



Inductive sensors IME

Dependable for industrial applications

SICK
Sensor Intelligence.

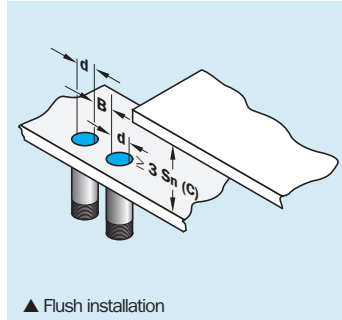
Installation notes

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

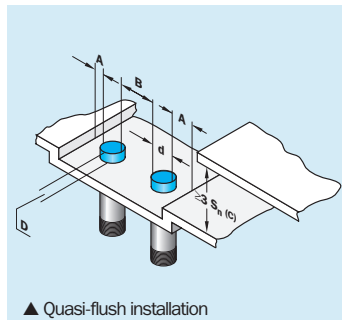
Type	Metal-free zone [mm]
IME08-1B5...	B = 8, C = 4,5
IME08-02B...	B = 16, C = 6
IME12-02B...	B = 12, C = 6
IME18-05B...	B = 18, C = 15
IHE30-10B...	B = 30, C = 30

d = Outer diameter of the sensor

Quasi-flush installation in metal

These sensors with increased sensing range cannot be totally flush-mounted in metal but can be quasi-flush mounted with the free zone specified.

General installation notes for cylindrical types, for quasi-flush installation in metal:



Advanced series

Type	Metal-free zone [mm]
IME12-04B...	A = 12, B = 24, C = 12, D = 1,2
IME18-08B...	A = 18, B = 36, C = 24, D = 1,8
IHE30-15B...	A = 30, B = 60, C = 45, D = 3,0

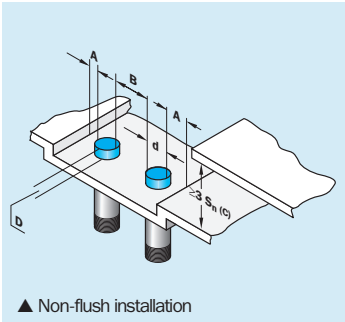
d = Outer diameter of the sensor

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:

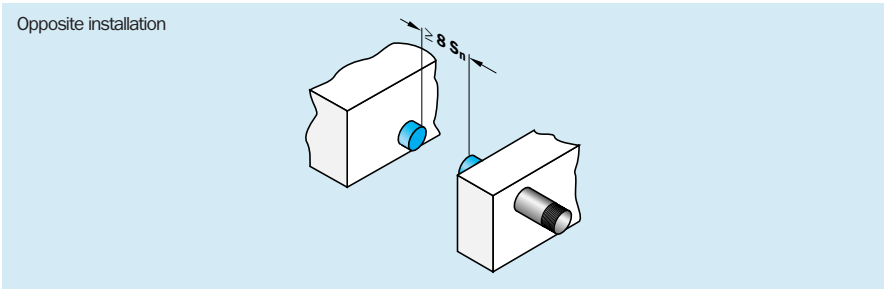


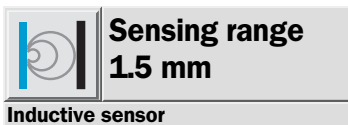
d = Outer diameter of the sensor

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
IHE30-15N...	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
IHE30-20N...	A = 30, B = 60, C = 60, D = 40

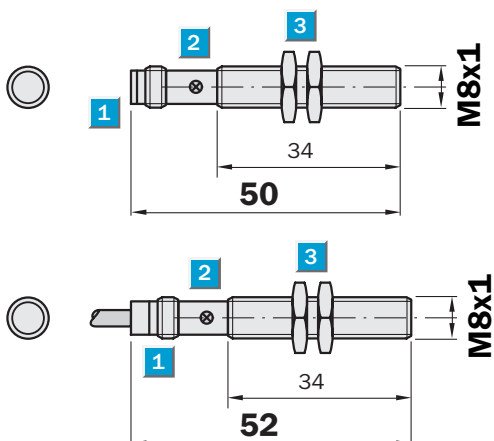
Non-flush installation in metal





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

Dimensional drawing

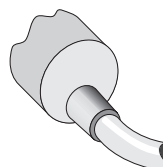
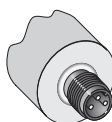


