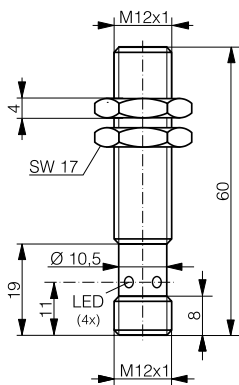
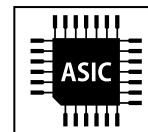
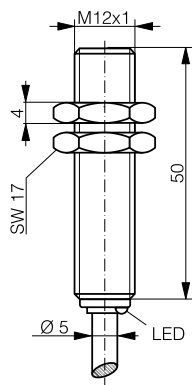


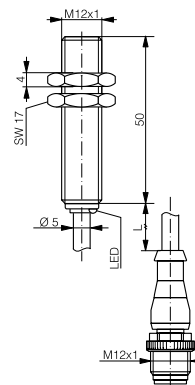
HOUSING	OPERATING DISTANCE	MOUNTING	✓ One-piece housing in stainless steel V2A	✓ Extremely robust
M12	6 mm	Embeddable	✓ Long operating distance	✓ Water resistant
			✓ Factor 1 on Fe and Al	✓ IP68/IP69K
				✓ IO-Link v1.1



DW-AS-70x-M12



DW-AD-70x-M12



DW-AV-70x-M12-274

DETECTION DATA		INTERFACE	
Rated operating distance (S_n)	6 mm	Indicator LED, yellow	Sensing state ($0 \leq s \leq 0.8 S_r$)
Assured operating distance (S_a)	$\leq (0.81 \times S_n)$ mm	Indicator LED, yellow, blinking	Sensing state ($0.8 S_r < s \leq S_r$)
Repeat accuracy	≤ 0.2 mm	IO-Link	✓
Hysteresis	$3\% S_r < \text{Hyst} \leq 15\% S_r$	MTTF (@40°C)	1017 y
Temperature drift	$\leq 10\% S_r$		
Standard target	18 x 18 x 1 mm ³ , FE360		

Note: $0.9S_n \leq S_a \leq 1.1S_n$.

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U_B)	10...30 VDC	Mounting	Embeddable
Residual ripple	$\leq 20\% U_B$	Housing material	V2A / 1.4305 / AISI 303
Output current	≤ 200 mA	Sensing face material	V2A / 1.4305 / AISI 303
Output voltage drop	≤ 2.0 VDC	Max tightening torque	20 Nm
Power consumption (no-load)	≤ 10 mA	Ambient operating temperature	-25...+85°C ¹
Residual current	≤ 0.1 mA	Enclosure rating	IP68 / IP69K
Switching frequency	≤ 600 Hz	Weight (cable/connector)	see page 2
Short-circuit protection	✓	Shock and vibration	IEC 60947-5-2
Voltage reversal protection	✓		
Cable length max.	≤ 300 m		

¹Maximum temperature according to UL: 70°C.

Note: all data measured according to IEC 60947-5-2 standard with $U_B=20 \dots 30$ VDC, $T_A=23^\circ\text{C} \pm 5^\circ\text{C}$.

CORRECTION FACTORS FOR TARGET OF

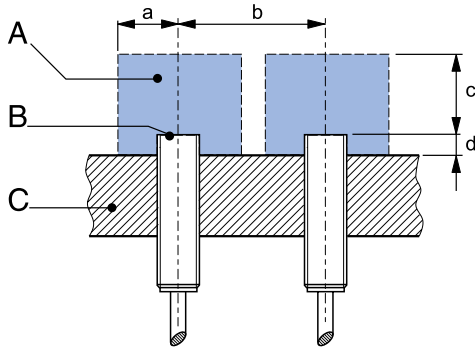
Steel FE 360	1	Copper	0.85	Aluminum	1	Brass	1.3	Stainless Steel V2A 1/2 mm	0.4 / 0.8
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CORRECTION FACTORS FOR EMBEDDABLE MOUNTING IN SUPPORT OF

Steel FE 360	0.7	Aluminum	1.15	Brass	1.05	Stainless Steel V2A	0.8
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Note: the operating distance of the sensor must be multiplied by the correction factor of the material. For example, the operating distance on Aluminum is $S_{n,Al} = S_n \times CF_{Al}$. In case of embeddable mounting, the distance is multiplied by the additional correction factor of the support, thus $S_{n,Al} = S_n \times CF_{Al} \times CF_{emb,Al}$.

