

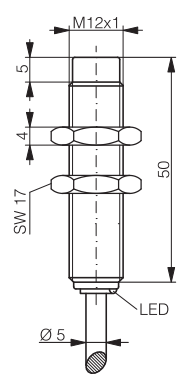
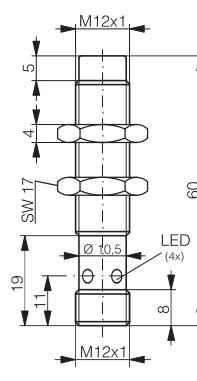

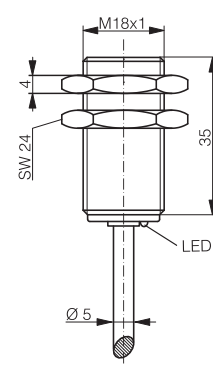


M12

M18

| Housing size | M12 | |
|---|---|---|
| Operating distance mm | 10* | 10* |
| Housing material | Stainless steel V2A | Stainless steel V2A |
| Connection ¹⁾ | PUR cable type 11 | Connector S12 |
| Degree of protection | IP 68 | IP 67 |
| Mounting | Non-embeddable | Non-embeddable |
| Max. switching frequency | 400 Hz | 400 Hz |
| Technical data ²⁾ | Table 1 | Table 1 |
| Wiring ³⁾ | Diagram 1 | Diagram 2 |
| LED | Built-in | Built-in |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C** | -25 ... +70 °C** |
| Output current | ≤ 200 mA | ≤ 200 mA |
| ¹⁾ Standard cable length 2 m. Non-standard cable lengths and types on request. ²⁾ see page 76 ³⁾ see page 77 ⁴⁾ see page 146 |  |  |
| | all-metal | all-metal |
| Dimensions: |  |  |
| Part references: (bold : preferred types) | | |
| NPN N.O. | DW-AD-711-M12 | DW-AS-711-M12 |
| NPN N.C. | DW-AD-712-M12 | DW-AS-712-M12 |
| PNP N.O. | DW-AD-713-M12 | DW-AS-713-M12 |
| PNP N.C. | DW-AD-714-M12 | DW-AS-714-M12 |
| DC 2-wire N.O. | | |
| AC/DC 2-wire N.O. | | |
| AC/DC 2-wire N.C. | | |
| Compatible connectors ⁴⁾ | | G ... N (N.O.); K ... N (N.C.) |