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



Connection type

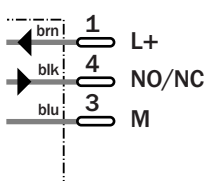
IME08-1B5NOZTOS	IME08-1B5NOZW2S
IME08-1B5NSZTOS	IME08-1B5NSZW2S
IME08-1B5POZTOS	IME08-1B5POZW2S
IME08-1B5PSZTOS	IME08-1B5PSZW2S



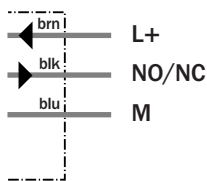
Accessories

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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

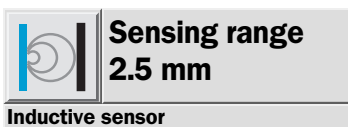
Reduction factor R_M

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

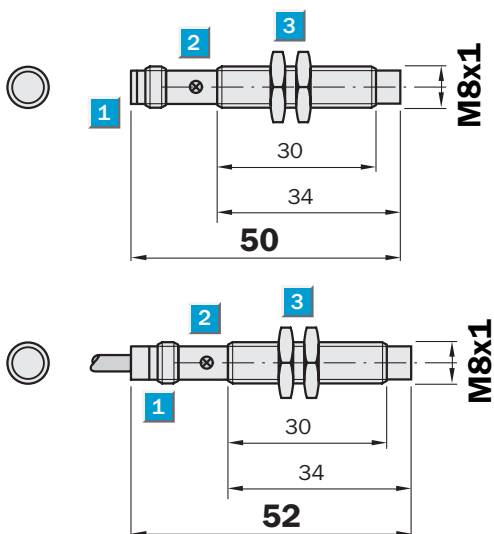
Ordering information

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



- 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

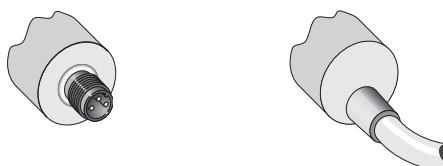


- 1** Connection
- 2** Display LED
- 3** Fastening nuts (2 x); width across 13, metal



Connection type

IME08-2N5NOZTOS	IME08-2N5NOZW2S
IME08-2N5NSZTOS	IME08-2N5NSZW2S
IME08-2N5POZTOS	IME08-2N5POZW2S
IME08-2N5PSZTOS	IME08-2N5PSZW2S

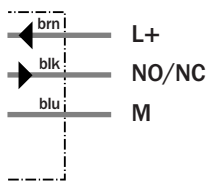
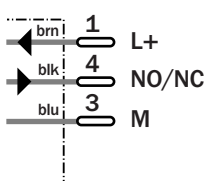


Accessories

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	$\leq 2 \text{ V}^{(1)}$											
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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

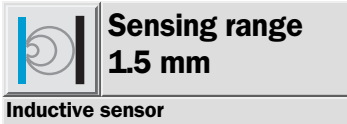
Reduction factor R_M

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

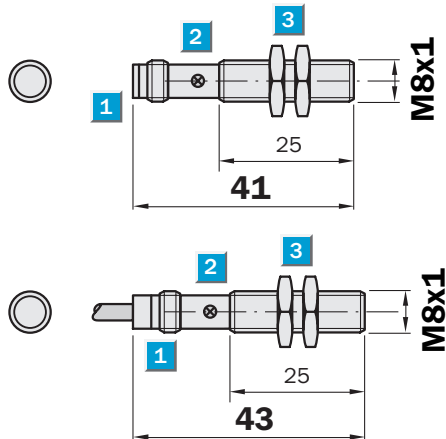
Ordering information

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



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

Dimensional drawing

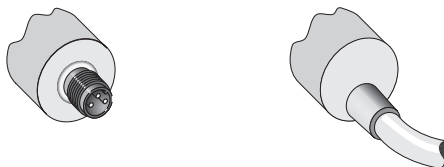


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



Connection type

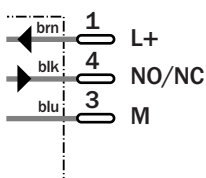
IME08-1B5NOZTOK	IME08-1B5NOZW2K
IME08-1B5NSZTOK	IME08-1B5NSZW2K
IME08-1B5POZTOK	IME08-1B5POZW2K
IME08-1B5PSZTOK	IME08-1B5PSZW2K



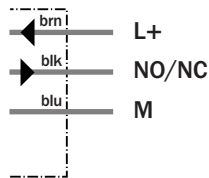
Accessories

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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

