25 ... +85 °C / -13 ... +176 °F |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |
| PNP NO | PNP NO | PNP NO | PNP NO |
| DW-LD-703-M12 | DW-LS-703-M12 | DW-LD-703-M18 | DW-LS-703-M18-002 |
| | | | |
| | | | |
| NPN NO, PNP NC, NPN NC, non-embeddable | NPN NO, PNP NC, NPN NC, non-embeddable | NPN NO, PNP NC, NPN NC, non-embeddable | NPN NO, PNP NC, NPN NC, non-embeddable |

WASHDOWN

INDUCTIVE

| | | | |
|-----------------------|-----------|-----------|--|
| FAMILY | FULL INOX | FULL INOX | |
| HOUSING SIZE | M30 | M30 | |
| OPERATING DISTANCE MM | 20 | 20 | |



| DATA |  |  | |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--|
| Operating pressure | 40 bar | 40 bar | |
| Housing material | Stainless steel V4A/AISI 316L | Stainless steel V4A/AISI 316L | |
| Connection | TPE-S cable | Connector S12 | |
| Degree of protection | IP 68 / IP 69K | IP 68 / IP 69K | |
| Mounting | Embeddable | Embeddable | |
| Max. switching frequency | 100 Hz | 100 Hz | |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | |
| Ambient temperature range | -25 ... +85 °C / -13 ... +176 °F | -25 ... +85 °C / -13 ... +176 °F | |
| Output current | ≤ 200 mA | ≤ 200 mA | |
| Description | PNP NO | PNP NO | |
| Part reference | DW-LD-703-M30 | DW-LS-703-M30-002 | |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | NPN NO, PNP NC, NPN NC, non-embeddable | NPN NO, PNP NC, NPN NC, non-embeddable | |

ANALOG OUTPUT FOR DISTANCE CONTROL



ANALOG OUTPUT

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Highest sensing ranges
- ✓ Best temperature stability
- ✓ Excellent repeat accuracy
- ✓ Resolution in μm range

| RANGE OVERVIEW | Housing size | Extra Distance |
|----------------|--------------|----------------|
| ANALOG | C8 | p. 113 |
| | M8 | p. 113-114 |
| | M12 | p. 114-115 |
| | M18 | p. 115-116 |
| | M30 | p. 116-117 |

FAMILY

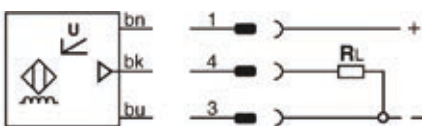
HOUSING SIZE MM

SENSING RANGE MM

INDUCTIVE

WIRING DIAGRAMS

Analog C8/M8



Analog M12/M18/M30

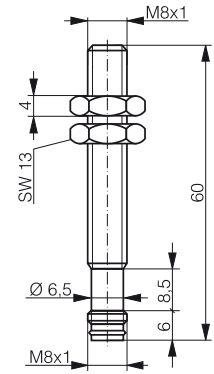
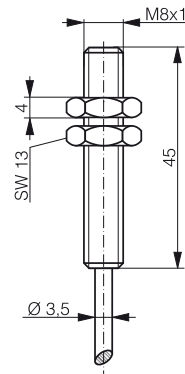
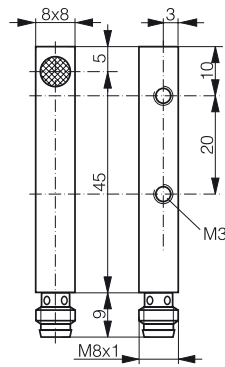
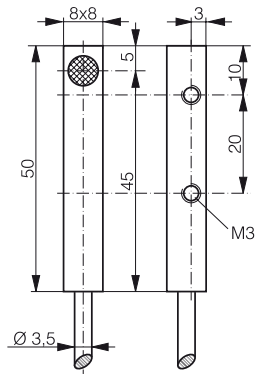


DATA

| |
|---------------------------|
| Bandwidth (-3 dB) |
| Output voltage |
| Housing material |
| Connection |
| Degree of protection |
| Mounting |
| Supply voltage range |
| Ambient temperature range |
| Output current |
| Description |
| Part reference |
| Description |
| Part reference |
| Description |
| Part reference |
| Other types available |