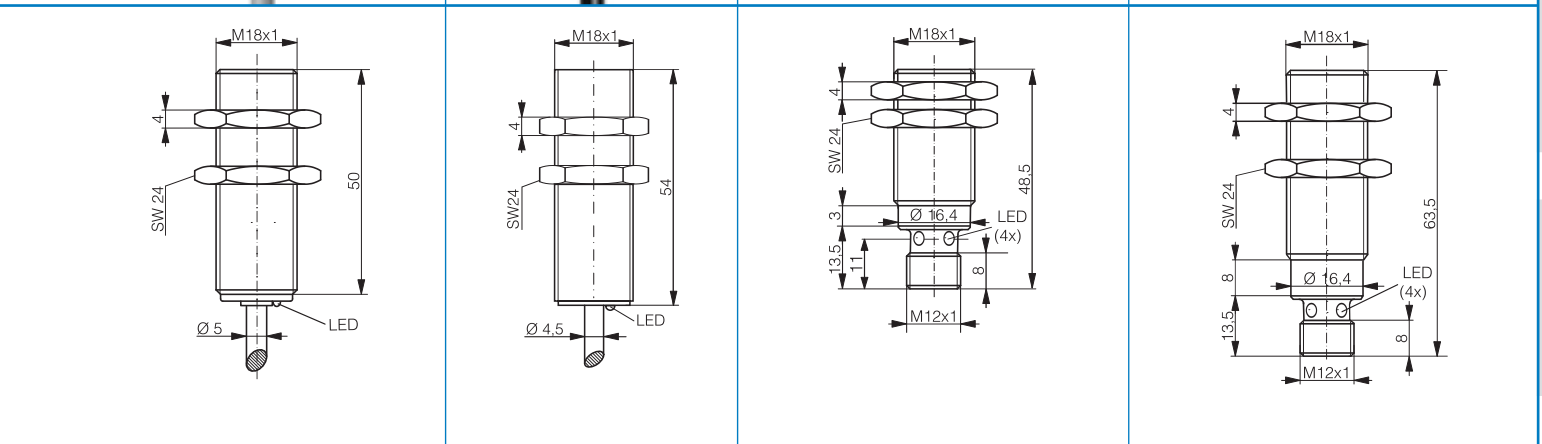
| Housing size | M18 | |
|---|---|--------------------------|
| Operating distance mm | 5 | |
| Housing material | Chrome-plated brass | |
| Connection ¹⁾ | PVC cable type 8 | |
| Degree of protection | IP 67 | |
| Mounting | Embeddable | |
| Max. switching frequency | 2,000 Hz | 1,500 Hz |
| Technical data ²⁾ | Table 1 | Table 11 |
| Wiring ³⁾ | Diagram 1 | Diagram 7 |
| LED | Built-in | Built-in |
| Supply voltage range | 10 ... 30 VDC | 10 ... 65 VDC |
| Ambient temperature range | -25 ... +70 °C** | -25 ... +70 °C** |
| Output current | ≤ 200 mA | ≤ 100 mA |
| ¹⁾ Standard cable length 2 m. Non-standard cable lengths and types on request. ²⁾ see page 76 ³⁾ see page 77 ⁴⁾ see page 146 |  | |
| | all-metal | |
| Dimensions: |  | |
| Part references: (bold : preferred types) | | |
| NPN N.O. | DW-AD-601-M18-120 | |
| NPN N.C. | DW-AD-602-M18-120 | |
| PNP N.O. | DW-AD-603-M18-120 | |
| PNP N.C. | DW-AD-604-M18-120 | |
| DC 2-wire N.O. | | |
| AC/DC 2-wire N.O. | | |
| AC/DC 2-wire N.C. | | |
| Compatible connectors ⁴⁾ | | DW-DD-605-M18-120 |

* versions with 4 mm operating distance on request ** -13 ... +158 °F

SERIES 600

M18

| 5 | | 5 | | 5 | | 5 | |
|---------------------|------------------|---------------------------------|--|---------------------|------------------|---------------------|------------------|
| Chrome-plated brass | | Nickel-plated brass | | Chrome-plated brass | | Chrome-plated brass | |
| PVC cable type 8 | | PUR cable type 5 | | Connector S12 | | Connector S12 | |
| IP 67 | | IP 67 | | IP 67 | | IP 67 | |
| Embeddable | | Embeddable | | Embeddable | | Embeddable | |
| 2,000 Hz | 1,500 Hz | 25 Hz (AC) / 490 Hz (DC) | | 2,000 Hz | 1,500 Hz | 2,000 Hz | 1,500 Hz |
| Table 1 | Table 11 | Table 4 | | Table 1 | Table 11 | Table 1 | Table 11 |
| Diagram 1 | Diagram 7 | Diagram 3 | | Diagram 2 | Diagram 7 | Diagram 2 | Diagram 7 |
| Built-in | Built-in | Built-in | | Built-in | Built-in | Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 65 VDC | 20 ... 265 VAC / 20 ... 320 VDC | | 10 ... 30 VDC | 10 ... 65 VDC | 10 ... 30 VDC | 10 ... 65 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +85 °C*** | | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 100 mA | ≤ 300 mA | | ≤ 200 mA | ≤ 100 mA | ≤ 200 mA | ≤ 100 mA |



| | | | | | |
|----------------------|----------------------|----------------------|----------------------------|--------------------------|----------------------------|
| DW-AD-601-M18 | | | DW-AS-601-M18-120 | | DW-AS-601-M18-002 |
| DW-AD-602-M18 | | | DW-AS-602-M18-120 | | DW-AS-602-M18-002 |
| DW-AD-603-M18 | | | DW-AS-603-M18-120 | | DW-AS-603-M18-002 |
| DW-AD-604-M18 | | | DW-AS-604-M18-120 | | DW-AS-604-M18-002 |
| | DW-DD-605-M18 | | | DW-DS-605-M18-120 | DW-DS-605-M18-002 |
| | | DW-AD-607-M18 | | | |
| | | DW-AD-608-M18 | | | |
| | | | G...N (N.O.); K...N (N.C.) | G ... N | G...N (N.O.); K...N (N.C.) |
| | | | | | G ... N |

