



Inductive sensors IME

Dependable for industrial applications

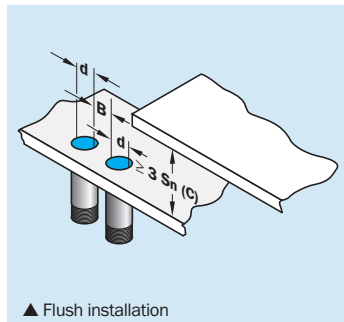
Installation notes

Flush installation in metal

The sensor can be embedded in the metal up to the sensing face.

Proximity sensors for flush installation have a smaller sensing range compared to proximity sensors for non-flush installation with the same shape and design.

General installation notes for cylindrical design for flush installation in metal:



Standard series	
Type	Metal-free zone [mm]
IME08-1B5...	B = 8, C = 4,5
IME12-02B...	B = 12, C = 6
IME18-05B...	B = 18, C = 15
IME30-10B...	B = 30, C = 30

Advanced-Reihe	
Type	Metal-free zone [mm]
IME08-02B...	B = 16, C = 6
IME12-04B...	B = 24, C = 12
IME18-08B...	B = 36, C = 24
IME30-15B...	B = 60, C = 45

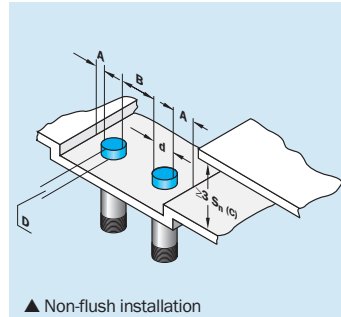
d = Outer diameter of the sensor

Installation notes

Non-flush installation in metal

With proximity sensors for non-flush installation, a metal-free zone must be maintained owing to the scattered field distribution.

General installation notes for cylindrical design for non-flush installation in metal:

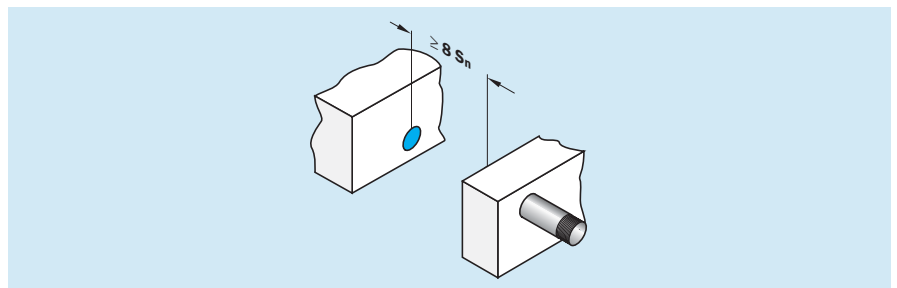
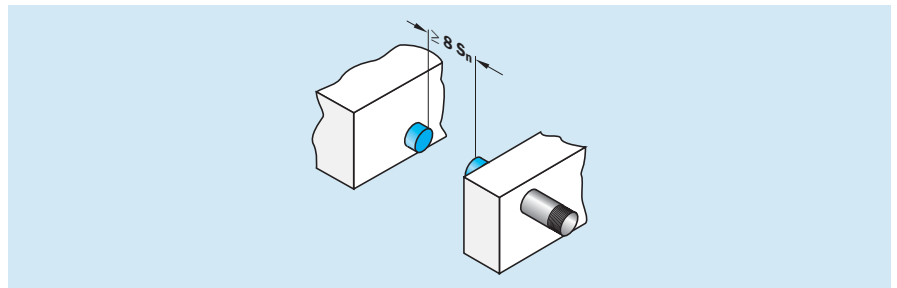


d = Outer diameter of the sensor

Standard series	
Type	Metal-free zone [mm]
IME08-2N5...	A = 8, B = 16, C = 7,5, D = 6
IME12-04N...	A = 12, B = 24, C = 12, D = 8
IME18-08N...	A = 18, B = 36, C = 24, D = 16
IME30-15N...	A = 30, B = 60, C = 45, D = 30

Advanced series	
Type	Metal-free zone [mm]
IME08-04N...	A = 8, B = 18, C = 12, D = 8
IME12-08N...	A = 12, B = 24, C = 24, D = 16
IME18-12N...	A = 18, B = 36, C = 36, D = 24
IME30-20N...	A = 30, B = 60, C = 60, D = 40

Opposite installation in metal

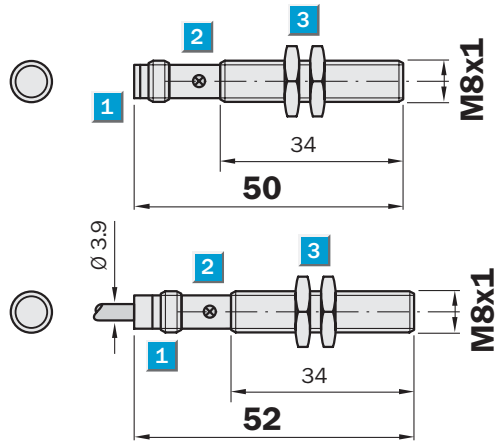


Sensing range
1.5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

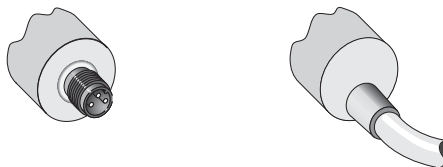


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



Connection type

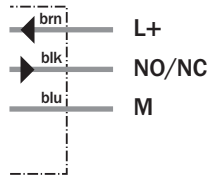
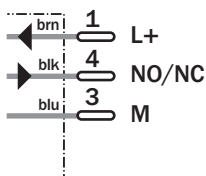
IME08-1B5NOZTOS	IME08-1B5NOZW2S
IME08-1B5NSZTOS	IME08-1B5NSZW2S
IME08-1B5POZTOS	IME08-1B5POZW2S
IME08-1B5PSZTOS	IME08-1B5PSZW2S



Accessories
Connector, M8, 3-pin

M8, 3-pin

3 x 0.14 mm²



Technical specifications		IME08-	1B5NO ZT0S	1B5NO ZW2S	1B5NS ZT0S	1B5NS ZW2S	1B5PO ZT0S	1B5PO ZW2S	1B5PS ZT0S	1B5PS ZW2S		
Sensing range S_n	1.5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

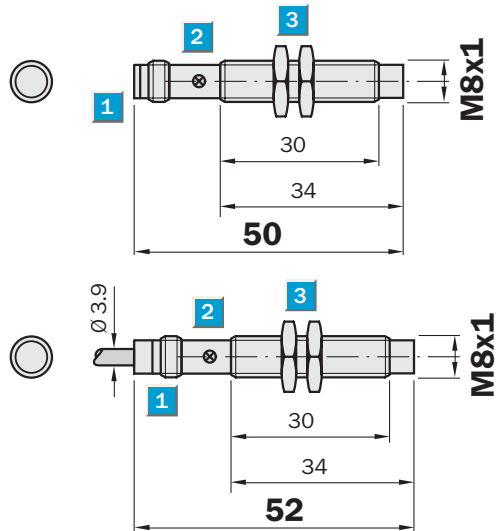
Type	Part Number
IME08-1B5NOZT0S	1040850
IME08-1B5NOZW2S	1040852
IME08-1B5NSZT0S	1040846
IME08-1B5NSZW2S	1040848
IME08-1B5POZT0S	1040842
IME08-1B5POZW2S	1040844
IME08-1B5PSZT0S	1040838
IME08-1B5PSZW2S	1040840

Sensing range
2.5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing



- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



Connection type

IME08-2N5NOZT0S	IME08-2N5NOZW2S
IME08-2N5NSZT0S	IME08-2N5NSZW2S
IME08-2N5POZT0S	IME08-2N5POZW2S
IME08-2N5PSZT0S	IME08-2N5PSZW2S

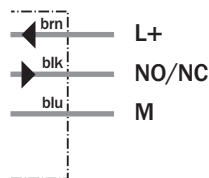
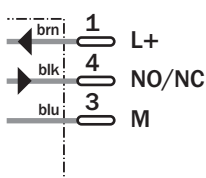


Accessories

Connector, M8, 3-pin

M8, 3-pin

3 x 0.14 mm²



Technical specifications		IME08-	2N5N OZT0S	2N5NO ZW2S	2N5NS ZT0S	2N5NS ZW2S	2N5PO ZT0S	2N5PO ZW2S	2N5PS ZT0S	2N5PS ZW2S		
Sensing range S_n	2.5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10 \%$											
Voltage drop U_d	$\leq 2 V^{1)}$											
Power consumption	$\leq 10 mA^{2)}$											
Continuous current I_a	$\leq 200 mA$											
Time delay before availability t_v	$\leq 100 ms$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10 \%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

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Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

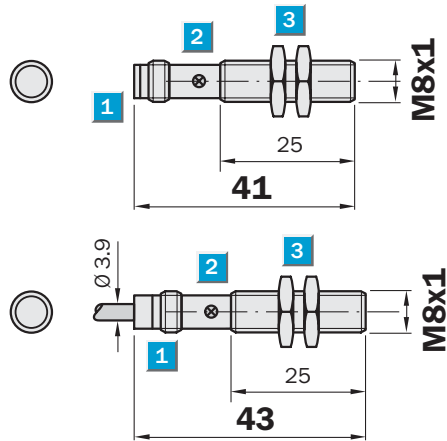
Type	Part Number
IME08-2N5NOZT0S	1040866
IME08-2N5NOZW2S	1040868
IME08-2N5NSZT0S	1040862
IME08-2N5NSZW2S	1040864
IME08-2N5POZT0S	1040858
IME08-2N5POZW2S	1040860
IME08-2N5PSZT0S	1040854
IME08-2N5PSZW2S	1040856

Sensing range
1.5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing



- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



Connection type

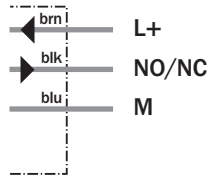
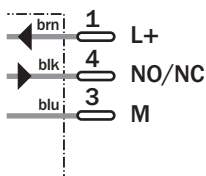
IME08-1B5NOZTOK	IME08-1B5NOZW2K
IME08-1B5NSZTOK	IME08-1B5NSZW2K
IME08-1B5POZTOK	IME08-1B5POZW2K
IME08-1B5PSZTOK	IME08-1B5PSZW2K



Accessories
Connector, M8, 3-pin

M8, 3-pin

3 x 0.14 mm²



Technical specifications		IME08-	1B5NO ZTOK	1B5NO ZW2K	1B5NS ZTOK	1B5NS ZW2K	1B5PO ZTOK	1B5PO ZW2K	1B5PS ZTOK	1B5PS ZW2K		
Sensing range S_n	1.5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

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St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

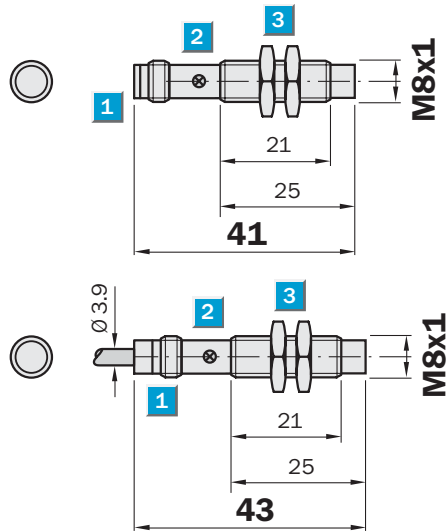
Type	Part Number
IME08-1B5NOZTOK	1040849
IME08-1B5NOZW2K	1040851
IME08-1B5NSZTOK	1040845
IME08-1B5NSZW2K	1040847
IME08-1B5POZTOK	1040841
IME08-1B5POZW2K	1040843
IME08-1B5PSZTOK	1040837
IME08-1B5PSZW2K	1040839

Sensing range
2.5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

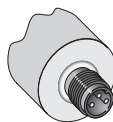


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

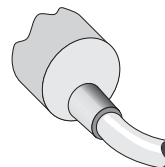


Connection type

IME08-2N5NOZTOK	IME08-2N5NOZW2K
IME08-2N5NSZTOK	IME08-2N5NSZW2K
IME08-2N5POZTOK	IME08-2N5POZW2K
IME08-2N5PSZTOK	IME08-2N5PSZW2K



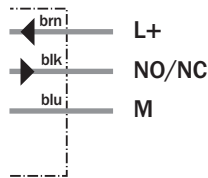
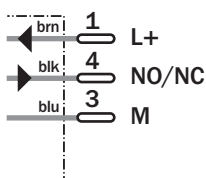
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	2N5NO ZTOK	2N5NO ZW2K	2N5NS ZTOK	2N5NS ZW2K	2N5PO ZTOK	2N5PO ZW2K	2N5PS ZTOK	2N5PS ZW2K		
Sensing range S_n	2.5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