ANALOG OUTPUT

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| □ 8 x 8 | □ 8 x 8 | M8 | M8 |
| 0 ... 4 | 0 ... 4 | 0 ... 4 | 0 ... 4 |

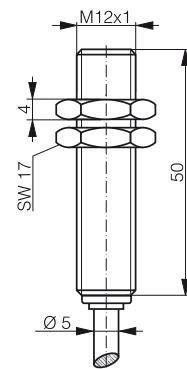
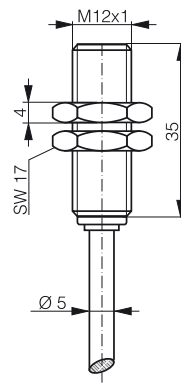
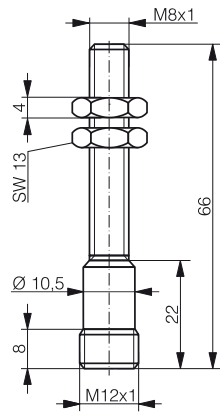





| | | | |
|----------------------------------|----------------------------------|--------------------------------------|----------------------------------|
| 1,600 Hz (at s = 2 mm) | 1,600 Hz (at s = 2 mm) | 1,600 Hz (at s = 2 mm) | 1,600 Hz (at s = 2 mm) |
| 0 ... 10 V | 0 ... 10 V | 0 ... 5 V / 0 ... 10 V (-390) | 0 ... 10 V |
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| PUR cable | Connector S8 | PUR cable | Connector S8 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| 15 ... 30 VDC | 15 ... 30 VDC | 10 ... 30 VDC / 15 ... 30 VDC (-390) | 15 ... 30 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| - | - | - | - |
| Output 0...10 V | Output 0...10 V | Output 0...5 V | Output 0...10 V |
| DW-AD-509-C8-390 | DW-AS-509-C8-390 | DW-AD-509-M8 | DW-AS-509-M8-390 |
| | | Output 0...10 V | |
| | | DW-AD-509-M8-390 | |
| - | - | - | On request |

ANALOG OUTPUT

INDUCTIVE

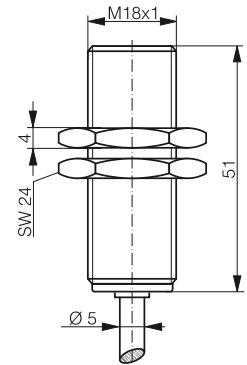
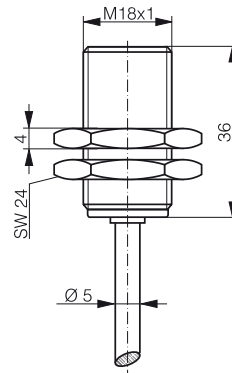
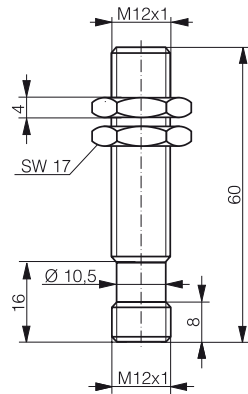
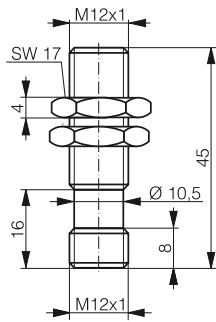
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|------------------|----------------|----------------|----------------|
| HOUSING SIZE | M8 | M12 | M12 |
| SENSING RANGE MM | 0 ... 4 | 0 ... 6 | 0 ... 6 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bandwidth (-3 dB) | 1,600 Hz (at s = 2 mm) | 1,000 Hz (at s = 3 mm) | 1,000 Hz (at s = 3 mm) |
| Output voltage | 0 ... 10 V | 0 ... 5 V / 0 ... 10 V (-390) | 0 ... 5 V / 0 ... 10 V (-390) |
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | Connector S12 | PUR cable | PUR cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| Supply voltage range | 15 ... 30 VDC | 10 ... 30 / 15 ... 30 VDC (-320) | 10 ... 30 / 15 ... 30 VDC (-390) |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | - | 1 ... 5 mA (-120 only) | 1 ... 5 mA / 4 ... 20 mA (-390) |
| Description | Output 0...10 V | Outputs 0...5 V / 1...5 mA | Outputs 0...5 V / 1...5 mA |
| Part reference | DW-AS-509-M8-393 | DW-AD-509-M12-120 | DW-AD-509-M12 |
| Description | | Output 0...10 V | Outputs 0...10 V / 4...20 mA |
| Part reference | | DW-AD-509-M12-320 | DW-AD-509-M12-390 |
| Description | | | |
| Part reference | | | |
| Other types available | On request | - | - |