** -13 ... +158 °F

*** -13 ... +185 °F

M18

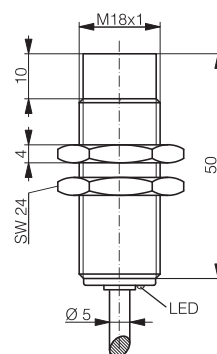
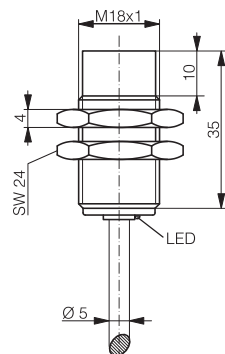
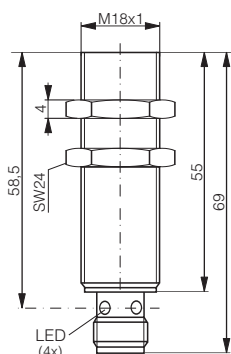
Housing size

| | | | | | |
|------------------------------|---------------------------------|---------------------|-----------------|---------------------|-----------------|
| Operating distance mm | 5 | 8 | | 8 | |
| Housing material | Nickel-plated brass | Chrome-plated brass | | Chrome-plated brass | |
| Connection ¹⁾ | Connector S12 | PVC cable type 8 | | PVC cable type 8 | |
| Degree of protection | IP 67 | IP 67 | | IP 67 | |
| Mounting | Embeddable | Non-embeddable | | Non-embeddable | |
| Max. switching frequency | 25 Hz (AC) / 490 Hz (DC) | 1,400 Hz | 1,200 Hz | 1,400 Hz | 1,200 Hz |
| Technical data ²⁾ | Table 4 | Table 1 | Table 11 | Table 1 | Table 11 |
| Wiring ³⁾ | Diagram 3 | Diagram 1 | Diagram 7 | Diagram 1 | Diagram 7 |
| LED | Built-in | Built-in | Built-in | Built-in | Built-in |
| Supply voltage range | 20 ... 265 VAC / 20 ... 320 VDC | 10 ... 30 VDC | 10 ... 65 VDC | 10 ... 30 VDC | 10 ... 65 VDC |
| Ambient temperature range | -25 ... +85 °C** | -25 ... +70 °C* | -25 ... +70 °C* | -25 ... +70 °C* | -25 ... +70 °C* |
| Output current | ≤ 300 mA | ≤ 200 mA | ≤ 100 mA | ≤ 200 mA | ≤ 100 mA |

¹⁾ Standard cable length 2 m.
Non-standard cable lengths
and types on request.
²⁾ see page 76
³⁾ see page 77
⁴⁾ see page 146



Dimensions:



Part references:
(**bold**: preferred types)

| | | | | | |
|-------------------------------------|--------------------------|--------------------------|--------------------------|----------------------|----------------------|
| NPN N.O. | | DW-AD-611-M18-120 | | DW-AD-611-M18 | |
| NPN N.C. | | DW-AD-612-M18-120 | | DW-AD-612-M18 | |
| PNP N.O. | | DW-AD-613-M18-120 | | DW-AD-613-M18 | |
| PNP N.C. | | DW-AD-614-M18-120 | | DW-AD-614-M18 | |
| DC 2-wire N.O. | | | DW-DD-615-M18-120 | | DW-DD-615-M18 |
| AC/DC 2-wire N.O. | DW-AS-607-M18-002 | | | | |
| AC/DC 2-wire N.C. | DW-AS-608-M18-002 | | | | |
| Compatible connectors ⁴⁾ | M, N | | | | |

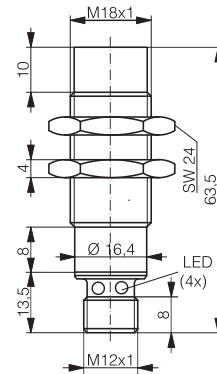
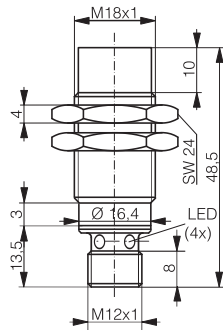
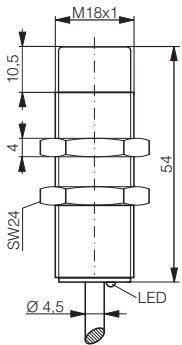
** -13 ... +185 °F