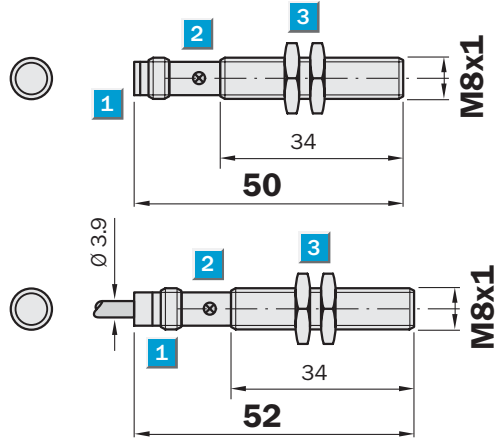
Type	Part Number
IME08-2N5NOZTOK	1040865
IME08-2N5NOZW2K	1040867
IME08-2N5NSZTOK	1040861
IME08-2N5NSZW2K	1040863
IME08-2N5POZTOK	1040857
IME08-2N5POZW2K	1040859
IME08-2N5PSZTOK	1040853
IME08-2N5PSZW2K	1040855

Sensing range
2 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

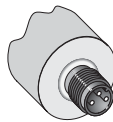


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

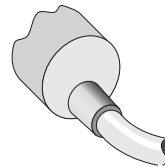


Connection type

IME08-02BNOZTOS	IME08-02BNOZW2S
IME08-02BNSZTOS	IME08-02BNSZW2S
IME08-02BPOZTOS	IME08-02BPOZW2S
IME08-02BPSZTOS	IME08-02BPSZW2S



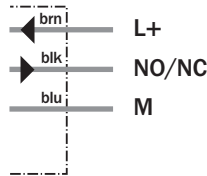
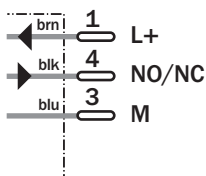
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	02BNO ZT0S	02BNO ZW2S	02BNS ZT0S	02BNS ZW2S	02BPO ZT0S	02BPO ZW2S	02BPS ZT0S	02BPS ZW2S		
Sensing range S_n	2 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

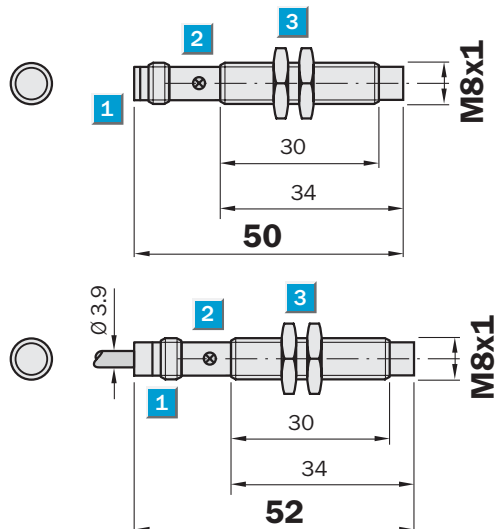
Type	Part Number
IME08-02BNOZT0S	1040882
IME08-02BNOZW2S	1040884
IME08-02BNSZT0S	1040878
IME08-02BNSZW2S	1040880
IME08-02BPOZT0S	1040874
IME08-02BPOZW2S	1040876
IME08-02BPSZT0S	1040870
IME08-02BPSZW2S	1040872

Sensing range
4 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

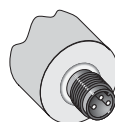


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

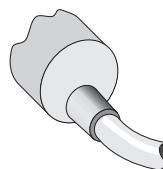


Connection type

IME08-04NNOZT0S	IME08-04NNOZW2S
IME08-04NNSZT0S	IME08-04NNSZW2S
IME08-04NPOZT0S	IME08-04NPOZW2S
IME08-04NPSZT0S	IME08-04NPSZW2S



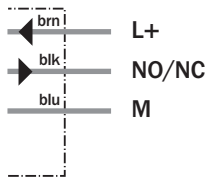
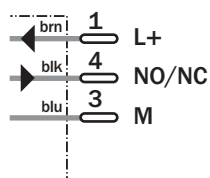
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	04NNO ZT0S	04NNO ZW2S	04NNS ZT0S	04NNS ZW2S	04NPO ZT0S	04NPO ZW2S	04NPS ZT0S	04NPS ZW2S		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

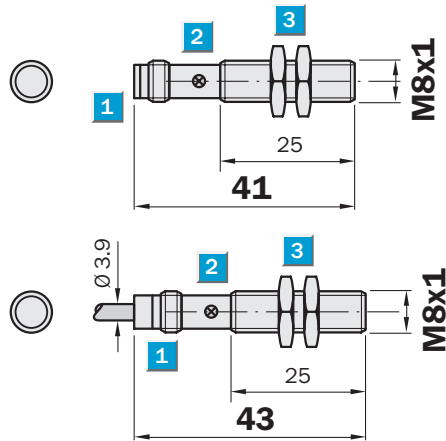
Type	Part Number
IME08-04NNOZT0S	1040898
IME08-04NNOZW2S	1040900
IME08-04NNSZT0S	1040894
IME08-04NNSZW2S	1040896
IME08-04NPOZT0S	1040890
IME08-04NPOZW2S	1040892
IME08-04NPSZT0S	1040886
IME08-04NPSZW2S	1040888

Sensing range
2 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

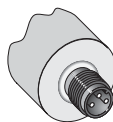


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

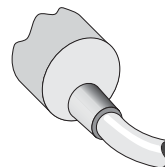


Connection type

IME08-02BNOZTOK	IME08-02BNOZW2K
IME08-02BNSZTOK	IME08-02BNSZW2K
IME08-02BPOZTOK	IME08-02BPOZW2K
IME08-02BPSZTOK	IME08-02BPSZW2K



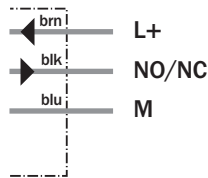
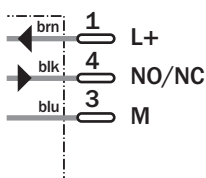
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	02BNO ZTOK	02BNO ZW2K	02BNS ZTOK	02BNS ZW2K	02BPO ZTOK	02BPO ZW2K	02BPS ZTOK	02BPS ZW2K		
Sensing range S_n	2 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

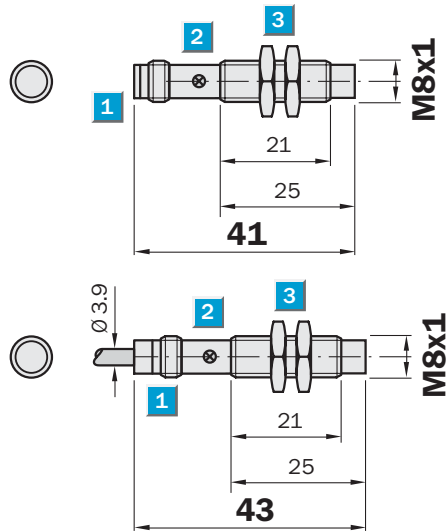
Type	Part Number
IME08-02BNOZTOK	1040881
IME08-02BNOZW2K	1040883
IME08-02BNSZTOK	1040877
IME08-02BNSZW2K	1040879
IME08-02BPOZTOK	1040873
IME08-02BPOZW2K	1040875
IME08-02BPSZTOK	1040869
IME08-02BPSZW2K	1040871

Sensing range
4 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M8 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

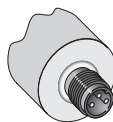


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

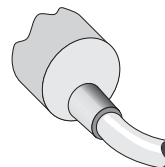


Connection type

IME08-04NNOZTOK	IME08-04NNOZW2K
IME08-04NNSZTOK	IME08-04NNSZW2K
IME08-04NPOZTOK	IME08-04NPOZW2K
IME08-04NPSZTOK	IME08-04NPSZW2K



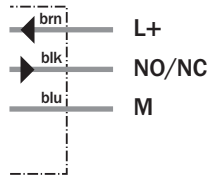
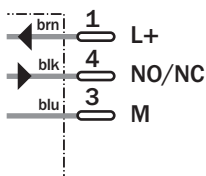
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	04NNO ZTOK	04NNO ZW2K	04NNS ZTOK	04NNS ZW2K	04NPO ZTOK	04NPO ZW2K	04NPS ZTOK	04NPS ZW2K		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M8, 3-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	4000 Hz											
Dimensions	M8 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 5 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

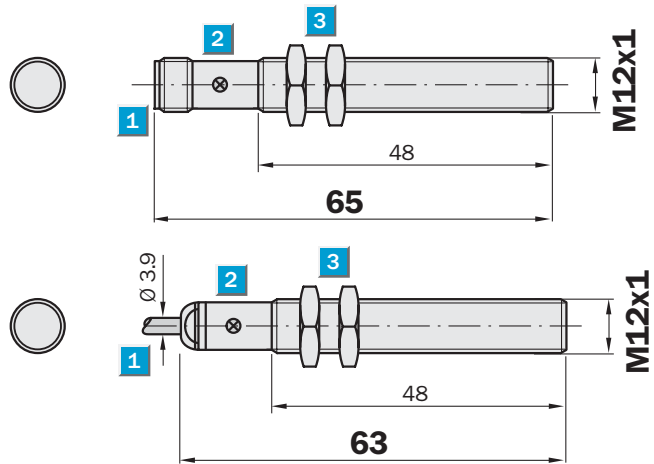
Type	Part Number
IME08-04NNOZTOK	1040897
IME08-04NNOZW2K	1040899
IME08-04NNSZTOK	1040893
IME08-04NNSZW2K	1040895
IME08-04NPOZTOK	1040889
IME08-04NPOZW2K	1040891
IME08-04NPSZTOK	1040885
IME08-04NPSZW2K	1040887

Sensing range
2 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

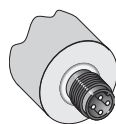


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

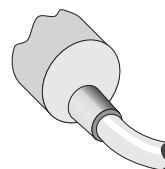
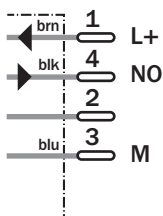


Connection type

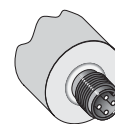
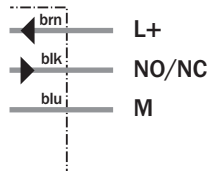
IME12-02BNSZC0S	IME12-02BNOZW2S	IME12-02BNOZC0S
IME12-02BPSZC0S	IME12-02BNSZW2S	IME12-02BPOZC0S
	IME12-02BPOZW2S	
	IME12-02BPSZW2S	



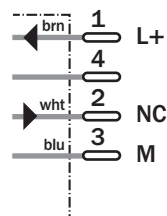
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	02BNO ZC0S	02BNO ZW2S	02BNS ZC0S	02BNS ZW2S	02BPO ZC0S	02BPO ZW2S	02BPS ZC0S	02BPS ZW2S		
Sensing range S_n	2 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

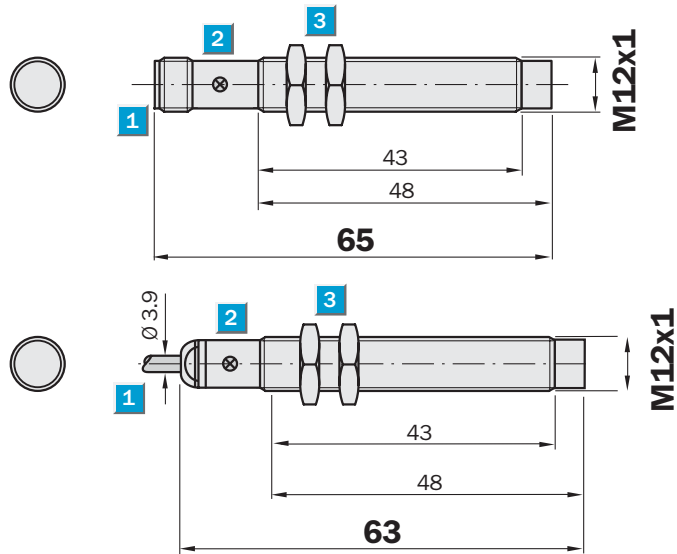
Type	Part Number
IME12-02BNOZC0S	1040743
IME12-02BNOZW2S	1040746
IME12-02BNSZC0S	1040740
IME12-02BNSZW2S	1040742
IME12-02BPOZC0S	1040736
IME12-02BPOZW2S	1040738
IME12-02BPSZC0S	1040732
IME12-02BPSZW2S	1040734

Sensing range
4 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

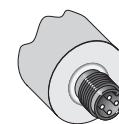
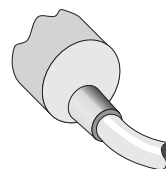
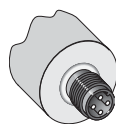


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal



Connection type

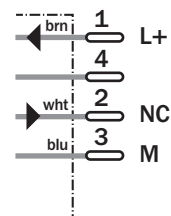
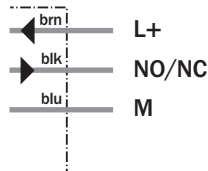
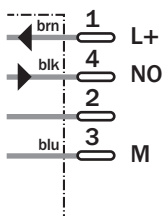
IME12-04NNSZC0S	IME12-04NNOZW2S	IME12-04NNOZC0S
IME12-04NPSZC0S	IME12-04NNSZW2S	IME12-04NPOZC0S
	IME12-04NPOZW2S	
	IME12-04NPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	04NNO ZC0S	04NNO ZW2S	04NNS ZC0S	04NNS ZW2S	04NPO ZC0S	04NPO ZW2S	04NPS ZC0S	04NPS ZW2S		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