ANALOG OUTPUT

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| M12 | M12 | M18 | M18 |
| 0 ... 6 | 0 ... 6 | 0 ... 10 | 0 ... 10 |

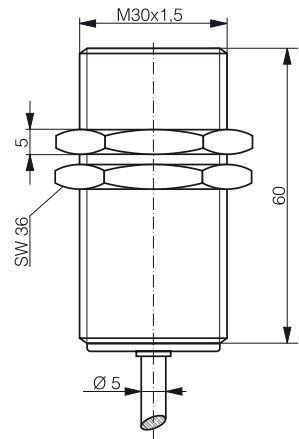
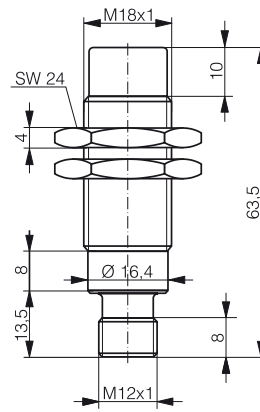
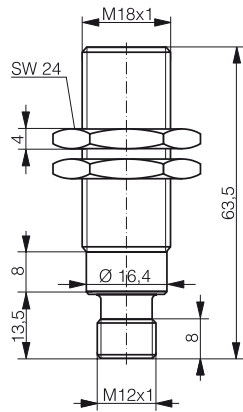





| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 1,000 Hz (at s = 3 mm) | 1,000 Hz (at s = 3 mm) | 500 Hz (at s = 5 mm) | 500 Hz (at s = 5 mm) |
| 0 ... 5 V / 0 ... 10 V (-320) | 0 ... 5 V / 0 ... 10 V (-390) | 0 ... 5 V / 0 ... 10 V (-320) | 0 ... 10 V |
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connector S12 | Connector S12 | PUR cable | PUR cable |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| 10 ... 30 / 15 ... 30 VDC (-320) | 10 ... 30 / 15 ... 30 VDC (-390) | 10 ... 30 / 15 ... 30 VDC (-320) | 15 ... 30 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| 1 ... 5 mA (-120 only) | 1 ... 5 mA / 4 ... 20 mA (-390) | 1 ... 5 mA / 4 ... 20 mA (-320) | 4 ... 20 mA |
| Outputs 0...5 V / 1...5 mA | Outputs 0...5 V / 1...5 mA | Outputs 0...5 V / 1...5 mA | Outputs 0...10 V / 4...20 mA |
| DW-AS-509-M12-120 | DW-AS-509-M12 | DW-AD-509-M18-120 | DW-AD-509-M18-390 |
| Output 0...10 V | Outputs 0...10 V / 4...20 mA | Outputs 0...10 V / 4...20 mA | |
| DW-AS-509-M12-320 | DW-AS-509-M12-390 | DW-AD-509-M18-320 | |
| - | - | - | On request |