* -13 ... +158 °F

SERIES 600

M18

| 8 | 8 | | 8 | |
|---------------------------------|---------------------|-----------------|---------------------|-----------------|
| Nickel-plated brass | Chrome-plated brass | | Chrome-plated brass | |
| PUR cable type 5 | Connector S12 | | Connector S12 | |
| IP 67 | IP 67 | | IP 67 | |
| Non-embeddable | Non-embeddable | | Non-embeddable | |
| 25 Hz (AC) / 340 Hz (DC) | 1,400 Hz | 1,200 Hz | 1,400 Hz | 1,200 Hz |
| Table 4 | Table 1 | Table 11 | Table 1 | Table 11 |
| Diagram 3 | Diagram 2 | Diagram 7 | Diagram 2 | Diagram 7 |
| Built-in | Built-in | Built-in | Built-in | Built-in |
| 20 ... 265 VAC / 20 ... 320 VDC | 10 ... 30 VDC | 10 ... 65 VDC | 10 ... 30 VDC | 10 ... 65 VDC |
| -25 ... +85 °C** | -25 ... +70 °C* | -25 ... +70 °C* | -25 ... +70 °C* | -25 ... +70 °C* |
| ≤ 300 mA | ≤ 200 mA | ≤ 100 mA | ≤ 200 mA | ≤ 100 mA |



| | | | | |
|----------------------|--------------------------------|--------------------------|--------------------------------|--------------------------|
| | DW-AS-611-M18-120 | | DW-AS-611-M18-002 | |
| | DW-AS-612-M18-120 | | DW-AS-612-M18-002 | |
| | DW-AS-613-M18-120 | | DW-AS-613-M18-002 | |
| | DW-AS-614-M18-120 | | DW-AS-614-M18-002 | |
| | | DW-DS-615-M18-120 | | DW-DS-615-M18-002 |
| DW-AD-617-M18 | | | | |
| DW-AD-618-M18 | | | | |
| | G ... N (N.O.); K ... N (N.C.) | G ... N | G ... N (N.O.); K ... N (N.C.) | G ... N |

** -13 ... +185 °F

* -13 ... +158 °F

M18

M18

| | |
|------------------------------|---------------------------------|
| Housing size | M18 |
| Operating distance mm | 8 |
| Housing material | Nickel-plated brass |
| Connection ¹⁾ | Connector S12 |
| Degree of protection | IP 67 |
| Mounting | Non-embeddable |
| Max. switching frequency | 25 Hz (AC) / 340 Hz (DC) |
| Technical data ²⁾ | Table 4 |
| Wiring ³⁾ | Diagram 3 |
| LED | Built-in |
| Supply voltage range | 20 ... 265 VAC / 20 ... 320 VDC |
| Ambient temperature range | -25 ... +85 °C*** |
| Output current | ≤ 300 mA |

| | | | |
|---------------------|------------------|---------------------|------------------|
| 8 | | 8 | |
| Chrome-plated brass | | Chrome-plated brass | |
| PVC cable type 8 | | PVC cable type 8 | |
| IP 67 | | IP 67 | |
| Quasi-embeddable | | Quasi-embeddable | |
| 1,000 Hz | 1,000 Hz | 1,000 Hz | 1,000 Hz |
| Table 1 | Table 11 | Table 1 | Table 11 |
| Diagram 1 | Diagram 7 | Diagram 1 | Diagram 7 |
| Built-in | Built-in | Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 65 VDC | 10 ... 30 VDC | 10 ... 65 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 100 mA | ≤ 200 mA | ≤ 100 mA |