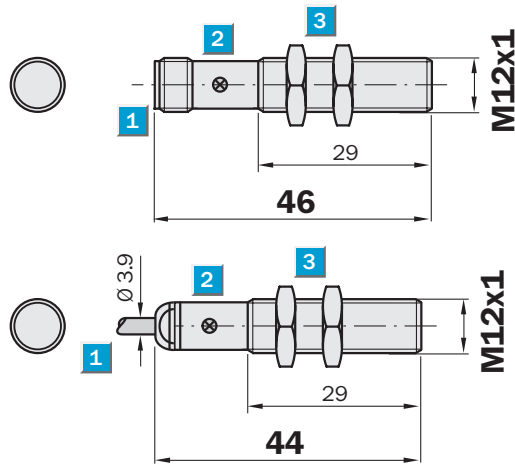
Type	Part Number
IME12-04NNOZC0S	1040760
IME12-04NNOZW2S	1040762
IME12-04NNSZC0S	1040756
IME12-04NNSZW2S	1040757
IME12-04NPOZC0S	1040752
IME12-04NPOZW2S	1040754
IME12-04NPSZC0S	1040748
IME12-04NPSZW2S	1040750

Sensing range
2 mm

Inductive sensor

- Short circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

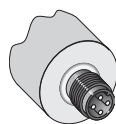


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

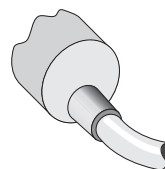
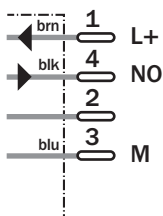


Connection type

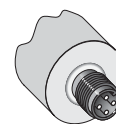
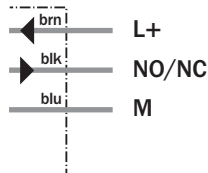
IME12-02BNSZCOK	IME12-02BNOZW2K	IME12-02BNOZCOK
IME12-02BPSZCOK	IME12-02BNSZW2K	IME12-02BPOZCOK
	IME12-02BPOZW2K	
	IME12-02BPSZW2K	



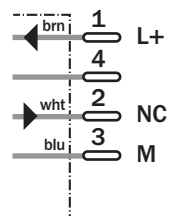
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	02BNOZCOK	02BNOZW2K	02BNSZCOK	02BNSZW2K	02BP0ZCOK	02BP0ZW2K	02BPSZCOK	02BPSZW2K		
Sensing range S_n	2 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

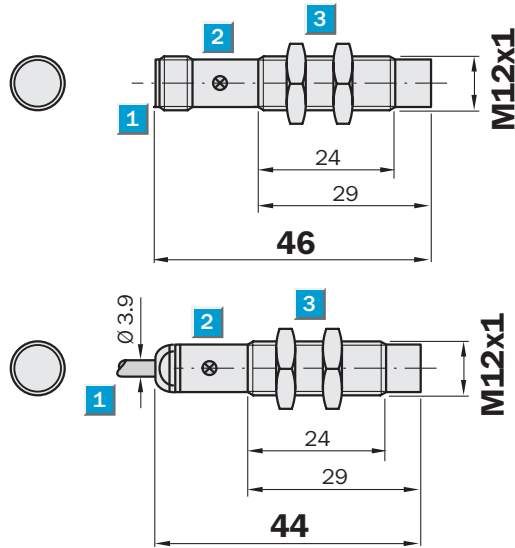
Type	Part Number
IME12-02BNOZCOK	1040744
IME12-02BNOZW2K	1040745
IME12-02BNSZCOK	1040739
IME12-02BNSZW2K	1040741
IME12-02BP0ZCOK	1040735
IME12-02BP0ZW2K	1040737
IME12-02BPSZCOK	1040731
IME12-02BPSZW2K	1040733

Sensing range
4 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

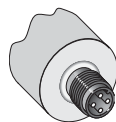


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

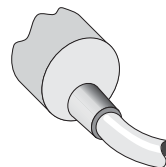
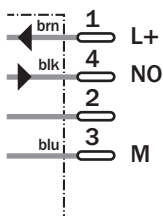


Connection type

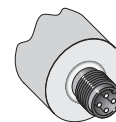
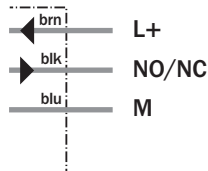
IME12-04NNSZCOK	IME12-04NNOZW2K	IME12-04NNOZCOK
IME12-04NPSZCOK	IME12-04NNSZW2K	IME12-04NPOZCOK
	IME12-04NPOZW2K	
	IME12-04NPSZW2K	



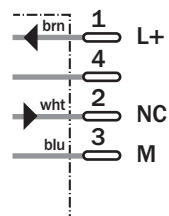
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	04NNO ZCOK	04NNO ZW2K	04NNS ZCOK	04NNS ZW2K	04NPO ZCOK	04NPO ZW2K	04NPS ZCOK	04NPS ZW2K		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U _{pp}	≤ 10 %											
Voltage drop U _d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t _v	≤ 100 ms											
Hysteresis H, of s _r	5 ... 15 %											
Repeatability R	≤ 2 % (U _b and T _a constant) ³⁾											
Temperature drift, of s _r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T _a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

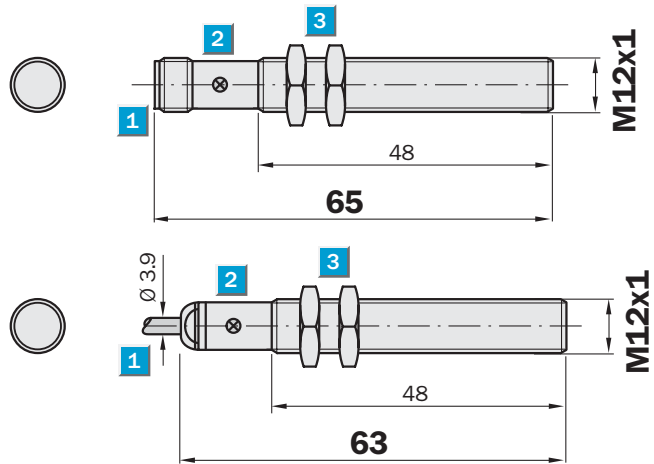
Type	Part Number
IME12-04NNOZCOK	1040759
IME12-04NNOZW2K	1040761
IME12-04NNSZCOK	1040755
IME12-04NNSZW2K	1040758
IME12-04NPOZCOK	1040751
IME12-04NPOZW2K	1040753
IME12-04NPSZCOK	1040747
IME12-04NPSZW2K	1040749

Sensing range
4 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating
- Installation flush

Dimensional drawing

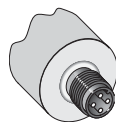


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

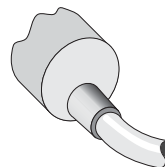
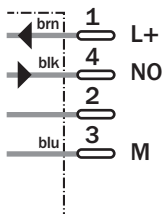


Connection type

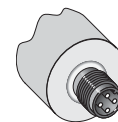
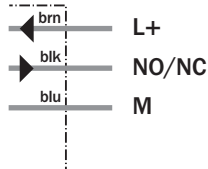
IME12-04BNSZC0S	IME12-04BNOZW2S	IME12-04BNOZC0S
IM12E-04BPSZC0S	IME12-04BNSZW2S	IME12-04BPOZC0S
	IME12-04BPOZW2S	
	IME12-04BPSZW2S	



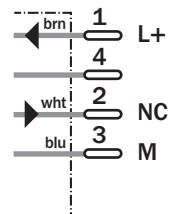
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

- Connector, M12, 4-pin
- Mounting systems

Technical specifications		IME12-	04BNO ZC0S	04BNO ZW2S	04BNS ZC0S	04BNS ZW2S	04BPO ZC0S	04BPO ZW2S	04BPS ZC0S	04BPS ZW2S		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

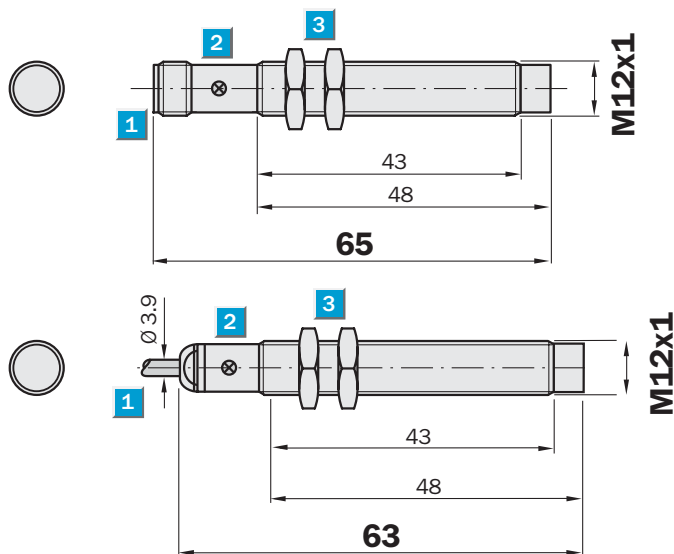
Type	Part Number
IME12-04BNOZC0S	1040776
IME12-04BNOZW2S	1040778
IME12-04BNSZC0S	1040772
IME12-04BNSZW2S	1040774
IME12-04BPOZC0S	1040768
IME12-04BPOZW2S	1040770
IME12-04BPSZC0S	1040764
IME12-04BPSZW2S	1040766

Sensing range
8 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
- M12 x 1 mm
- Enclosure rating
- Installation non-flush

Dimensional drawing

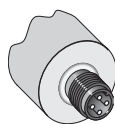


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

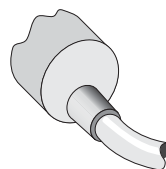
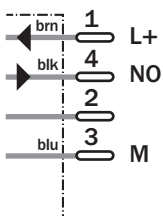


Connection type

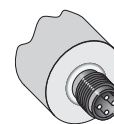
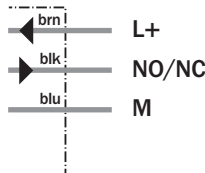
IME12-08NNSZC0S	IME12-08NNOZW2S	IME12-08NNOZC0S
IME12-08NPSZC0S	IME12-08NNSZW2S	IME12-08NPOZC0S
	IME12-08NPOZW2S	
	IME12-08NPSZW2S	



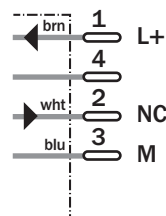
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	08NNO ZC0S	08NNO ZW2S	08NNS ZC0S	08NNS ZW2S	08NPO ZC0S	08NPO ZW2S	08NPS ZC0S	08NPS ZW2S		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10\%$											
Voltage drop U_d	$\leq 2\text{ V}^{1)}$											
Power consumption	$\leq 10\text{ mA}^{2)}$											
Continuous current I_a	$\leq 200\text{ mA}$											
Time delay before availability t_v	$\leq 100\text{ ms}$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2\%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10\%$											
EMC	According to EN 60947-5-2											
Switching output	PNP											
	NPN											
Output function	Normally closed											
	Normally open											
Installation	Overflush											
	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

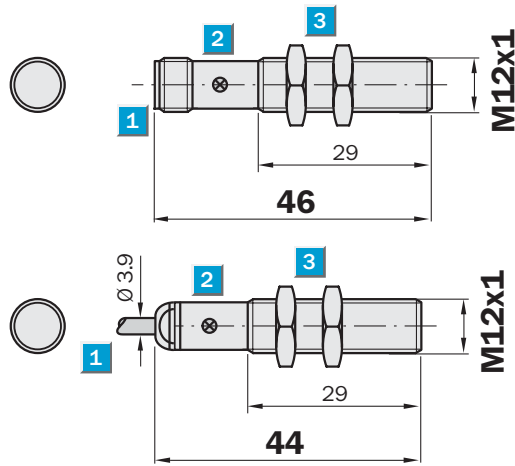
Type	Part Number
IME12-08NNOZC0S	1040826
IME12-08NNOZW2S	1040793
IME12-08NNSZC0S	1040788
IME12-08NNSZW2S	1040790
IME12-08NPOZC0S	1040784
IME12-08NPOZW2S	1040786
IME12-08NPSZC0S	1040780
IME12-08NPSZW2S	1040782

Sensing range
4 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M12 x 1 mm
- Enclosure rating
- Installation flush

Dimensional drawing

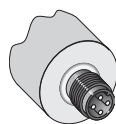


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

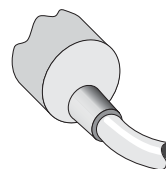
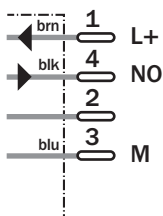


Connection type

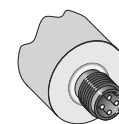
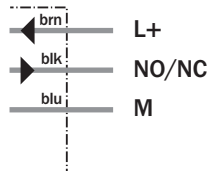
IME12-04BNSZCOK	IME12-04BNOZW2K	IME12-04BNOZCOK
IME12-04BPSZCOK	IME12-04BNSZW2K	IME12-04BPOZCOK
	IME12-04BPOZW2K	
	IME12-04BPSZW2K	