INSTALLATION CONDITIONS



A : metal free zone a : 12 mm d : steel 0 mm
 B : sensing face b : 50 mm
 C : support c : 18 mm

IO-LINK FUNCTIONALITIES

IO-Link version	1.1
SIO mode	Supported
Process data	7-bit input
Baudrate	COM2 (38.4 kBaud)
Minimum cycle time	10.4 ms
ISDU	Not supported



IO-Link files may be downloaded from

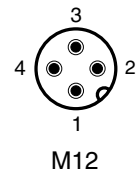
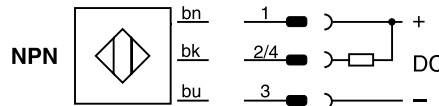
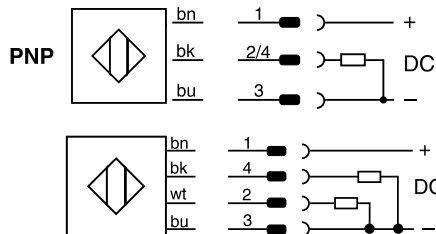
www.contrinx.com/product-range/inductive-sensors/.

Select the product name to display the product page with corresponding downloads.

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Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

WIRING DIAGRAM



PIN ASSIGNMENT

AVAILABLE TYPES

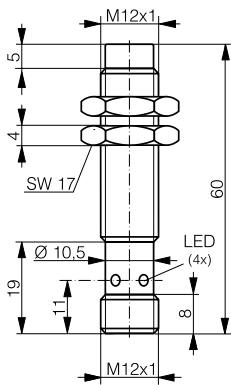
Part number	Part reference	Polarity	Connection	Output on pin 2	Output on pin 4 / bk	Weight
320-420-201	DW-AD-701-M12	NPN	PUR, 2 m, 3 wire	-	Normally open (NO)	89 g
320-420-202	DW-AD-702-M12	NPN	PUR, 2 m, 3 wire	Normally close (NC)	-	89 g
330-320-010	DW-AD-703-M12	PNP	PUR, 2 m, 3 wire	-	Normally open (NO) / IO-Link	89 g
320-420-204	DW-AD-704-M12	PNP	PUR, 2 m, 3 wire	Normally close (NC)	-	89 g
320-420-206	DW-AS-701-M12	NPN	M12 4-pin	-	Normally open (NO)	25 g
320-420-207	DW-AS-702-M12	NPN	M12 4-pin	Normally close (NC)	-	25 g
330-320-011	DW-AS-703-M12	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	25 g
320-420-209	DW-AS-704-M12	PNP	M12 4-pin	Normally close (NC)	-	25 g
330-320-129	DW-AS-70A-M12	PNP	M12 4-pin	Normally close (NC)	Normally open (NO) / IO-Link	25 g
320-420-745	DW-AS-70B-M12	NPN	M12 4-pin	Normally close (NC)	Normally open (NO)	25 g
330-320-190	DW-AS-703-M12-528 *	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	25 g
320-420-407	DW-AV-701-M12-274	NPN	PUR, 0.3 m + M12 4-pin	-	Normally open (NO)	42 g
330-320-074	DW-AV-703-M12-274	PNP	PUR, 0.3 m + M12 4-pin	-	Normally open (NO) / IO-Link	42 g

*LED in IO-Link mode default value set to 2 = same as SIO

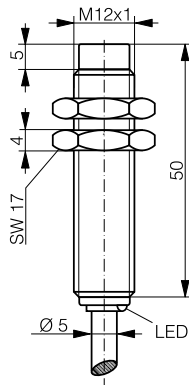
Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.

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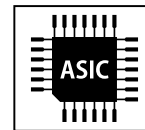
HOUSING	OPERATING DISTANCE	MOUNTING	<ul style="list-style-type: none"> ✓ One-piece housing in stainless steel V2A ✓ Long operating distance ✓ Factor 1 on Fe and Al 	<ul style="list-style-type: none"> ✓ Extremely robust ✓ Water resistant ✓ IP68/IP69K ✓ IO-Link v1.1
M12	10 mm	Non-embeddable		



DW-AS-71x-M12



DW-AD-71x-M12



DETECTION DATA		INTERFACE	
Rated operating distance (S_n)	10 mm	Indicator LED, yellow	Sensing state ($0 \leq s \leq 0.8 S_r$)
Assured operating distance (S_a)	$\leq (0.81 \times S_n)$ mm	Indicator LED, yellow, blinking	Sensing state ($0.8 S_r < s \leq S_r$)
Repeat accuracy	≤ 0.3 mm	IO-Link	✓
Hysteresis	$3\% S_r < \text{Hyst} \leq 15\% S_r$	MTTF (@40°C)	1017 y
Temperature drift	$\leq 10\% S_r$		
Standard target	30 x 30 x 1 mm ³ , FE360		

Note: $0.9S_n \leq S_a \leq 1.1S_n$.