ANALOG OUTPUT

INDUCTIVE

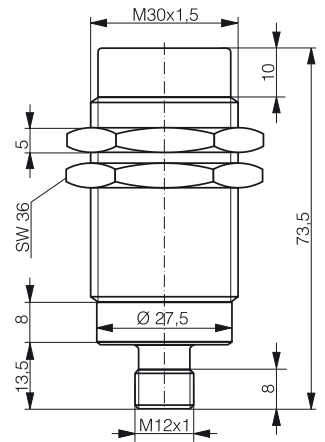
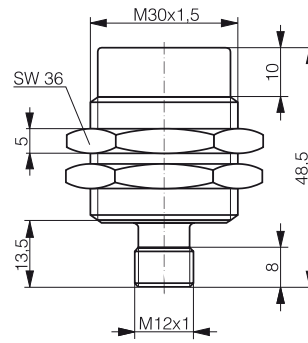
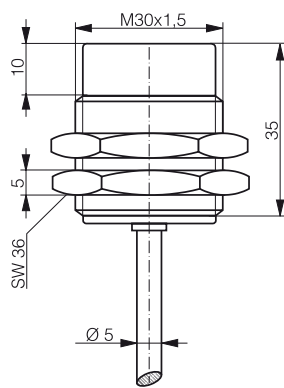
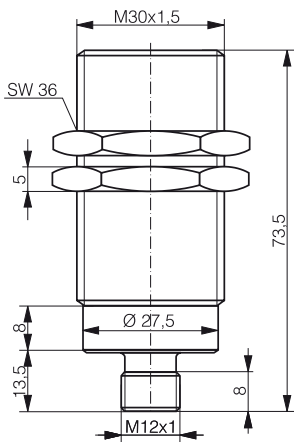
| FAMILY | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|------------------|----------------|----------------|----------------|
| HOUSING SIZE | M18 | M18 | M30 |
| SENSING RANGE MM | 0 ... 10 | 0 ... 20 | 0 ... 20 |



| DATA |  |  |  |
|---------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Bandwidth (-3 dB) | 500 Hz (at s = 5 mm) | 250 Hz (at s = 10 mm) | 200 Hz (at s = 10 mm) |
| Output voltage | 0 ... 10 V | 0 ... 5 V | 0 ... 10 V |
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection | Connector S12 | Connector S12 | PUR cable |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Non-embeddable | Quasi-embeddable |
| Supply voltage range | 15 ... 30 VDC | 10 ... 30 VDC | 15 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | 4 ... 20 mA | 1 ... 5 mA | 4 ... 20 mA |
| Description | Outputs 0...10 V / 4...20 mA | Outputs 0...5 V / 1...5 mA | Outputs 0...10 V / 4...20 mA |
| Part reference | DW-AS-509-M18-390 | DW-AS-519-M18-002 | DW-AD-509-M30-390 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | On request | On request | On request |

ANALOG OUTPUT

| EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE | EXTRA DISTANCE |
|----------------|----------------|----------------|----------------|
| M30 | M30 | M30 | M30 |
| 0 ... 20 | 0 ... 40 | 0 ... 40 | 0 ... 40 |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 200 Hz (at s = 10 mm) | 100 Hz (at s = 20 mm) | 100 Hz (at s = 20 mm) | 100 Hz (at s = 20 mm) |
| 0 ... 10 V | 0 ... 10 V | 0 ... 10 V | 0 ... 10 V |
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connector S12 | PUR cable | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Quasi-embeddable | Non-embeddable | Non-embeddable | Non-embeddable |
| 15 ... 30 VDC | 15 ... 30 VDC | 15 ... 30 VDC | 15 ... 30 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| 4 ... 20 mA | 4 ... 20 mA | 4 ... 20 mA | 4 ... 20 mA |
| Outputs 0...10 V / 4...20 mA | Outputs 0...10 V / 4...20 mA | Outputs 0...10 V / 4...20 mA | Outputs 0...10 V / 4...20 mA |
| DW-AS-509-M30-390 | DW-AD-519-M30-320 | DW-AS-519-M30-320 | DW-AS-519-M30-390 |
| On request | On request | On request | On request |

DURABLE AND RELIABLE IN WELDING CELLS



WELD- IMMUNE

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ Resistant to electromagnetic fields of up to 40 millitesla
- ✓ Extremely robust
- ✓ Easy to clean - even using harsh methods
- ✓ No false switching caused by metal dust or chips
- ✓ Factor 1
- ✓ No extra protection needed
- ✓ Long operating distances