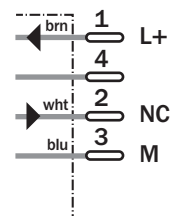
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	04BNO ZCOK	04BNO ZW2K	04BNS ZCOK	04BNS ZW2K	04BPO ZCOK	04BPO ZW2K	04BPS ZCOK	04BPS ZW2K		
Sensing range S_n	4 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	$\leq 10 \%$											
Voltage drop U_d	$\leq 2 V^{1)}$											
Power consumption	$\leq 10 mA^{2)}$											
Continuous current I_a	$\leq 200 mA$											
Time delay before availability t_v	$\leq 100 ms$											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	$\leq 2 \%$ (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	$\pm 10 \%$											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

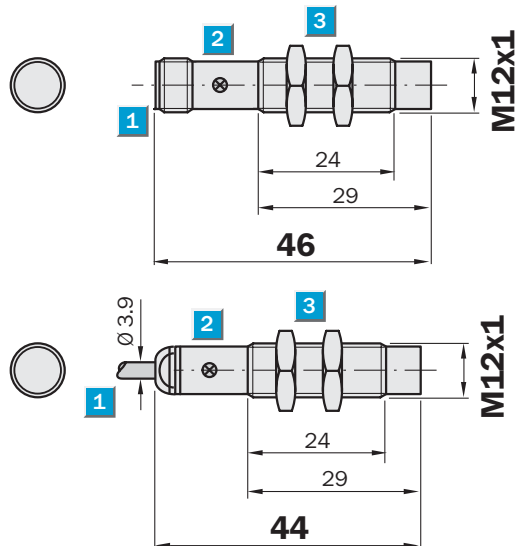
Type	Part Number
IME12-04BNOZCOK	1040775
IME12-04BNOZW2K	1040777
IME12-04BNSZCOK	1040771
IME12-04BNSZW2K	1040773
IME12-04BPOZCOK	1040767
IME12-04BPOZW2K	1040769
IME12-04BPSZCOK	1040763
IME12-04BPSZW2K	1040765

Sensing range
8 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
M12 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

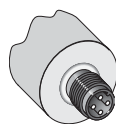


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

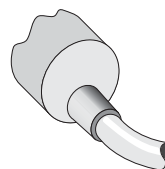
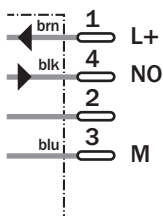


Connection type

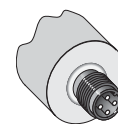
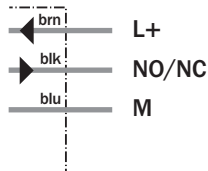
IME12-08NNSZCOK	IME12-08NNOZW2K	IME12-08NNOZCOK
IME12-08NPSZCOK	IME12-08NNSZW2K	IME12-08NPOZCOK
	IME12-08NPOZW2K	
	IME12-08NPSZW2K	



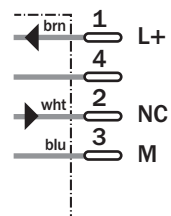
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME12-	08NNO ZCOK	08NNO ZW2K	08NNS ZCOK	08NNS ZW2K	08NPO ZCOK	08NPO ZW2K	08NPS ZCOK	08NPS ZW2K		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	2000 Hz											
Dimensions	M12 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	Typ. 12 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_{rr}
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

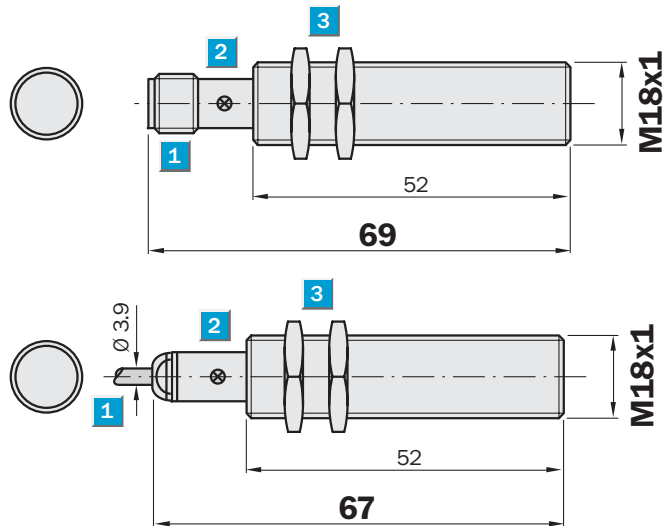
Type	Part Number
IME12-08NNOZCOK	1040791
IME12-08NNOZW2K	1040792
IME12-08NNSZCOK	1040787
IME12-08NNSZW2K	1040789
IME12-08NPOZCOK	1040783
IME12-08NPOZW2K	1040785
IME12-08NPSZCOK	1040779
IME12-08NPSZW2K	1040781

Sensing range
5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

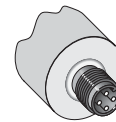
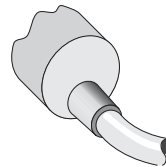
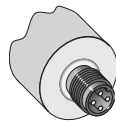


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal



Connection type

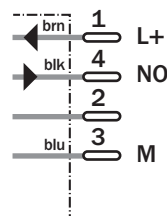
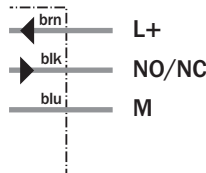
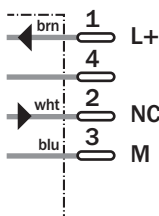
IME18-05BNOZC0S	IME18-05BNOZW2S	IME18-05BNSZC0S
IME18-05BP0ZC0S	IME18-05BNSZW2S	IME18-05BPSZ0S
	IME18-05BP0ZW2S	
	IME18-05BPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	05BNO ZC0S	05BNO ZW2S	05BNS ZC0S	05BNS ZW2S	05BPO ZC0S	05BPO ZW2S	05BPS ZC0S	05BPS ZW2S		
Sensing range S_n	5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

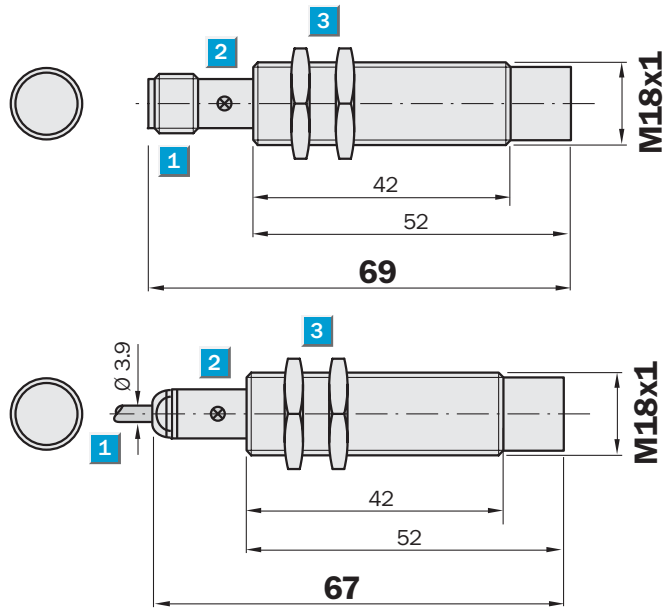
Type	Part Number
IME18-05BNOZC0S	1040946
IME18-05BNOZW2S	1040948
IME18-05BNSZC0S	1040942
IME18-05BNSZW2S	1040944
IME18-05BPOZC0S	1040938
IME18-05BPOZW2S	1040940
IME18-05BPSZC0S	1040934
IME18-05BPSZW2S	1040936

Sensing range
8 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

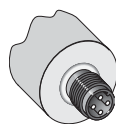


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

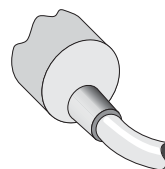
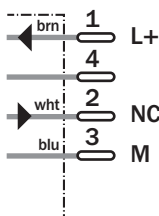


Connection type

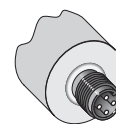
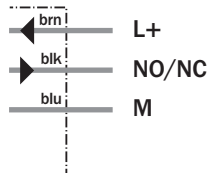
IME18-08NNOZC0S	IME18-08NNOZW2S	IME18-08NNSZC0S
IME18-08NPOZC0S	IME18-08NNSZW2S	IME18-08NPSZC0S
	IME18-08NPOZW2S	
	IME18-08NPSZW2S	



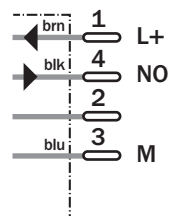
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	08NNO ZC0S	08NNO ZW2S	08NNS ZC0S	08NNS ZW2S	08NPO ZC0S	08NPO ZW2S	08NPS ZC0S	08NPS ZW2S		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

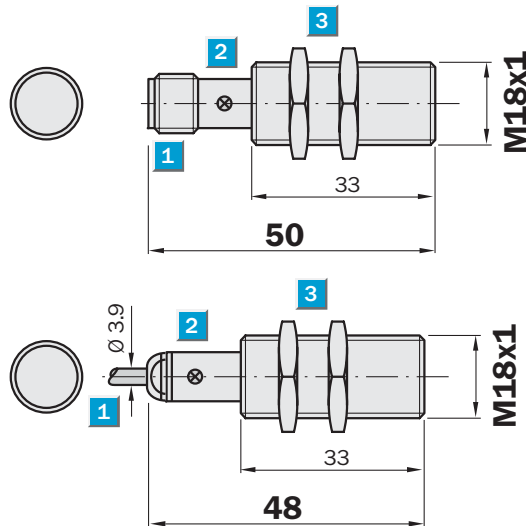
Type	Part Number
IME18-08NNOZC0S	1040962
IME18-08NNOZW2S	1040964
IME18-08NNSZC0S	1040958
IME18-08NNSZW2S	1040960
IME18-08NPOZC0S	1040954
IME18-08NPOZW2S	1040956
IME18-08NPSZC0S	1040950
IME18-08NPSZW2S	1040952

Sensing range
5 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

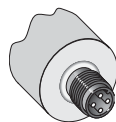


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

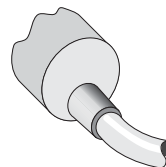
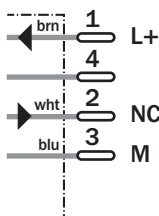


Connection type

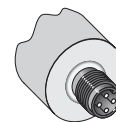
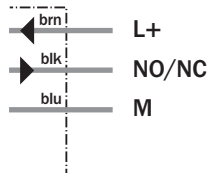
IME18-05BNOZCOK	IME18-05BNOZW2K	IME18-05BNSZCOK
IME18-05BPOZCOK	IME18-05BNSZW2K	IME18-05BPSZCOK
	IME18-05BPOZW2K	
	IME18-05BPSZW2K	



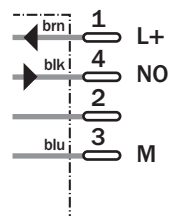
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	05BNO ZCOK	05BNO ZW2K	05BNS ZCOK	05BNS ZW2K	05BPO ZCOK	05BPO ZW2K	05BPS ZCOK	05BPS ZW2K		
Sensing range S_n	5 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

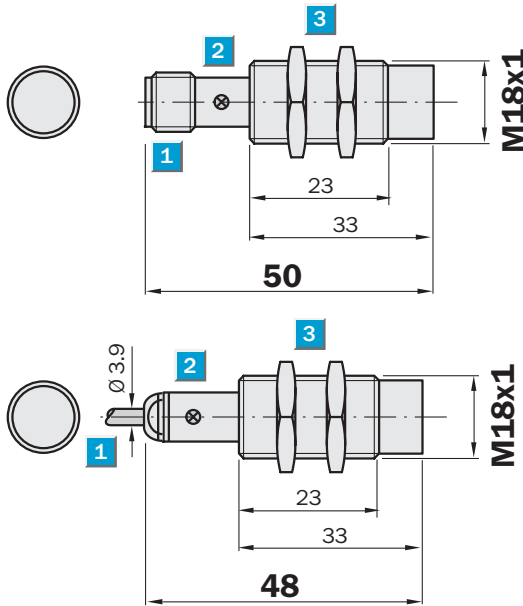
Type	Part Number
IME18-05BNOZCOK	1040945
IME18-05BNOZW2K	1040947
IME18-05BNSZCOK	1040941
IME18-05BNSZW2K	1040943
IME18-05BPOZCOK	1040937
IME18-05BPOZW2K	1040939
IME18-05BPSZCOK	1040933
IME18-05BPSZW2K	1040935

Sensing range
8 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

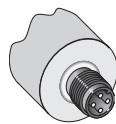


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

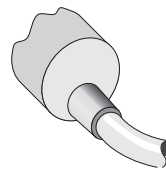
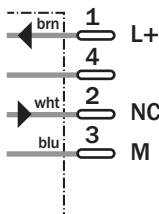