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U_B)	10...30 VDC	Mounting	Non-embeddable
Residual ripple	$\leq 20\% U_B$	Housing material	V2A / 1.4305 / AISI 303
Output current	≤ 200 mA	Sensing face material	V2A / 1.4305 / AISI 303
Output voltage drop	≤ 2.0 VDC	Max tightening torque	20 Nm
Power consumption (no-load)	≤ 10 mA	Ambient operating temperature	-25...+85°C ¹
Residual current	≤ 0.1 mA	Enclosure rating	IP68 / IP69K
Switching frequency	≤ 400 Hz	Weight (cable/connector)	see page 2
Short-circuit protection	✓	Shock and vibration	IEC 60947-5-2 / 7.4
Voltage reversal protection	✓		
Cable length max.	≤ 300 m		

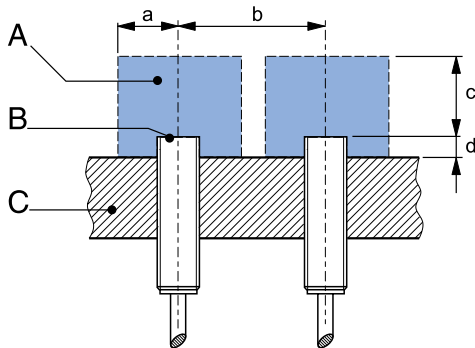
¹Maximum temperature according to UL: 70°C.

Note: all data measured according to IEC 60947-5-2 standard with $U_B=20 \dots 30$ VDC, $T_A=23^\circ\text{C} \pm 5^\circ\text{C}$.

CORRECTION FACTORS FOR TARGET OF

Steel FE 360	1	Copper	0.8	Aluminum	1	Brass	1.4	Stainless Steel V2A 1/2 mm	0.15 / 0.85
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INSTALLATION CONDITIONS



A : metal free zone a : 30 mm d : steel 22 mm
 B : sensing face b : 120 mm
 C : support c : 30 mm

Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

IO-LINK FUNCTIONALITIES

IO-Link version	1.1
SIO mode	Supported
Process data	7-bit input
Baudrate	COM2 (38.4 kBaud)
Minimum cycle time	10.4 ms
ISDU	Not supported



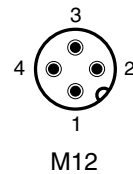
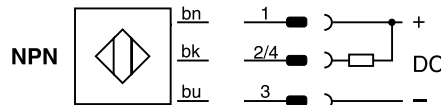
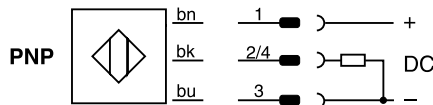
IO-Link files may be downloaded from

www.contrinex.com/product-range/inductive-sensors/.

Select the product name to display the product page with corresponding downloads.

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WIRING DIAGRAM



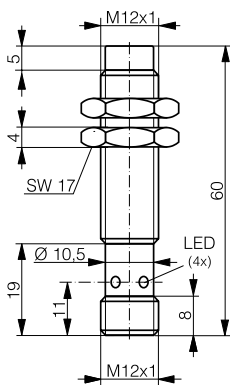
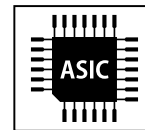
AVAILABLE TYPES

Part number	Part reference	Polarity	Connection	Output on pin 2	Output on pin 4 / bk	Weight
320-420-211	DW-AD-711-M12	NPN	PUR, 2 m, 3 wire	-	Normally open (NO)	89 g
320-420-212	DW-AD-712-M12	NPN	PUR, 2 m, 3 wire	Normally close (NC)	-	89 g
330-320-012	DW-AD-713-M12	PNP	PUR, 2 m, 3 wire	-	Normally open (NO) / IO-Link	89 g
320-420-214	DW-AD-714-M12	PNP	PUR, 2 m, 3 wire	Normally close (NC)	-	89 g
320-420-216	DW-AS-711-M12	NPN	M12 4-pin	-	Normally open (NO)	25 g
320-420-217	DW-AS-712-M12	NPN	M12 4-pin	Normally close (NC)	-	25 g
330-320-013	DW-AS-713-M12	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	25 g
320-420-219	DW-AS-714-M12	PNP	M12 4-pin	Normally close (NC)	-	25 g

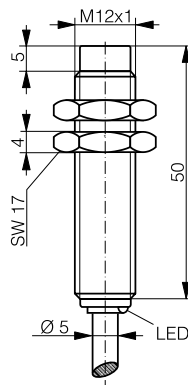
Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.