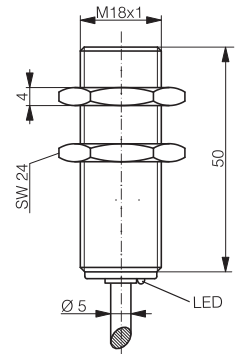
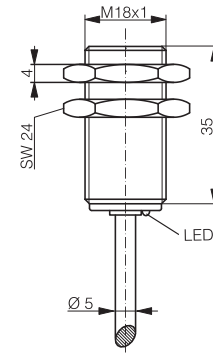
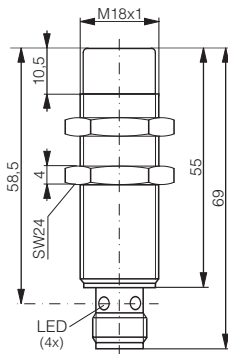
¹⁾ Standard cable length 2 m. Non-standard cable lengths and types on request.
²⁾ see page 76
³⁾ see page 77
⁴⁾ see page 146



increased distance

increased distance

Dimensions:



Part references:
(bold): preferred types

| | |
|-------------------------------------|--------------------------|
| NPN N.O. | |
| NPN N.C. | |
| PNP N.O. | |
| PNP N.C. | |
| DC 2-wire N.O. | |
| AC/DC 2-wire N.O. | DW-AS-617-M18-002 |
| AC/DC 2-wire N.C. | DW-AS-618-M18-002 |
| Compatible connectors ⁴⁾ | M, N |

| | | | |
|--------------------------|--------------------------|----------------------|----------------------|
| DW-AD-621-M18-120 | | DW-AD-621-M18 | |
| DW-AD-622-M18-120 | | DW-AD-622-M18 | |
| DW-AD-623-M18-120 | | DW-AD-623-M18 | |
| DW-AD-624-M18-120 | | DW-AD-624-M18 | |
| | DW-DD-625-M18-120 | | DW-DD-625-M18 |

*** -13 ... +185 °F

** -13 ... +158 °F

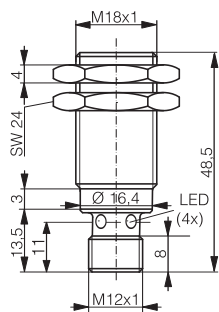
SERIES 620

M18

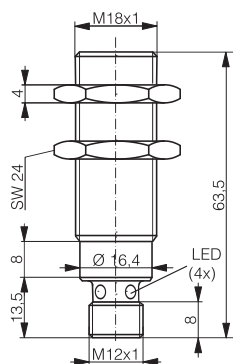
| 8 | | 8 | |
|---------------------|------------------|---------------------|------------------|
| Chrome-plated brass | | Chrome-plated brass | |
| Connector S12 | | Connector S12 | |
| IP 67 | | IP 67 | |
| Quasi-embeddable | | Quasi-embeddable | |
| 1,000 Hz | 1,000 Hz | 1,000 Hz | 1,000 Hz |
| Table 1 | Table 11 | Table 1 | Table 11 |
| Diagram 2 | Diagram 7 | Diagram 2 | Diagram 7 |
| Built-in | Built-in | Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 65 VDC | 10 ... 30 VDC | 10 ... 65 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 100 mA | ≤ 200 mA | ≤ 100 mA |



increased distance



increased distance



DW-AS-621-M18-120

DW-AS-622-M18-120

DW-AS-623-M18-120

DW-AS-624-M18-120

DW-DS-625-M18-120

G...N (N.O.); K...N (N.C.)

G ... N

DW-AS-621-M18-002

DW-AS-622-M18-002

DW-AS-623-M18-002

DW-AS-624-M18-002

DW-DS-625-M18-002

G...N (N.O.); K...N (N.C.)

G ... N

** -13 ... +158 °F

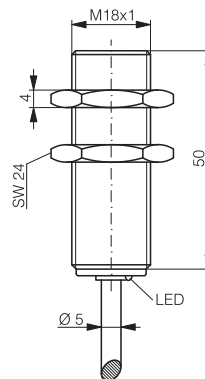
SERIES 700

M18

| 10* | | 10* | |
|---------------------|------------------|---------------------|------------------|
| Stainless steel V2A | | Stainless steel V2A | |
| PUR cable type 11 | | Connector S12 | |
| IP 68 | | IP 67 | |
| Embeddable | | Embeddable | |
| 200 Hz | 200 Hz | 200 Hz | 200 Hz |
| Table 1 | Table 1 | Table 1 | Table 1 |
| Diagram 1 | Diagram 2 | Diagram 1 | Diagram 2 |
| Built-in | Built-in | Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |



all-metal



DW-AD-701-M18

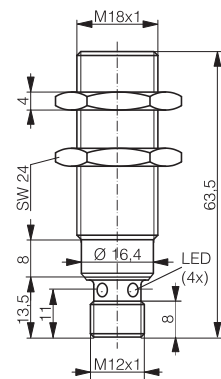
DW-AD-702-M18

DW-AD-703-M18

DW-AD-704-M18



all-metal



DW-AS-701-M18-002

DW-AS-702-M18-002

DW-AS-703-M18-002

DW-AS-704-M18-002

G ... N (N.O.); K ... N (N.C.)