Connection type

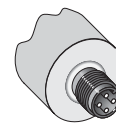
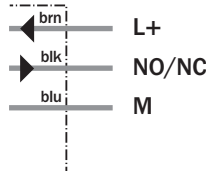
IME18-08NNOZCOK	IME18-08NNOZW2K	IME18-08NNSZCOK
IME18-08NPOZCOK	IME18-08NNSZW2K	IME18-08NPSZCOK
	IME18-08NPOZW2K	
	IME18-08NPSZW2K	



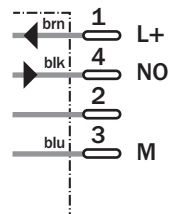
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

- Connector, M12, 4-pin
- Mounting systems

Technical specifications		IME18-	08NNO ZCOK	08NNO ZW2K	08NNS ZCOK	08NNS ZW2K	08NPO ZCOK	08NPO ZW2K	08NPS ZCOK	08NPS ZW2K		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

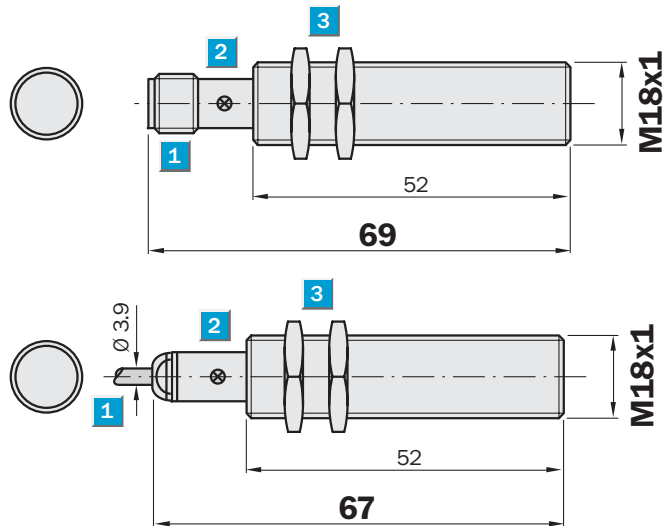
Type	Part Number
IME18-08NNOZCOK	1040961
IME18-08NNOZW2K	1040963
IME18-08NNSZCOK	1040957
IME18-08NNSZW2K	1040959
IME18-08NPOZCOK	1040953
IME18-08NPOZW2K	1040955
IME18-08NPSZCOK	1040949
IME18-08NPSZW2K	1040951

Sensing range
8 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
- M18 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

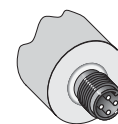
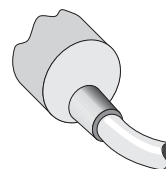
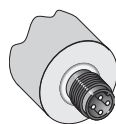


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal



Connection type

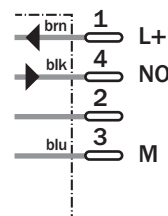
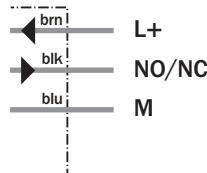
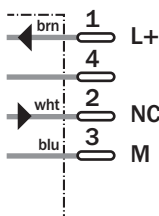
IME18-BNOZCOS	IME18-08BNOZW2S	IME18-08BNSZCOS
IME18-08BPOZCOS	IME18-08BNSZW2S	IME18-08BPSZCOS
	IME18-08BPZW2S	
	IME18-08BPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	08BNO ZC0S	08BNO ZW2S	08BNS ZC0S	08BNS ZW2S	08BPO ZC0S	08BPO ZW2S	08BPS ZC0S	08BPS ZW2S		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

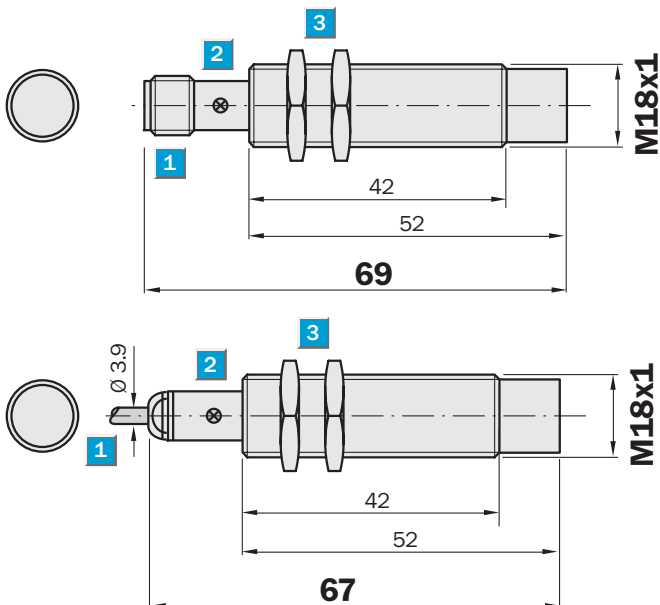
Type	Part Number
IME18-08BNOZC0S	1040978
IME18-08BNOZW2S	1040980
IME18-08BNSZC0S	1040974
IME18-08BNSZW2S	1040976
IME18-08BPOZC0S	1040970
IME18-08BPOZW2S	1040972
IME18-08BPSZC0S	1040966
IME18-08BPSZW2S	1040968

Sensing range
12 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

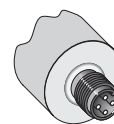
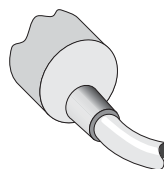
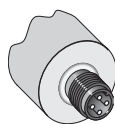


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal



Connection type

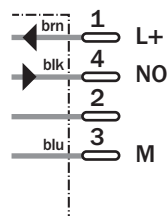
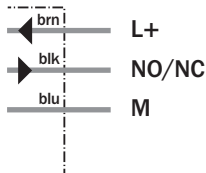
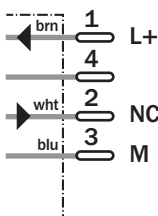
IME18-12NNOZC0S	IME18-12NNOZW2S	IME18-12NNSZC0S
IME18-12NPOZC0S	IME18-12NNSZW2S	IME18-12NPSZC0S
	IME18-12NPOZW2S	
	IME18-12NPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	12NNO ZC0S	12NNO ZW2S	12NNS ZC0S	12NNS ZW2S	12NPO ZC0S	12NPO ZW2S	12NPS ZC0S	12NPS ZW2S		
Sensing range S_n	12 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

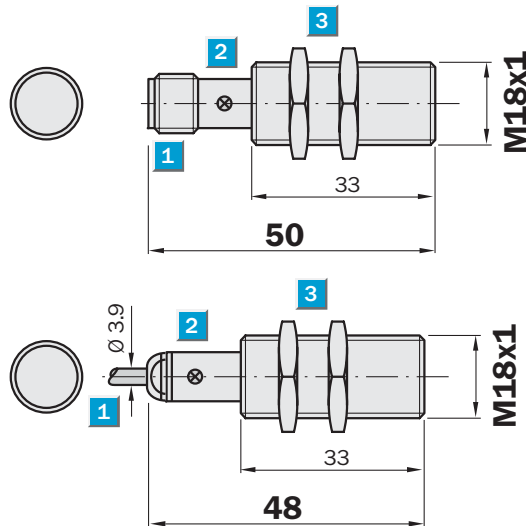
Type	Part Number
IME18-12NNOZC0S	1040994
IME18-12NNOZW2S	1040996
IME18-12NNSZC0S	1040990
IME18-12NNSZW2S	1040992
IME18-12NPOZC0S	1040986
IME18-12NPOZW2S	1040988
IME18-12NPSZC0S	1040982
IME18-12NPSZW2S	1040984

Sensing range
8 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

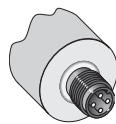


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

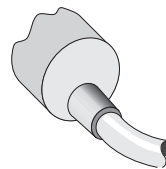
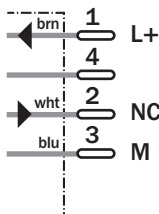


Connection type

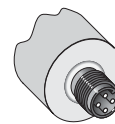
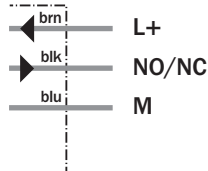
IME18-08BNOZCOK	IME18-08BNOZW2K	IME18-08BNSZCOK
IME18-08BPOZCOK	IME18-08BNSZW2K	IME18-08BPSZCOK
	IME18-08BPOZW2K	
	IME18-08BPSZW2K	



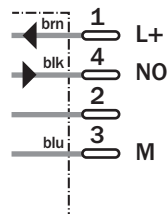
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	08BNO ZCOK	08BNO ZW2K	08BNS ZCOK	08BNS ZW2K	08BPO ZCOK	08BPO ZW2K	08BPS ZCOK	08BPS ZW2K		
Sensing range S_n	8 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

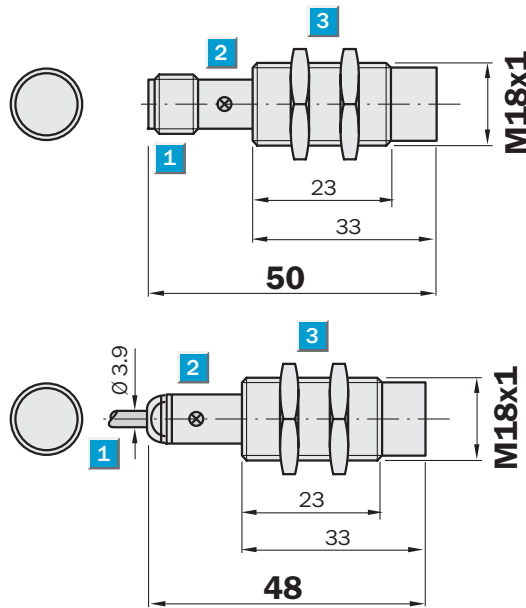
Type	Part Number
IME18-08BNOZCOK	1040977
IME18-08BNOZW2K	1040979
IME18-08BNSZCOK	1040973
IME18-08BNSZW2K	1040975
IME18-08BPOZCOK	1040969
IME18-08BPOZW2K	1040971
IME18-08BPSZCOK	1040965
IME18-08BPSZW2K	1040967

Sensing range
12 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M18 x 1 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

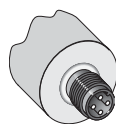


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

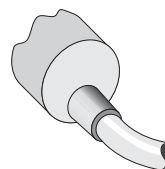
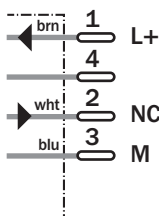


Connection type

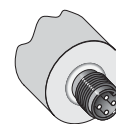
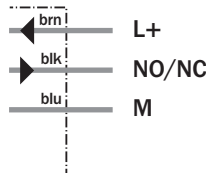
IME18-12NNOZCOK	IME18-12NNOZW2K	IME18-12NNSZCOK
IME18-12NPOZCOK	IME18-12NNSZW2K	IME18-12NPSZCOK
	IME18-12NPOZW2K	
	IME18-12NPSZW2K	



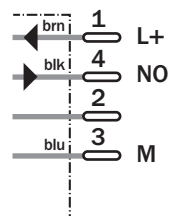
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME18-	12NNO ZC0K	12NNO ZW2K	12NNS ZC0K	12NNS ZW2K	12NPO ZC0K	12NPO ZW2K	12NPS ZC0K	12NPS ZW2K		
Sensing range S_n	12 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 100 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	1000 Hz											
Dimensions	M18 x 1 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	40 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Ordering information

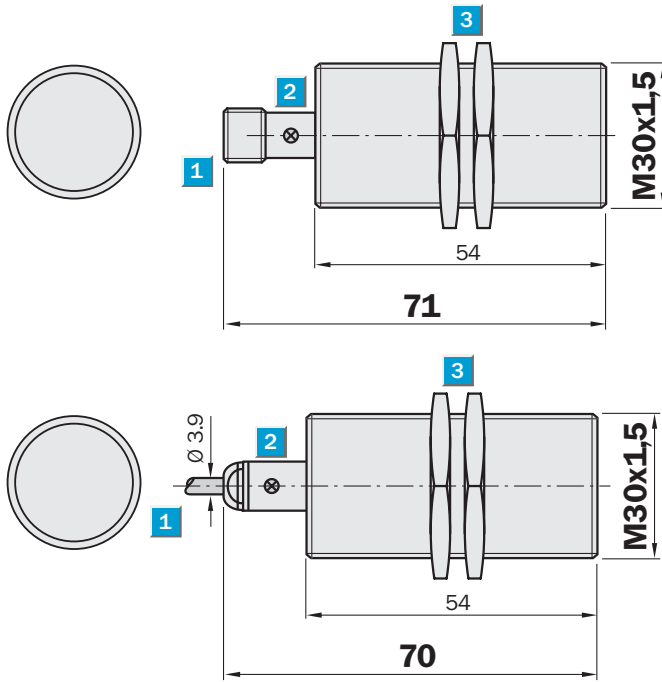
Type	Part Number
IME18-12NNOZC0K	1040993
IME18-12NNOZW2K	1040995
IME18-12NNSZC0K	1040989
IME18-12NNSZW2K	1040991
IME18-12NPOZC0K	1040985
IME18-12NPOZW2K	1040987
IME18-12NPSZC0K	1040981
IME18-12NPSZW2K	1040983

