



## INDUCTIVE SENSORS: FOOD & SEA WATER SERIES 700L



- ✓ **Corrosion resistant**
- ✓ **Food safe (V4A/AISI 316L)**
- ✓ **IP 68 & IP 69K, sea-water resistant**
- ✓ Mechanically and chemically **rugged**
- ✓ **All-metal housing** (incl. sensing face)
- ✓ **Factor 1:** operating distances up to **40 mm**

### TECHNICAL DATA

(according to IEC 60947-5-2)	
Housing material	V4A/AISI 316L/DIN 1.4435 (food safe)
Degree of protection	IP 68 & IP 69K
Supply voltage range $U_B$	10 ... 30 VDC
Ambient temperature	-25 ... +85 °C
Output current	200 mA
Max. ripple content	$\leq 20 \% U_B$
No-load supply current	$\leq 10$ mA
Leakage current at output	$\leq 0,1$ mA
Voltage drop, switched state	$\leq 2,0$ V
Temperature drift % $s_r$	$\leq 10$ %
Hysteresis % $s_r$	$\leq 15$ %
Repeat accuracy % $s_r$	$\leq 5$ %
Short-circuit protection	Built-in
Polarity reversal protection	Built-in
Power-on reset	Built-in

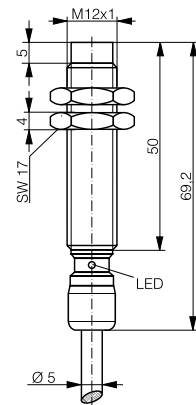
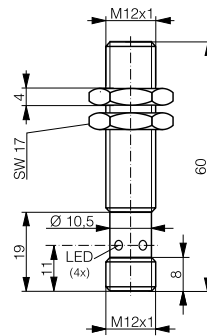
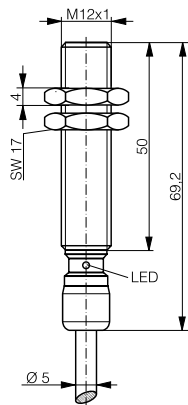
Corrosion-resistant and food-safe all-metal sensors in V4A (incl. sensing face). ECOLAB tested: fully impervious, resistant to cleaning and high-pressure water jets (IP 68 & IP 69K). Pressure resistant up to 80 bar and thus usable down to depths of 800 m. Factor 1: long operating distances on ferromagnetic and non-ferromagnetic metals with good conductivity as well as identical operating distances on steel and aluminum. Particularly suited for

- ✓ **dairies**
- ✓ **food processing**
- ✓ **beverage manufacture & filling machines**
- ✓ **winery machines**
- ✓ **slaughterhouses & meat processing**
- ✓ **animal farming**
- ✓ **gastronomy machines**
- ✓ **ships & submarines**
- ✓ **harbor installations**
- ✓ **locks & docks**
- ✓ **offshore installations**
- ✓ **wave energy power plants**
- ✓ **fish processing**
- ✓ **sewage treatment plants**

HOUSING SIZE	M12		
OPERATING DISTANCE MM	6	6	10



ALL-METAL FOOD SAFE & CORROSION RESISTANT / IP 68 + IP 69K



- <sup>1)</sup> Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- <sup>2)</sup> see page 133
- <sup>3)</sup> see page 269

**TECHNICAL DATA**

Connection <sup>1)</sup>	TPE-S cable type 13	Connector S12	TPE-S cable type 13
Degree of protection	IP 68 + IP 69K	IP 68 + IP 69K	IP 68 + IP 69K
Max. operating pressure	80 bar	80 bar	80 bar
Mounting	Embeddable	Embeddable	Non-embeddable
Max. switching frequency	600 Hz	600 Hz	400 Hz
Wiring <sup>2)</sup>	Diagram 1	Diagram 2	Diagram 1
LED	Built-in	Built-in	Built-in
Approvals	CE, RoHS, Ecolab	CE, RoHS, Ecolab	CE, RoHS, Ecolab