* versions with 5 mm operating distance on request

- 1 Inductive proximity switches
- 2 Photoelectric proximity switches
- 3 Optical fibers
- 4 Ultrasonic proximity switches
- 5 Connecting cables
- 6 Accessories
- 7 Glossary
- 8 Index

M18

Housing size

| | | | | |
|------------------------------|---------------------|---------------------|---------------------|---------------------|
| Operating distance mm | 12 | 12 | 12 | 12 |
| Housing material | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| Connection ¹⁾ | PVC cable type 8 | PVC cable type 8 | Connector S12 | Connector S12 |
| Degree of protection | IP 67 | IP 67 | IP 67 | IP 67 |
| Mounting | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable | Quasi-embeddable |
| Max. switching frequency | 500 Hz | 500 Hz | 500 Hz | 500 Hz |
| Technical data ²⁾ | Table 1 | Table 1 | Table 1 | Table 1 |
| Wiring ³⁾ | Diagram 1 | Diagram 1 | Diagram 2 | Diagram 2 |
| LED | Built-in | Built-in | Built-in | Built-in |
| Supply voltage range | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| Ambient temperature range | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| Output current | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |

¹⁾ Standard cable length 2 m. Non-standard cable lengths and types on request.
²⁾ see page 76
³⁾ see page 77
⁴⁾ see page 146



long distance



long distance

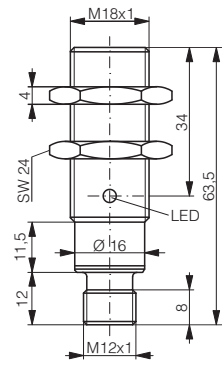
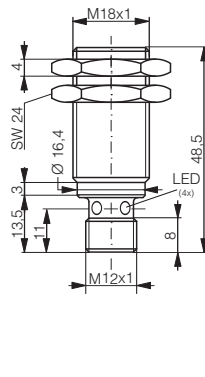
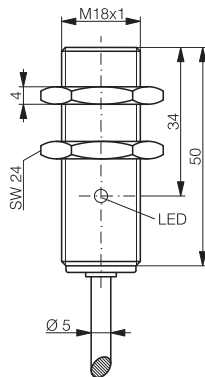
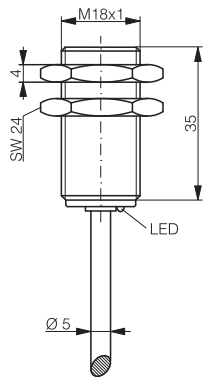


long distance



long distance

Dimensions:



Part references:

(**bold**: preferred types)

| | | | | |
|-------------------------------------|--------------------------|----------------------|--------------------------------|--------------------------------|
| NPN N.O. | DW-AD-501-M18-120 | DW-AD-501-M18 | DW-AS-501-M18-120 | DW-AS-501-M18-002 |
| NPN N.C. | DW-AD-502-M18-120 | DW-AD-502-M18 | DW-AS-502-M18-120 | DW-AS-502-M18-002 |
| PNP N.O. | DW-AD-503-M18-120 | DW-AD-503-M18 | DW-AS-503-M18-120 | DW-AS-503-M18-002 |
| PNP N.C. | DW-AD-504-M18-120 | DW-AD-504-M18 | DW-AS-504-M18-120 | DW-AS-504-M18-002 |
| DC 2-wire N.O. | | | | |
| AC/DC 2-wire N.O. | | | | |
| AC/DC 2-wire N.C. | | | | |
| Compatible connectors ⁴⁾ | | | G ... N (N.O.); K ... N (N.C.) | G ... N (N.O.); K ... N (N.C.) |