Sensing range
10 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

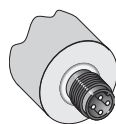


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

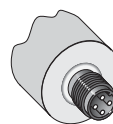
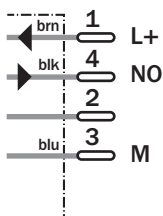


Connection type

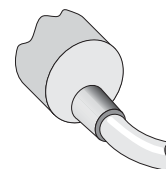
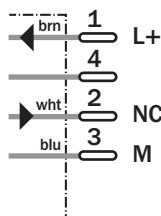
IME30-10BNSZC0S	IME30-10BNOZC0K	IME30-10BNOZW2S
IME30-10BPSZC0S	IME30-10BPOZC0S	IME30-10BNSZW2S
		IME30-10BPOZW2S
		IME30-10BPSZW2S



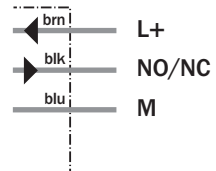
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	10BNO ZCOK	10BNO ZW2S	10BNS ZC0S	10BNS ZW2S	10BPO ZC0S	10BPO ZW2S	10BPS ZC0S	10BPS ZW2S		
Sensing range S_n	10 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

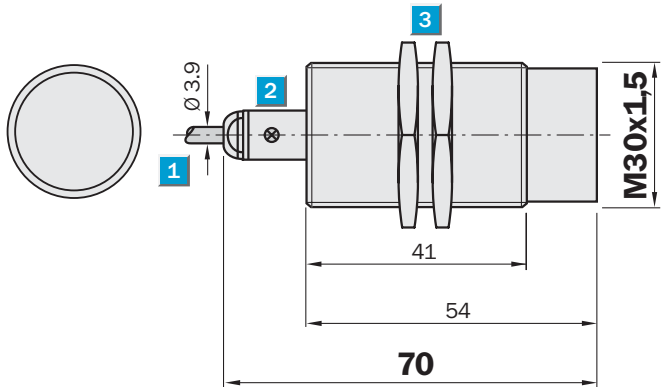
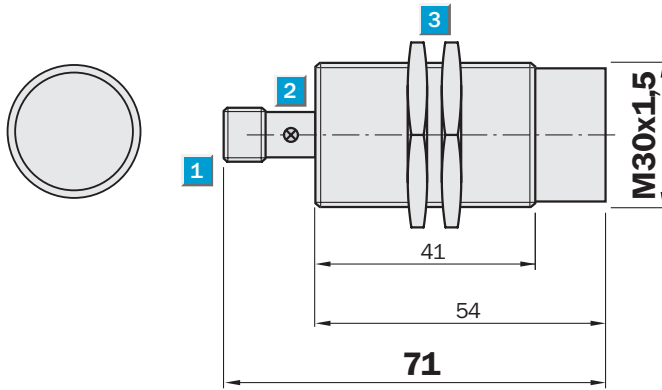
Type	Part Number
IME30-10BNOZCOK	1041010
IME30-10BNOZW2S	1041012
IME30-10BNSZC0S	1041006
IME30-10BNSZW2S	1041008
IME30-10BPOZC0S	1041002
IME30-10BPOZW2S	1041004
IME30-10BPSZC0S	1040998
IME30-10BPSZW2S	1041000

Sensing range
15 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

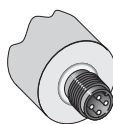


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

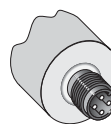
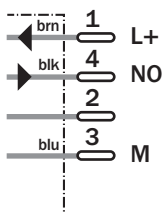


Connection type

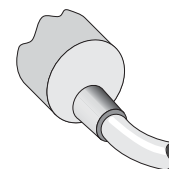
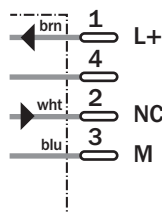
IME30-15NNSZC0S	IME30-15NNOZC0S	IME30-15NNOZW2S
IME30-15NPSZC0S	IME30-15NPOZC0S	IME30-15NNSZW2S
		IME30-15NPOZW2S
		IME30-15NPSZW2S



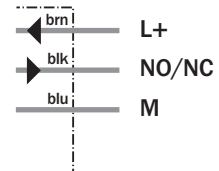
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	15NNO ZC0S	15NNO ZW2S	15NNS ZC0S	15NNS ZW2S	15NPO ZC0S	15NPO ZW2S	15NPS ZC0S	15NPS ZW2S		
Sensing range S_n	15 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

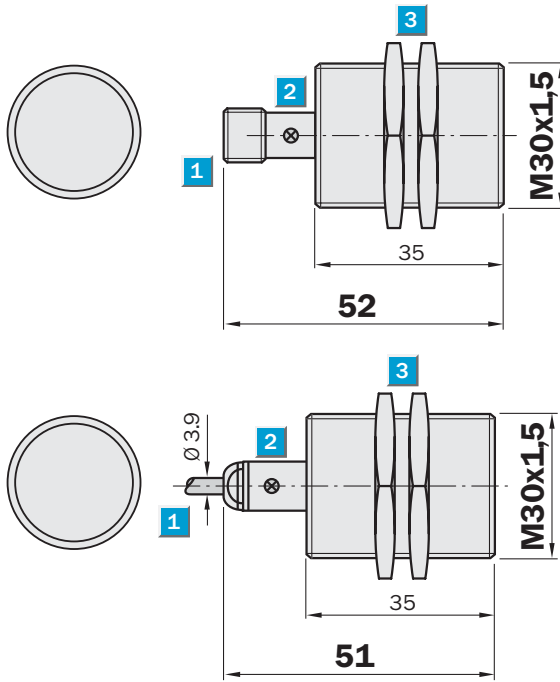
Type	Part Number
IME30-15NNOZC0S	1041026
IME30-15NNOZW2S	1041028
IME30-15NNSZC0S	1041022
IME30-15NNSZW2S	1041024
IME30-15NPOZC0S	1041018
IME30-15NPOZW2S	1041020
IME30-15NPSZC0S	1041014
IME30-15NPSZW2S	1041016

Sensing range
10 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

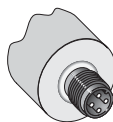


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

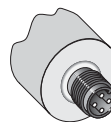
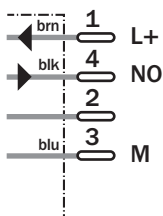


Connection type

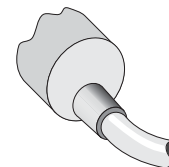
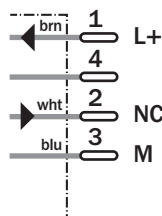
IME30-10BNSZCOK	IME30-10BNOZCOK	IME30-10BNOZW2K
IME30-10BPSZCOK	IME30-10BPOZCOK	IME30-10BNSZW2K
		IME30-10BPOZW2K
		IME30-10BPSZW2K



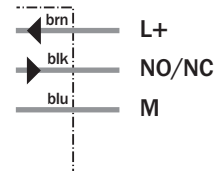
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	10BNO ZC0S	10BNO ZW2K	10BNS ZC0K	10BNS ZW2K	10BP0 ZC0K	10BP0 ZW2K	10BPS ZC0K	10BPS ZW2K		
Sensing range S_n	10 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

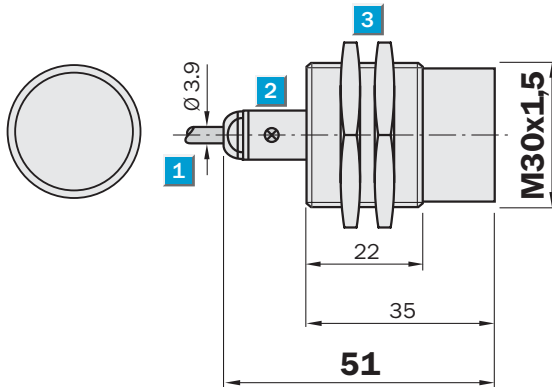
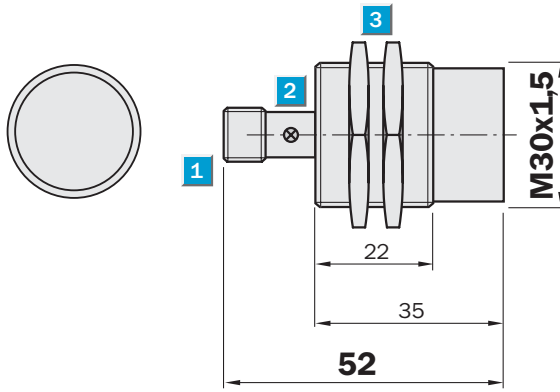
Type	Part Number
IME30-10BNOZC0S	1041009
IME30-10BNOZW2K	1041011
IME30-10BNSZC0K	1041005
IME30-10BNSZW2K	1041007
IME30-10BP0ZC0K	1041001
IME30-10BP0ZW2K	1041003
IME30-10BPSZC0K	1040997
IME30-10BPSZW2K	1040999

Sensing range
15 mm

Inductive sensor

- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

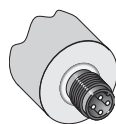


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

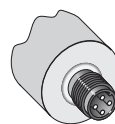
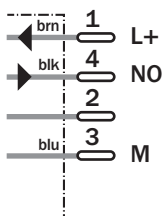


Connection type

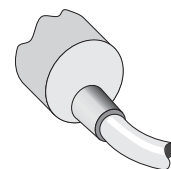
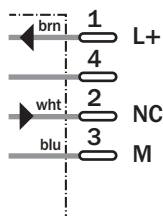
IME30-15NNSZCOK	IME30-15NNOZCOK	IME30-15NNOZW2K
IME30-15NPSZCOK	IME30-15NPOZCOK	IME30-15NNSZW2K
		IME30-15NPOZW2K
		IME30-15NPSZW2K



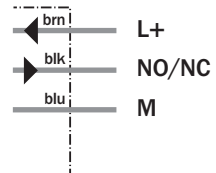
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	15NNO ZCOK	15NNO ZW2K	15NNS ZCOK	15NNS ZW2K	15NPO ZCOK	15NPO ZW2K	15NPS ZCOK	15NPS ZW2K		
Sensing range S_n	15 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

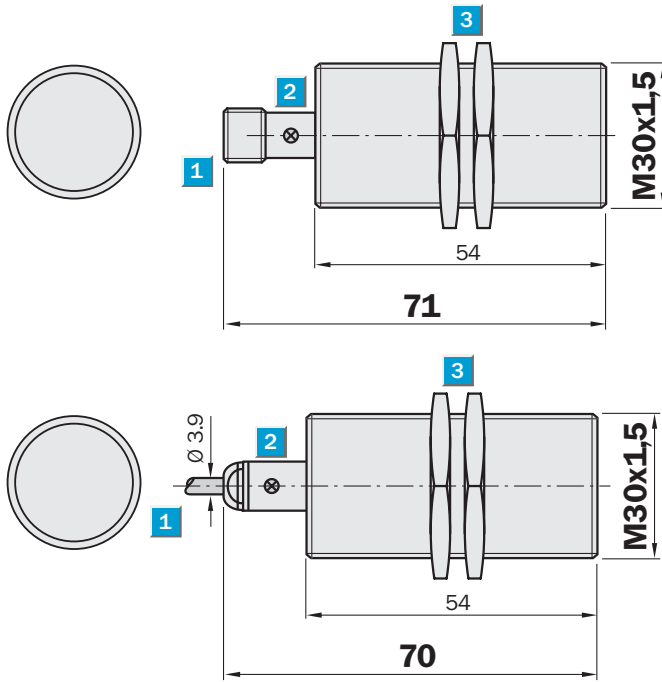
Type	Part Number
IME30-15NNOZCOK	1041025
IME30-15NNOZW2K	1041027
IME30-15NNSZCOK	1041021
IME30-15NNSZW2K	1041023
IME30-15NPOZCOK	1041017
IME30-15NPOZW2K	1041019
IME30-15NPSZCOK	1041013
IME30-15NPSZW2K	1041015

Sensing range
15 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
M30 x 1.5 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

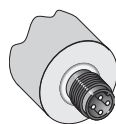


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

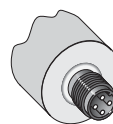
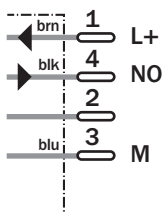


Connection type

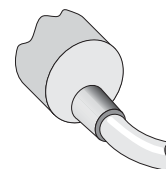
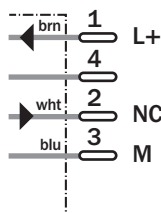
IME30-15BNSZC0S	IME30-15BNOZC0S	IME30-15BNOZW2S
IME30-15BPSZC0S	IME30-15BPOZC0S	IME30-15BNSZW2S
		IME30-15BPOZW2S
		IME30-15BPSZW2S



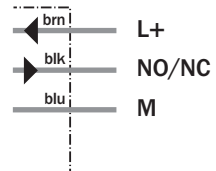
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	15BNO ZC0S	15BNO ZW2S	15BNS ZC0S	15BNS ZW2S	15BPO ZC0S	15BPO ZW2S	15BPS ZC0S	15BPS ZW2S		
Sensing range S_n	15 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	3 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