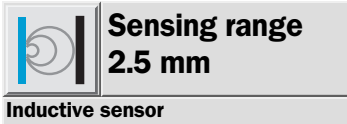
Reduction factor R_M

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

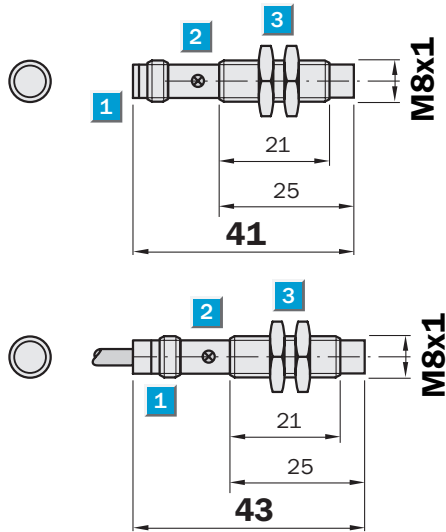
Ordering information

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



- 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

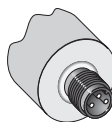


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

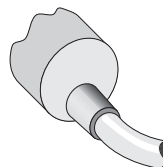


Connection type

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



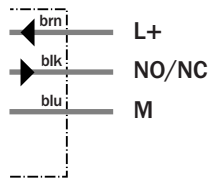
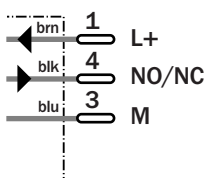
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	2N5N OZT0K	2N5NO ZW2K	2N5NS ZT0K	2N5NS ZW2K	2N5PO ZT0K	2N5PO ZW2K	2N5PS ZT0K	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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

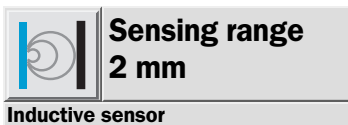
Reduction factor R_M

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Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

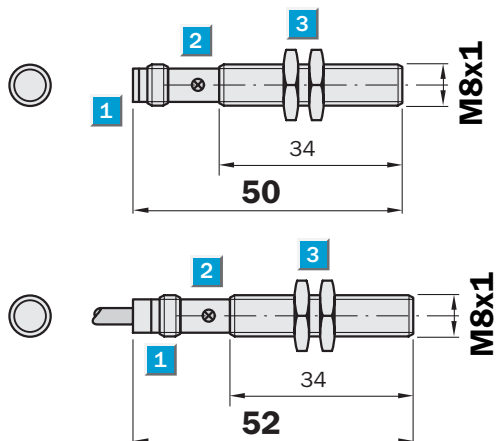
Ordering information

Type	Part Number
IME08-2N5NOZT0K	1040865
IME08-2N5NOZW2K	1040867
IME08-2N5NSZT0K	1040861
IME08-2N5NSZW2K	1040863
IME08-2N5POZT0K	1040857
IME08-2N5POZW2K	1040859
IME08-2N5PSZT0K	1040853
IME08-2N5PSZW2K	1040855



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

Dimensional drawing



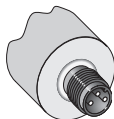
- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal



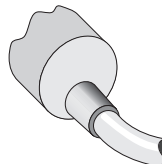
Connection type

IME08-02BNOZTOS
IME08-02BNSZTOS
IME08-02BPOZTOS
IME08-02BPSZTOS

IME08-02BNOZW2S
IME08-02BNSZW2S
IME08-02BPOZW2S
IME08-02BPSZW2S



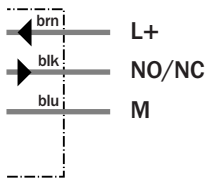
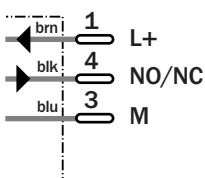
M8, 3-pin



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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