RANGE OVERVIEW

Housing size

Full Inox

WELD-
IMMUNE

M12

p. 121

M18

p. 121

FAMILY

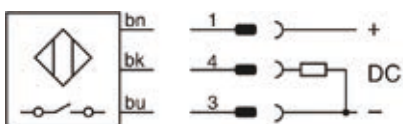
HOUSING SIZE

OPERATING DISTANCE MM

INDUCTIVE

WIRING DIAGRAMS

PNP NO

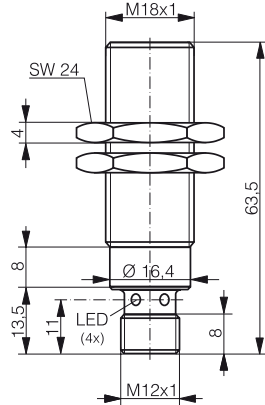
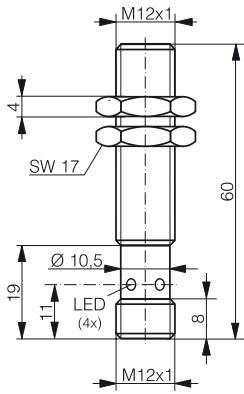


DATA

- Sensing face material
- Magnetic field strength
- Housing material
- Connection
- Degree of protection
- Mounting
- Max. switching frequency
- Supply voltage range
- Ambient temperature range
- Output current
- Description
- Part reference
- Description
- Part reference
- Description
- Part reference
- Other types available

WELD-IMMUNE

| | | | |
|-----------|-----------|--|--|
| FULL INOX | FULL INOX | | |
| M12 | M18 | | |
| 6 | 10 | | |



| | | | |
|----------------------------------|----------------------------------|--|--|
| | | | |
| Stainless steel V2A | Stainless steel V2A | | |
| 40 mT | 40 mT | | |
| Stainless steel V2A | Stainless steel V2A | | |
| Connector S12 | Connector S12 | | |
| IP 68 / IP 69K | IP 68 / IP 69K | | |
| Embeddable | Embeddable | | |
| 15 Hz | 15 Hz | | |
| 10 ... 30 VDC | 10 ... 30 VDC | | |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | | |
| ≤ 200 mA | ≤ 200 mA | | |
| PNP NO | PNP NO | | |
| DW-AS-703-M12-673 | DW-AS-703-M18-673 | | |
| | | | |
| | | | |
| | | | |
| NPN NO, PNP NC, NPN NC | NPN NO, PNP NC, NPN NC | | |

DESIGNED FOR SPECIAL REQUIREMENTS

SPECIAL

INDUCTIVE SENSORS

KEY ADVANTAGES

- ✓ 2-wire sensors
- ✓ Namur types
- ✓ Double sheet detection

| RANGE OVERVIEW | Housing size | Classics | Full Inox |
|----------------|--------------|------------|-----------|
| SPECIAL | ∅ 4 mm | p. 125 | |
| | M5 | p. 125 | |
| | C5 | p. 125 | |
| | ∅ 6.5 mm | p. 126 | |
| | M12 | p. 126-127 | |
| | M18 | p. 127 | |
| | M30 | | |