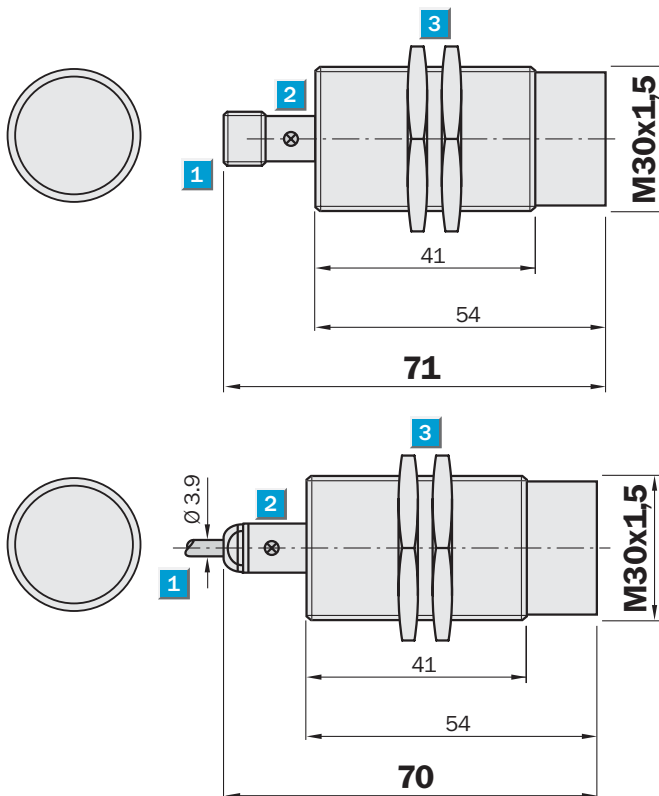
Type	Part Number
IME30-15BNOZC0S	1041042
IME30-15BNOZW2S	1041044
IME30-15BNSZC0S	1041038
IME30-15BNSZW2S	1041040
IME30-15BPOZC0S	1041034
IME30-15BPOZW2S	1041036
IME30-15BPSZC0S	1041030
IME30-15BPSZW2S	1041032

Sensing range
20 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
M30 x 1.5 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

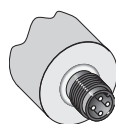


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

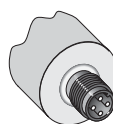
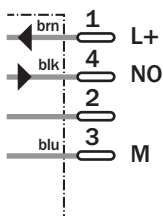


Connection type

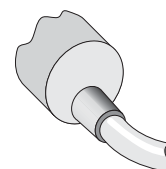
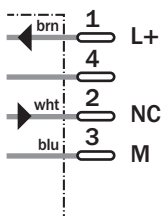
IME30-20NNSZC0S	IME30-20NNOZC0S	IME30-20NNOZW2S
IME30-20NPSZC0S	IME30-20NPOZC0S	IME30-20NNSZW2S
		IME30-20NPOZW2S
		IME30-20NPSZW2S



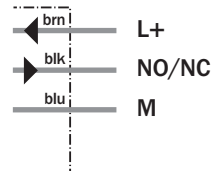
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	20NNO ZC0S	20NNO ZW2S	20NNS ZC0S	20NNS ZW2S	20NPO ZC0S	20NPO ZW2S	20NPS ZC0S	20NPS ZW2S		
Sensing range S_n	20 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	Typ. 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

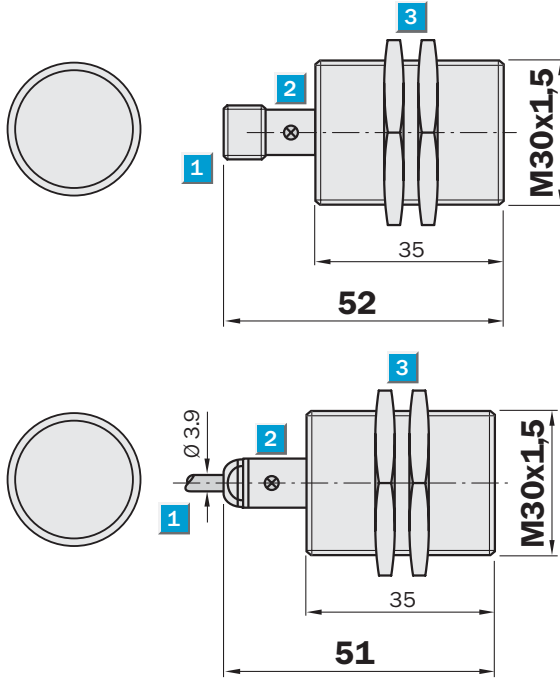
Type	Part Number
IME30-20NNOZC0S	1041058
IME30-20NNOZW2S	1041060
IME30-20NNSZC0S	1041054
IME30-20NNSZW2S	1041056
IME30-20NPOZC0S	1041050
IME30-20NPOZW2S	1041052
IME30-20NPSZC0S	1041046
IME30-20NPSZW2S	1041048

Sensing range
15 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

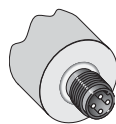


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

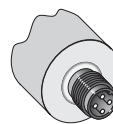
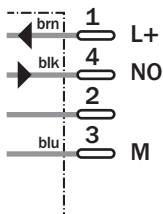


Connection type

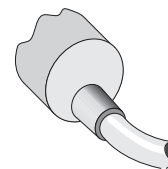
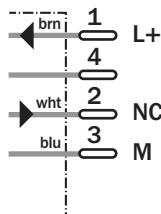
IME30-15BNSZCOK	IME30-15BNOZCOK	IME30-15BNOZW2K
IME30-15BPSZCOK	IME30-15BPOZCOK	IME30-15BNSZW2K
		IME30-15BPOZW2K
		IME30-15BPSZW2K



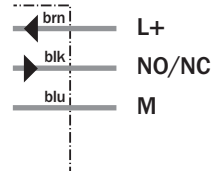
M12, 4-pin



M12, 4-pin



3 x 0.15 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	15BNOZCOK	15BNOZW2K	15BNSZCOK	15BNSZW2K	15BP0ZCOK	15BP0ZW2K	15BPSZCOK	15BPSZW2K		
Sensing range S_n	15 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	3 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

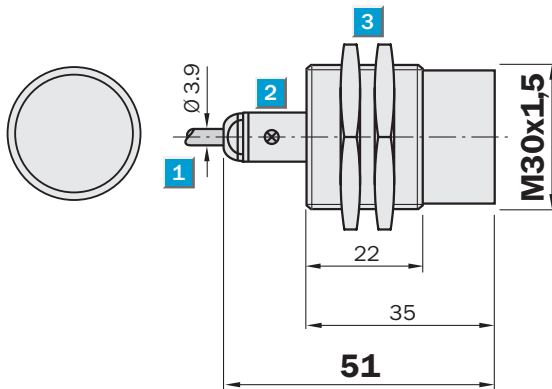
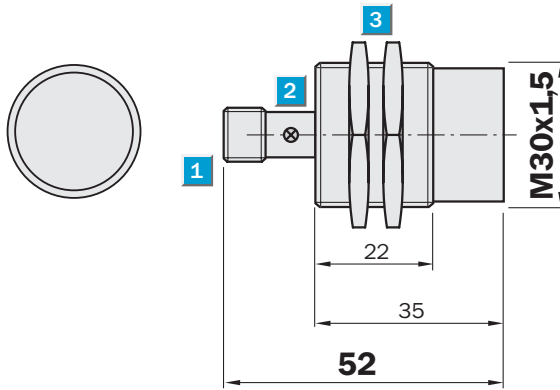
Type	Part Number
IME30-15BNOZCOK	1041041
IME30-15BNOZW2K	1041043
IME30-15BNSZCOK	1041037
IME30-15BNSZW2K	1041039
IME30-15BP0ZCOK	1041033
IME30-15BP0ZW2K	1041035
IME30-15BPSZCOK	1041029
IME30-15BPSZW2K	1041031

Sensing range
20 mm

Inductive sensor

- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread
M30 x 1.5 mm
- Enclosure rating IP 67
- Installation non-flush

Dimensional drawing

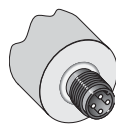


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

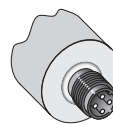
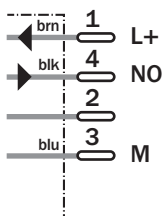


Connection type

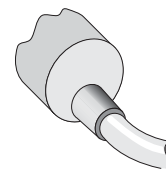
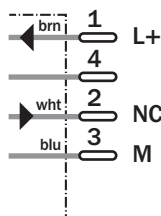
IME30-20NNSZCOK	IME30-20NNOZCOK	IME30-20NNOZW2K
IME30-20NPSZCOK	IME30-20NPOZCOK	IME30-20NNSZW2K
		IME30-20NPOZW2K
		IME30-20NPSZW2K



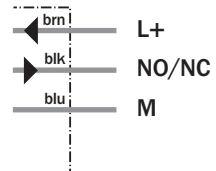
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	20NNO ZCOK	20NNO ZW2K	20NNS ZCOK	20NNS ZW2K	20NPO ZCOK	20NPO ZW2K	20NPS ZCOK	20NPS ZW2K		
Sensing range S_n	20 mm											
Electrical configuration	DC3-wire											
Supply voltage V_s	DC 10 ... 30 V											
Nominal voltage V_n	DC											
Ripple U_{pp}	≤ 10 %											
Voltage drop U_d	≤ 2 V ¹⁾											
Power consumption	≤ 10 mA ²⁾											
Continuous current I_a	≤ 200 mA											
Time delay before availability t_v	≤ 125 ms											
Hysteresis H, of s_r	5 ... 15 %											
Repeatability R	≤ 2 % (U_b and T_a constant) ³⁾											
Temperature drift, of s_r	± 10 %											
EMC	According to EN 60947-5-2											
Switching output	NPN											
	PNP											
Output function	Normally closed											
	Normally open											
Installation	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 Hz											
Dimensions	M30 x 1.5 ⁵⁾											
Short-circuit protection	✓ ⁶⁾											
Reverse polarity protection	✓											
Power-up pulse suppression	✓											
Shock/vibration stress	30 g, 11 ms/10 ... 55 Hz, 1 mm											
Ambient temperature T_a	-25 °C ... +75 °C											
Housing material	Brass nickel-plated, plastic (PA6)											
Tightening torque	100 Nm											
Approvals												
Protection class	<input type="checkbox"/>											
UL approval	cULus Listed											

¹⁾ At I_a max
²⁾ Without load

³⁾ Of s_r
⁴⁾ According to EN 60529

⁵⁾ Thread diameter x pitch (mm)
⁶⁾ (Pulsed)

Reduction factor R_M

The following are reference values, which may vary from type to type:

St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

Ordering information

Type	Part Number
IME30-20NNOZCOK	1041057
IME30-20NNOZW2K	1041059
IME30-20NNSZCOK	1041053
IME30-20NNSZW2K	1041055
IME30-20NPOZCOK	1041049
IME30-20NPOZW2K	1041051
IME30-20NPSZCOK	1041045
IME30-20NPSZW2K	1041047

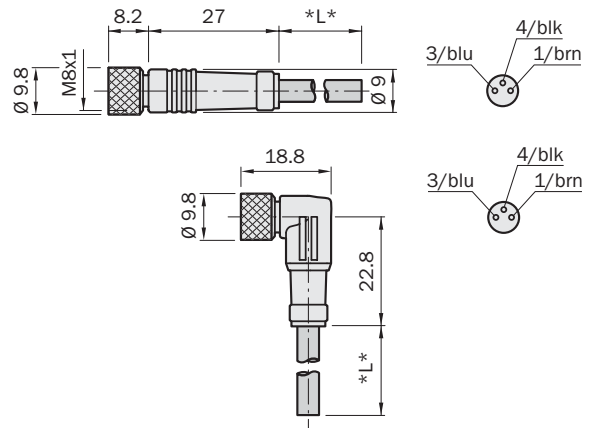
Connecting cables PVC

Round connectors

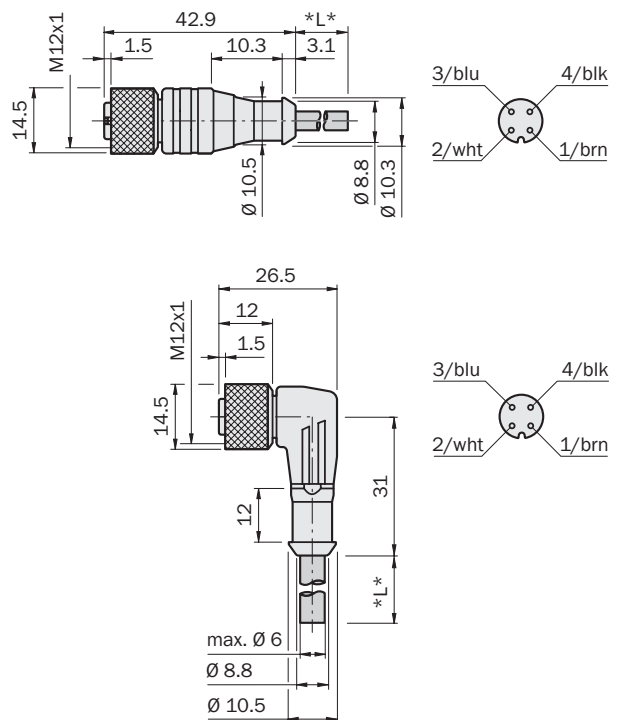
- Gold plated pins
- Self locking threaded
- Conditional resistance to chemicals and oils
- Especially suitable for use in assembly, packaging and production lines
- Enclosure rating IP 68 (M12)/IP 67 (M8) (only in fully locked position with its plugs)

Dimensional drawings

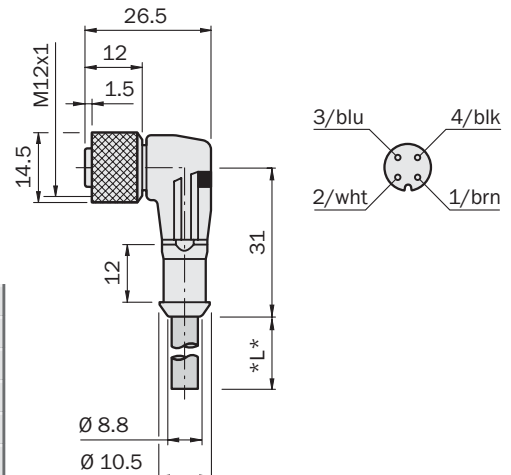
DOL-08...