**PART REFERENCES: (BOLD: PREFERRED TYPES)**

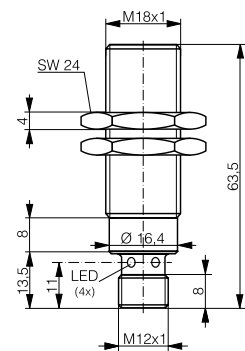
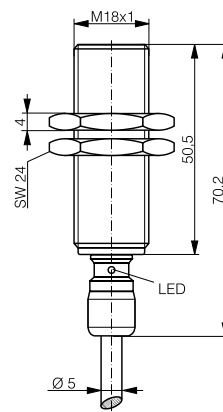
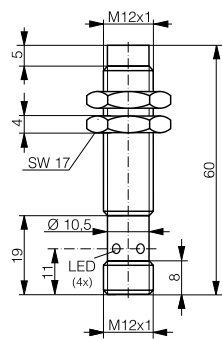
NPN N.O.	<b>DW-LD-701-M12</b>	<b>DW-LS-701-M12</b>	<b>DW-LD-711-M12</b>
NPN N.C.	DW-LD-702-M12	DW-LS-702-M12	DW-LD-712-M12
PNP N.O.	<b>DW-LD-703-M12</b>	<b>DW-LS-703-M12</b>	<b>DW-LD-713-M12</b>
PNP N.C.	DW-LD-704-M12	DW-LS-704-M12	DW-LD-714-M12
Compatible connectors <sup>3)</sup>	U		

- Inductive
- Photoelectric
- Optical fibers
- Ultrasonic
- Capacitive
- Cables & connectors
- Accessories
- Glossary
- Index

HOUSING SIZE	M12		M18	
OPERATING DISTANCE MM	10		10	



ALL-METAL FOOD SAFE & CORROSION RESISTANT / IP 68 + IP 69K



- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 133
- 3) see page 269

**TECHNICAL DATA**

Connection <sup>1)</sup>	Connector S12	TPE-S cable type 13	Connector S12
Degree of protection	IP 68 + IP 69K	IP 68 + IP 69K	IP 68 + IP 69K
Max. operating pressure	80 bar	60 bar	60 bar
Mounting	Non-embeddable	Embeddable	Embeddable
Max. switching frequency	400 Hz	300 Hz	300 Hz
Wiring <sup>2)</sup>	Diagram 2	Diagram 1	Diagram 2
LED	Built-in	Built-in	Built-in
Approvals	CE, RoHS, Ecolab	CE, RoHS, Ecolab	CE, RoHS, Ecolab

**PART REFERENCES: (BOLD: PREFERRED TYPES)**

NPN N.O.	<b>DW-LS-711-M12</b>	<b>DW-LD-701-M18</b>	<b>DW-LS-701-M18-002</b>
NPN N.C.	DW-LS-712-M12	DW-LD-702-M18	DW-LS-702-M18-002
PNP N.O.	<b>DW-LS-713-M12</b>	<b>DW-LD-703-M18</b>	<b>DW-LS-703-M18-002</b>
PNP N.C.	DW-LS-714-M12	DW-LD-704-M18	DW-LS-704-M18-002
Compatible connectors <sup>3)</sup>	U		U

## M18

## M30

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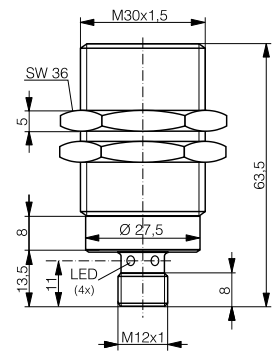
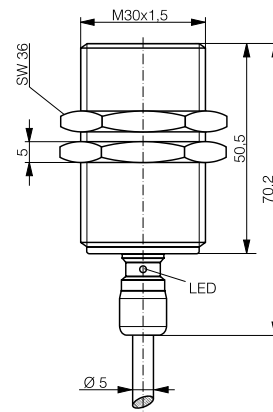
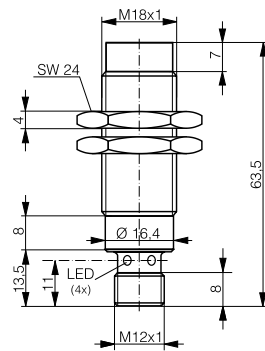
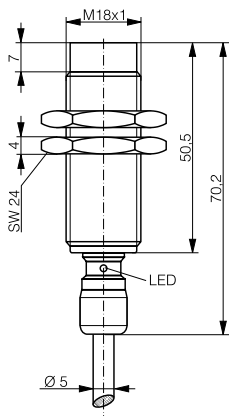
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ALL-METAL FOOD SAFE & CORROSION RESISTANT / IP 68 + IP 69K