FAMILY

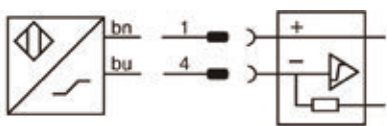
HOUSING SIZE MM

OPERATING DISTANCE MM

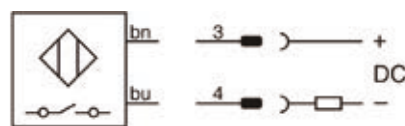
INDUCTIVE

WIRING DIAGRAMS

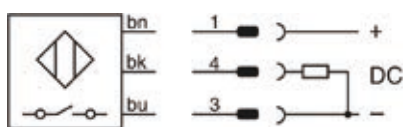
Namur



2-wire DC



PNP NO



DATA

Housing material

Connection

Degree of protection

Mounting

Max. switching frequency

Supply voltage range

Ambient temperature range

Output current

Description

Part reference

Description

Part reference

Description

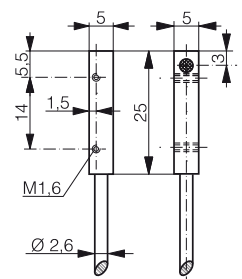
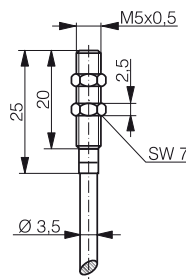
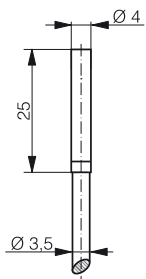
Part reference





Other types available

*Part reference change see p. 334

SPECIAL

| CLASSICS | CLASSICS | CLASSICS | CLASSICS |
|----------|----------|----------|----------|
| Ø 4 | Ø 4 | M5 | □ 5 x 5 |
| 0.8 | 0.8 | 0.8 | 0.8 |

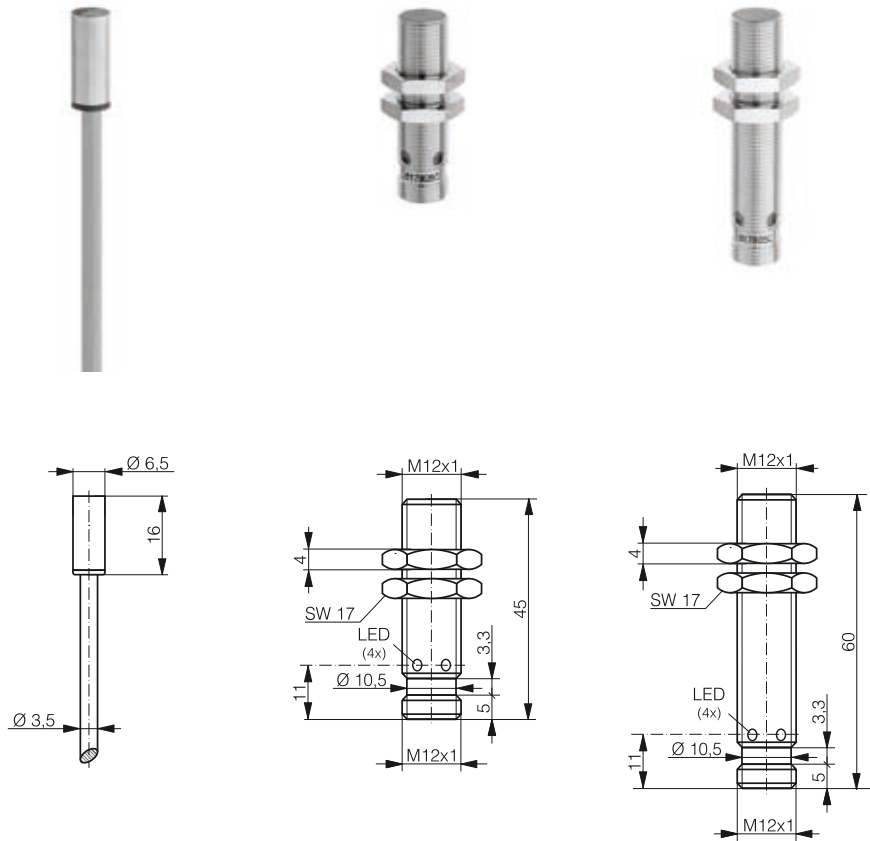





|  |  |  |  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Stainless steel V2A | Stainless steel V2A | Stainless steel V2A | Chrome-plated brass |
| PVC cable | Single wires | PVC cable | PUR cable |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Embeddable | Embeddable | Embeddable | Embeddable |
| 10000 Hz | 10000 Hz | 10000 Hz | 10000 Hz |
| 7.7 ... 9 VDC | 7.7 ... 9 VDC | 7.7 ... 9 VDC | 7.7 ... 9 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 1 / ≥ 2.2 mA | ≤ 1 / ≥ 2.2 mA | ≤ 1 / ≥ 2.2 mA | ≤ 1 / ≥ 2.2 mA |
| NAMUR | NAMUR | NAMUR | NAMUR |
| DW-AD-605-04* | DW-AD-605-04K* | DW-AD-605-M5* | DW-AD-605-C5* |
| - | - | - | - |