DOL-12...



DOL-1204-L...



Contacts	Wire colour
1	brown
2	white
3	blue
4	black
5	grey

1) Minimum bend radius in dynamic use
 $R_{min} = 20 \times \text{cable diameter}$



(for M8-connector in preparation)

Technical data

Nominal voltage V_n	60 V AC/75 V DC (M8-connector)
	250 V AC/300 V DC (M12, 4-pin-connector)
	30 V AC/36 V DC (M12, 5-pin-connector)
	10 ... 30 V DC (M12, LED-indicator)
Contact resistance	≤ 5 mΩ
Nominal power	4 A (CSA = 3 A)
Testvoltage	2.0 kV eff./60 s. (M12, 4-pin-connector)
	1.5 kV eff./60 s. (M8-connector and M12, 5-pin)
Insulation group	C acc. VDE 0110
Insulation resistance	> 10 ⁹ Ω
Temperature range	In fixed position -40 °C ... +80 °C
	In flexible motion +5 °C ... +80 °C
Bending radius	> 10 x diameter of cable (in flexible motion)
	5 x diameter of cable (in fixed position)
Contact	CuZn, 0.3 μm gold plated
Locking nut	CuZn, brass nickeled
Cable	PVC, colour orange
Conductor diameter	3 x 0.34 mm ²
	4 x 0.25 mm ²
	5 x 0.5 mm ²
Connector	TPU, colour orange

Order information

Round connectors M8 connecting cable, PVC

Type	Order no.	Description	Contacts	Cable length [m]
DOL-0803-G02M	6010785	Female connector straight	3	2
DOL-0803-G05M	6022010	Female connector straight	3	5
DOL-0803-G10M	6022011	Female connector straight	3	10
DOL-0803-W02M	6008489	Female connector angled	3	2
DOL-0803-W05M	6022009	Female connector angled	3	5
DOL-0803-W10M	6022012	Female connector angled	3	10
DOL-0804-G02M	6009870	Female connector straight	4	2
DOL-0804-G05M	6009872	Female connector straight	4	5
DOL-0804-G10M	6010754	Female connector straight	4	10
DOL-0804-W02M	6009871	Female connector angled	4	2
DOL-0804-W05M	6009873	Female connector angled	4	5
DOL-0804-W10M	6010755	Female connector angled	4	10

Round connectors M12 connecting cable, PVC

Type	Order no.	Description	Contacts	Cable length [m]
DOL-1204-G02M	6009382	Female connector straight	4	2
DOL-1204-G05M	6009866	Female connector straight	4	5
DOL-1204-G10M	6010543	Female connector straight	4	10
DOL-1204-G15M	6010753	Female connector straight	4	15
DOL-1204-W02M	6009383	Female connector angled	4	2
DOL-1204-W05M	6009867	Female connector angled	4	5
DOL-1204-W10M	6010541	Female connector angled	4	10
DOL-1204-L02M	6027945	Female connector angled LED (PNP)	4	2
DOL-1204-L05M	6027944	Female connector angled LED (PNP)	4	5
DOL-1204-L10M	6027946	Female connector angled LED (PNP)	4	10
DOL-1205-G02M	6008899	Female connector straight	5	2
DOL-1205-G05M	6009868	Female connector straight	5	5
DOL-1205-G10M	6010544	Female connector straight	5	10
DOL-1205-W02M	6008900	Female connector angled	5	2
DOL-1205-W05M	6009869	Female connector angled	5	5
DOL-1205-W10M	6010542	Female connector angled	5	10
DOL-1205-G05MX	6010474	Female connector straight (shielded PIN 5)	5	5

Connecting cables PUR halogenfree

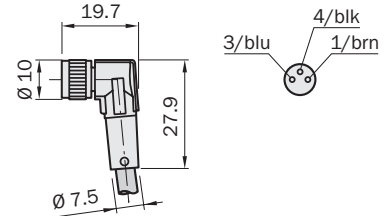
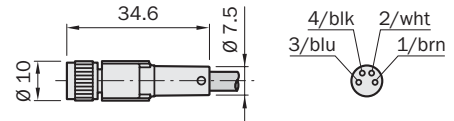
Round connectors

- Gold plated pins
- Halogenfree, PVC-free, silicone-free-cable
- Flame-retardant IEC 332-2
- Resisting to coolants and lubricants
- Suitable for use with drag chains
- Resistant against hydrolysis
- Enclosure rating IP 67 (M8)/IP 68 (M12) (only in fully locked position with its plugs)

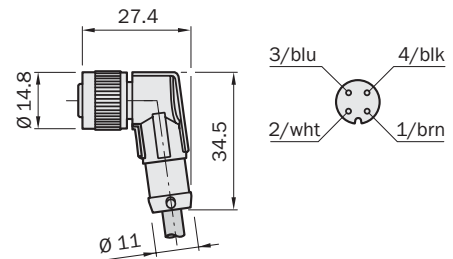
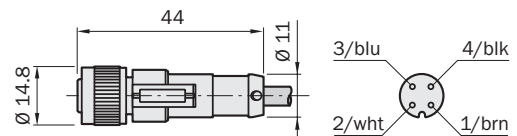


Dimensional drawings

DOL-08...



DOL-12...



Contacts	Wire colour
1	brown
2	white
3	blue
4	black
5	grey



1) Minimum bend radius in dynamic use
R_{min} = 20 x cable diameter

Technical data

Nominal voltage V_n	60 V AC/75 V DC (M8-connector)
	250 V AC/300 V DC (M12, 4-pin-connector)
	30 V AC/36 V DC (M12, 5-pin-connector)
Contact resistance	≤ 5 mΩ
Nominal power	4 A (CSA = 3 A)
Insulation group	C acc. VDE0110
Insulation resistance	> 10 ⁹ Ω
Temperature range	In fixed position -40 °C ... +80 °C
	In flexible motion -5 °C ... +80 °C
Bending radius	> 10 x diameter of cable
Guaranteed bending cycles	≤ 2 million (at bend radius r = 60 mm)
Max. allowed speed up	8.6 m/sec ²
Max. speed	90 m/min (for 2 m horizontal path)
Contact	CuZn, gold plated
Cable	Colour black, PUR halogenfree
Conductor diameter	3 x 0.25 mm ² (M8)
	4 x 0.25 mm ² (M8), 4 x 0.34 mm ² (M12)
	5 x 0.34 mm ²
Connector	Colour black, TPU

Order information

Round connectors M8 connecting cable PUR halogenfree

Type	Order no.	Description	Contacts	Cable length [m]
DOL-0803-G02MC	6025888	Female connector	straight 3	2
DOL-0803-G05MC	6025889	Female connector	straight 3	5
DOL-0803-G10MC	6025890	Female connector	straight 3	10
DOL-0803-W02MC	6025891	Female connector	angled 3	2
DOL-0803-W05MC	6025892	Female connector	angled 3	5
DOL-0803-W10MC	6025893	Female connector	angled 3	10
DOL-0804-G02MC	6025894	Female connector	straight 4	2
DOL-0804-G05MC	6025895	Female connector	straight 4	5
DOL-0804-G10MC	6025896	Female connector	straight 4	10
DOL-0804-W02MC	6025897	Female connector	angled 4	2
DOL-0804-W05MC	6025898	Female connector	angled 4	5
DOL-0804-W10MC	6025899	Female connector	angled 4	10

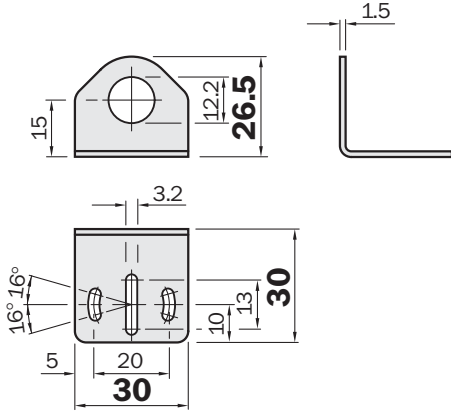
Round connectors M12 connecting cable PUR halogenfree

Type	Order no.	Description	Contacts	Cable length [m]
DOL-1204-G02MC	6025900	Female connector	straight 4	2
DOL-1204-G05MC	6025901	Female connector	straight 4	5
DOL-1204-G10MC	6025902	Female connector	straight 4	10
DOL-1204-W02MC	6025903	Female connector	angled 4	2
DOL-1204-W05MC	6025904	Female connector	angled 4	5
DOL-1204-W10MC	6025905	Female connector	angled 4	10
STL-1204-G02MC	6028077	Male connector	straight 4	2
DOL-1205-G02MC	6025906	Female connector	straight 5	2
DOL-1205-G05MC	6025907	Female connector	straight 5	5
DOL-1205-G10MC	6025908	Female connector	straight 5	10
DOL-1205-W02MC	6025909	Female connector	angled 5	2
DOL-1205-W05MC	6025910	Female connector	angled 5	5
DOL-1205-W10MC	6025911	Female connector	angled 5	10

Dimensional drawings and order information

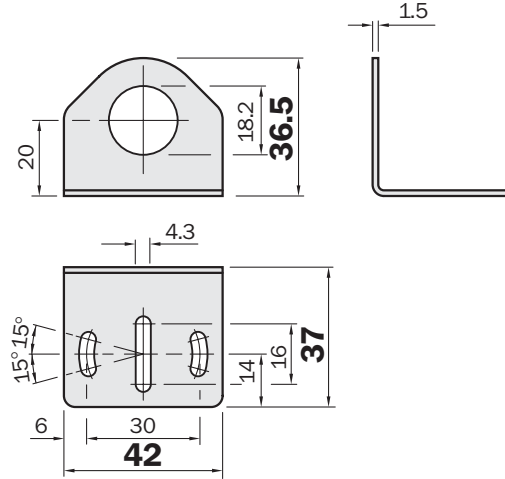
Mounting bracket for IME12

Type	Order no.
BEF-WN-M12	5308447



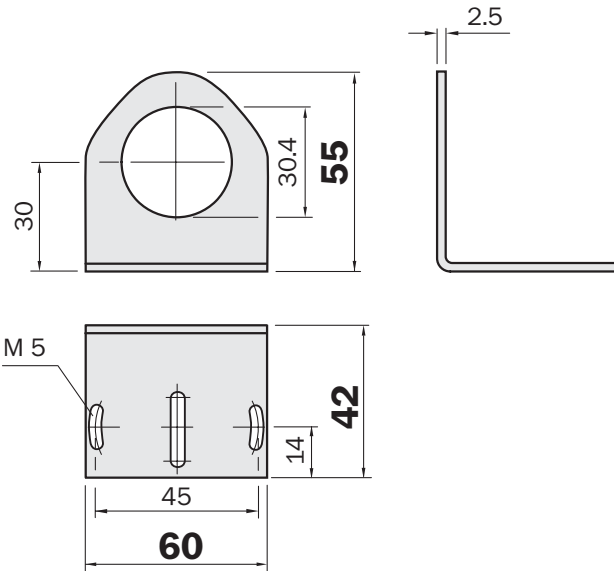
Mounting bracket for IME18

Type	Order no.
BEF-WN-M18	5308446



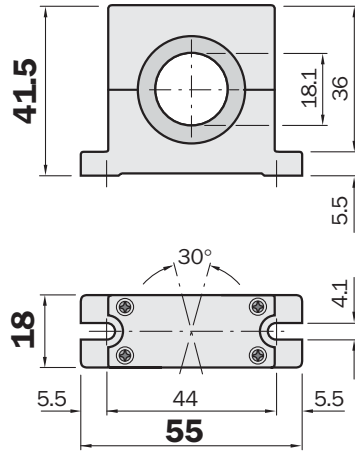
Mounting bracket for IME30

Type	Order no.
BEF-WN-M30	5308445



Mounting bracket for IME18

Type	Order no.
BEF-WN-M18-ST02	5312973



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