TPE-S cable type 13  
IP 68 + IP 69K

60 bar

Non-embeddable

200 Hz

Diagram 1

Built-in

CE, RoHS, Ecolab

Connector S12

IP 68 + IP 69K

60 bar

Non-embeddable

200 Hz

Diagram 2

Built-in

CE, RoHS, Ecolab

TPE-S cable type 13  
IP 68 + IP 69K

40 bar

Embeddable

100 Hz

Diagram 1

Built-in

CE, RoHS, Ecolab

Connector S12

IP 68 + IP 69K

40 bar

Embeddable

100 Hz

Diagram 2

Built-in

CE, RoHS, Ecolab

**DW-LD-711-M18**

DW-LD-712-M18

**DW-LD-713-M18**

DW-LD-714-M18

**DW-LS-711-M18-002**

DW-LS-712-M18-002

**DW-LS-713-M18-002**

DW-LS-714-M18-002

U

**DW-LD-701-M30**

DW-LD-702-M30

**DW-LD-703-M30**

DW-LD-704-M30

**DW-LS-701-M30-002**

DW-LS-702-M30-002

**DW-LS-703-M30-002**

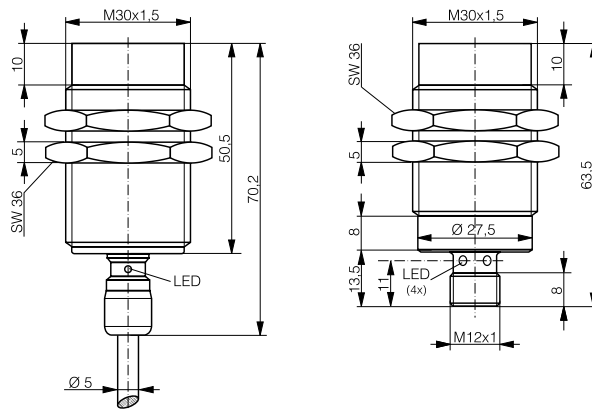
DW-LS-704-M30-002

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HOUSING SIZE	M30	
OPERATING DISTANCE MM	40	40



ALL-METAL FOOD SAFE & CORROSION RESISTANT / IP 68 + IP 69K



- 1) Standard cable length 2 m. Non-standard cable lengths and types on request. Cable type see page 271.
- 2) see page 133
- 3) see page 269

**TECHNICAL DATA**

Connection <sup>1)</sup>	TPE-S cable type 13	Connector S12
Degree of protection	IP 68 + IP 69K	IP 68 + IP 69K
Max. operating pressure	40 bar	40 bar
Mounting	Non-embeddable	Non-embeddable
Max. switching frequency	90 Hz	90 Hz
Wiring <sup>2)</sup>	Diagram 1	Diagram 2
LED	Built-in	Built-in
Approvals	CE, RoHS, Ecolab	CE, RoHS, Ecolab

**PART REFERENCES: (BOLD: PREFERRED TYPES)**

NPN N.O.	<b>DW-LD-711-M30</b>	<b>DW-LS-711-M30-002</b>
NPN N.C.	DW-LD-712-M30	DW-LS-712-M30-002
PNP N.O.	<b>DW-LD-713-M30</b>	<b>DW-LS-713-M30-002</b>
PNP N.C.	DW-LD-714-M30	DW-LS-714-M30-002
Compatible connectors <sup>3)</sup>		U