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HOUSING	OPERATING DISTANCE	MOUNTING	<ul style="list-style-type: none"> ✓ One-piece housing in stainless steel V2A ✓ Long operating distance ✓ Factor 1 on Fe and Al 	<ul style="list-style-type: none"> ✓ Extremely robust ✓ Water resistant ✓ IP68/IP69K ✓ IO-Link v1.1
M12	15 mm	Non-embeddable		



DW-AS-73x-M12



DW-AD-73x-M12

DETECTION DATA		INTERFACE	
Rated operating distance (S_n)	15 mm	Indicator LED, yellow	Sensing state ($0 \leq s \leq 0.8 S_r$)
Assured operating distance (S_a)	$\leq (0.81 \times S_n)$ mm	Indicator LED, yellow, blinking	Sensing state ($0.8 S_r < s \leq S_r$)
Repeat accuracy	≤ 0.7 mm	IO-Link	✓
Hysteresis	$3\% S_r < \text{Hyst} \leq 15\% S_r$	MTTF (@40°C)	1017 y
Temperature drift	$\leq 10\% S_r$		
Standard target	45 x 45 x 1 mm ³ , FE360		

Note: $0.9S_n \leq S_a \leq 1.1S_n$.

ELECTRICAL DATA		MECHANICAL DATA	
Supply voltage range (U_B)	10...30 VDC	Mounting	Non-embeddable
Residual ripple	$\leq 20\% U_B$	Housing material	V2A / 1.4305 / AISI 303
Output current	≤ 200 mA	Sensing face material	V2A / 1.4305 / AISI 303
Output voltage drop	≤ 2.0 VDC	Max tightening torque	20 Nm
Power consumption (no-load)	≤ 10 mA	Ambient operating temperature	-25...+85°C ¹
Residual current	≤ 0.1 mA	Enclosure rating	IP68 / IP69K
Switching frequency	≤ 300 Hz	Weight (cable/connector)	see page 2
Short-circuit protection	✓	Shock and vibration	IEC 60947-5-2 / 7.4
Voltage reversal protection	✓		
Cable length max.	≤ 300 m		

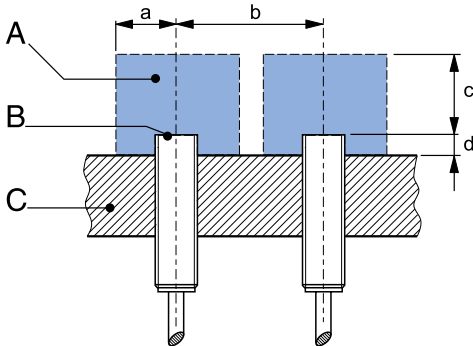
¹Maximum temperature according to UL: 70°C.

Note: all data measured according to IEC 60947-5-2 standard with $U_B=20 \dots 30$ VDC, $T_A=23^\circ\text{C} \pm 5^\circ\text{C}$.

CORRECTION FACTORS FOR TARGET OF

Steel FE 360	1	Copper	0.7	Aluminum	1	Brass	1.2	Stainless Steel V2A 1/2 mm	0.5 / 0.95
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INSTALLATION CONDITIONS



A : metal free zone a : 45 mm d : steel 26mm
 B : sensing face b : 150 mm
 C : support c : 45 mm

Note: additional installation information can be found in the glossary of the Contrinex General Catalog.

IO-LINK FUNCTIONALITIES

IO-Link version	1.1
SIO mode	Supported
Process data	7-bit input
Baudrate	COM2 (38.4 kBaud)
Minimum cycle time	10.4 ms
ISDU	Not supported



IO-Link files may be downloaded from

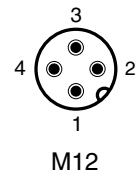
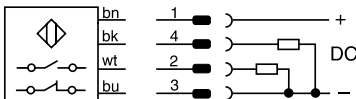
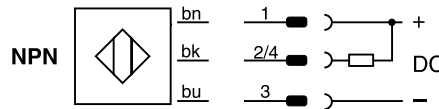
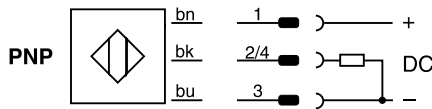
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WIRING DIAGRAM

PIN ASSIGNMENT



AVAILABLE TYPES

Part number	Part reference	Polarity	Connection	Output on pin 2	Output on pin 4 / bk	Weight
320-420-671	DW-AS-731-M12	NPN	M12 4-pin	-	Normally open (NO)	25 g
330-320-088	DW-AS-733-M12	PNP	M12 4-pin	-	Normally open (NO) / IO-Link	25 g
330-320-128	DW-AS-73A-M12	PNP	M12 4-pin	Normally close (NC)	Normally open (NO) / IO-Link	25 g
320-420-673	DW-AD-731-M12	NPN	PUR, 2 m, 3 wire	-	Normally open (NO)	89 g
330-320-089	DW-AD-733-M12	PNP	PUR, 2 m, 3 wire	-	Normally open (NO) / IO-Link	89 g

Note: part reference may include additional suffix to indicate a revision version or special version. Further information is available on request.

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