SPECIAL

INDUCTIVE

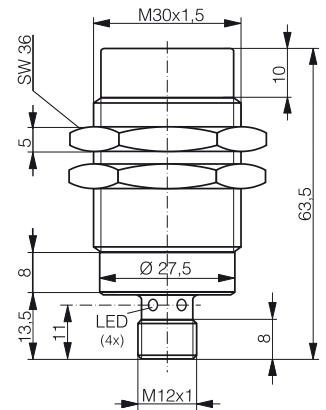
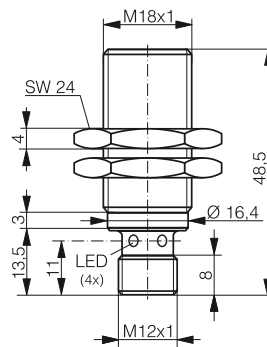
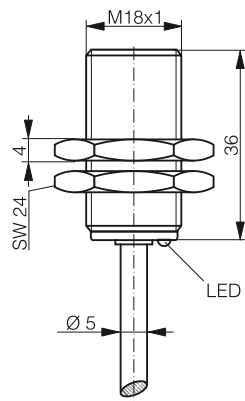
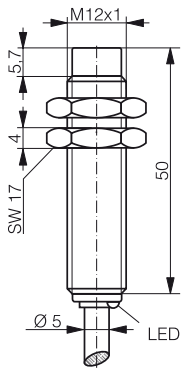
| FAMILY | CLASSICS | CLASSICS | CLASSICS |
|-----------------------|----------|----------|----------|
| HOUSING SIZE MM | Ø 6.5 | M12 | M12 |
| OPERATING DISTANCE MM | 1.5 | 2 | 2 |



| DATA |  |  |  |
|-----------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Housing material | Stainless steel V2A | Nickel-plated brass | Nickel-plated brass |
| Connection | PVC cable | Connector S12 | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 |
| Mounting | Embeddable | Embeddable | Embeddable |
| Max. switching frequency | 10000 Hz | 3000 Hz | 3000 Hz |
| Supply voltage range | 7.7 ... 9 VDC | 10 ... 65 VDC | 10 ... 65 VDC |
| Ambient temperature range | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| Output current | ≤ 1 / ≥ 2.2 mA | ≤ 100 mA | ≤ 100 mA |
| Description | NAMUR | 2-wire DC | 2-wire DC |
| Part reference | DW-AD-605-065-120* | DW-DS-605-M12-120 | DW-DS-605-M12 |
| Description | | | |
| Part reference | | | |
| Description | | | |
| Part reference | | | |
| Other types available | - | - | - |
| *Part reference change see p. 334 | | | |

SPECIAL

| CLASSICS | CLASSICS | CLASSICS | FULL INOX |
|----------|----------|----------|-----------|
| M12 | M18 | M18 | M30 |
| 4 | 5 | 8 | 3 ... 5 |



| | | | |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| Nickel-plated brass | Nickel-plated brass | Nickel-plated brass | Stainless steel V2A |
| PVC cable | PVC cable | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 68 / IP 69K |
| Non-embeddable | Quasi-embeddable | Embeddable | Non-embeddable |
| 2500 Hz | 1000 Hz | 1500 Hz | 10 Hz |
| 10 ... 65 VDC | 10 ... 65 VDC | 10 ... 65 VDC | 10 ... 30 VDC |
| -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F | -25 ... +70 °C / -13 ... +158 °F |
| ≤ 100 mA | ≤ 100 mA | ≤ 100 mA | ≤ 200 mA |
| 2-wire DC | 2-wire DC | 2-wire DC | Double sheet |
| DW-DD-615-M12 | DW-DD-625-M18-120 | DW-DS-605-M18-120 | DW-AS-713-M30-618 |
| - | - | - | - |