** -13 ... +158 °F

SERIES 500

M18

| 20 | 20 | 20 | 20 |
|---------------------|---------------------|---------------------|---------------------|
| Chrome-plated brass | Chrome-plated brass | Chrome-plated brass | Chrome-plated brass |
| PVC cable type 8 | PVC cable type 8 | Connector S12 | Connector S12 |
| IP 67 | IP 67 | IP 67 | IP 67 |
| Non-embeddable | Non-embeddable | Non-embeddable | Non-embeddable |
| 200 Hz | 200 Hz | 200 Hz | 200 Hz |
| Table 1 | Table 1 | Table 1 | Table 1 |
| Diagram 1 | Diagram 1 | Diagram 2 | Diagram 2 |
| Built-in | Built-in | Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC | 10 ... 30 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 200 mA | ≤ 200 mA | ≤ 200 mA |

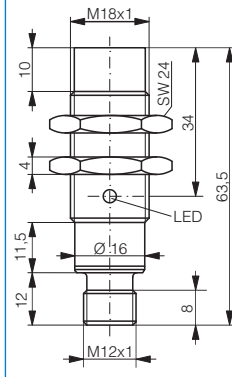
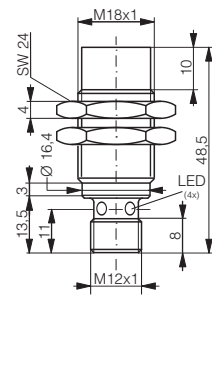
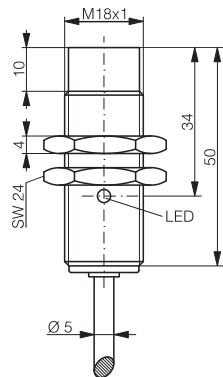
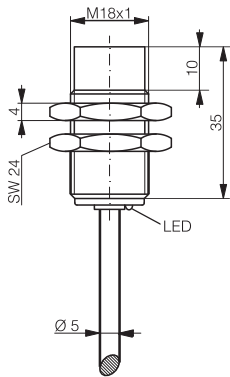


long distance

long distance

long distance

long distance



DW-AD-511-M18-120

DW-AD-511-M18

DW-AS-511-M18-120

DW-AS-511-M18-002

DW-AD-512-M18-120

DW-AD-512-M18

DW-AS-512-M18-120

DW-AS-512-M18-002

DW-AD-513-M18-120

DW-AD-513-M18

DW-AS-513-M18-120

DW-AS-513-M18-002

DW-AD-514-M18-120

DW-AD-514-M18

DW-AS-514-M18-120

DW-AS-514-M18-002

G ... N (N.O.); K ... N (N.C.)

G ... N (N.O.); K ... N (N.C.)

** -13 ... +158 °F

SERIES 700

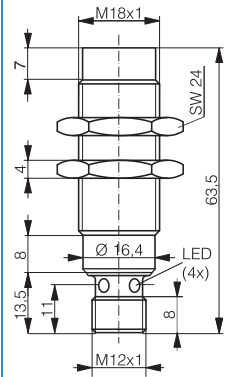
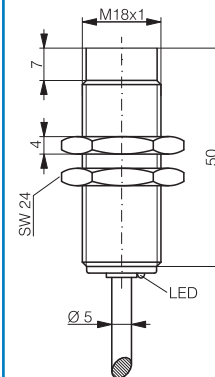
M18

| 20* | 20* |
|---------------------|---------------------|
| Stainless steel V2A | Stainless steel V2A |
| PUR cable type 11 | Connector S12 |
| IP 68 | IP 67 |
| Non-embeddable | Non-embeddable |
| 200 Hz | 200 Hz |
| Table 1 | Table 1 |
| Diagram 1 | Diagram 2 |
| Built-in | Built-in |
| 10 ... 30 VDC | 10 ... 30 VDC |
| -25 ... +70 °C** | -25 ... +70 °C** |
| ≤ 200 mA | ≤ 200 mA |



all-metal

all-metal



DW-AD-711-M18

DW-AS-711-M18-002

DW-AD-712-M18

DW-AS-712-M18-002

DW-AD-713-M18

DW-AS-713-M18-002

DW-AD-714-M18

DW-AS-714-M18-002

G ... N (N.O.); K ... N (N.C.)

* versions with 8 mm operating distance on request