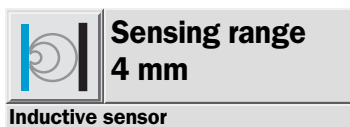
Reduction factor R_M

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

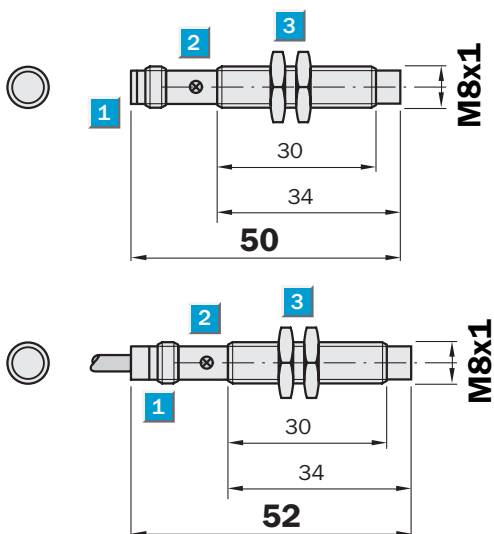
Ordering information

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



- 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

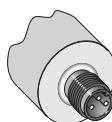


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

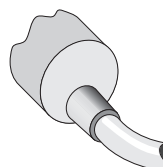


Connection type

IME08-04NNOZTOS	IME08-04NNOZW2S
IME08-04NNSZTOS	IME08-04NNSZW2S
IME08-04NPOZTOS	IME08-04NPOZW2S
IME08-04NPSZTOS	IME08-04NPSZW2S



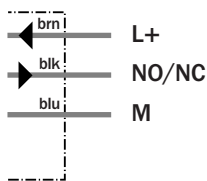
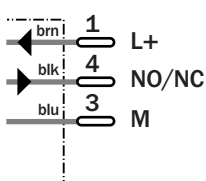
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	04NN OZT0S	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}	$\leq 10 \%$											
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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

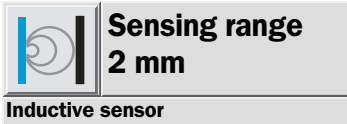
Reduction factor R_M

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

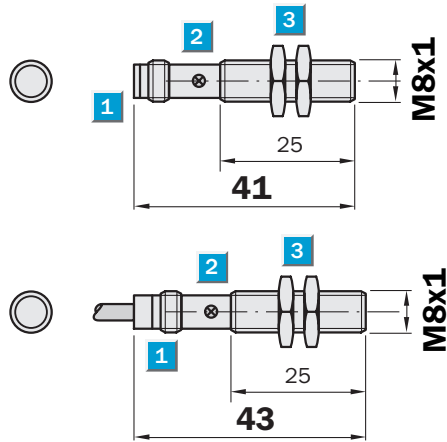
Ordering information

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



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

Dimensional drawing

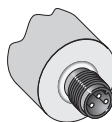


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

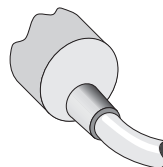


Connection type

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



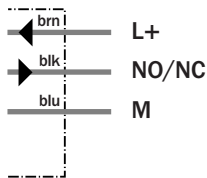
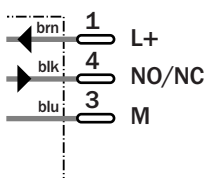
M8, 3-pin



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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

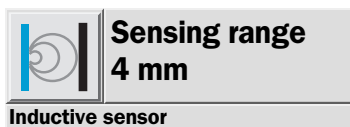
Reduction factor R_M

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

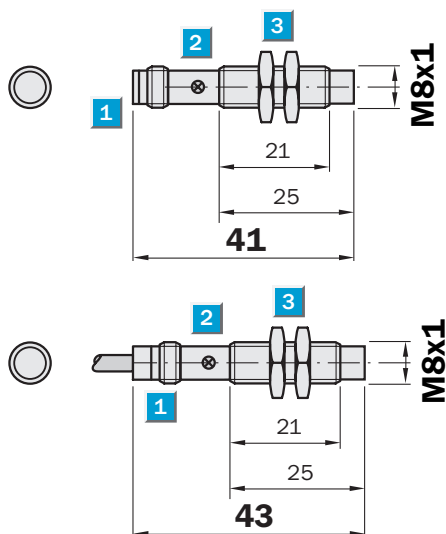
Ordering information

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



- 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

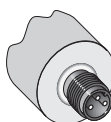


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 13, metal

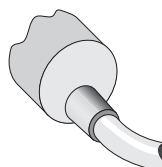


Connection type

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



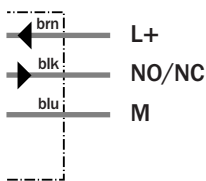
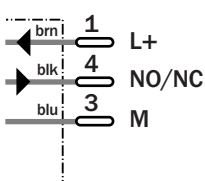
M8, 3-pin



3 x 0.14 mm²

Accessories

Connector, M8, 3-pin



Technical specifications		IME08-	04NN OZT0K	04NNO ZW2K	04NNS ZT0K	04NNS ZW2K	04NPO ZT0K	04NPO ZW2K	04NPS ZT0K	04NPS 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	$\leq 2 \text{ V}^{(1)}$											
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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	6 Nm											

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)

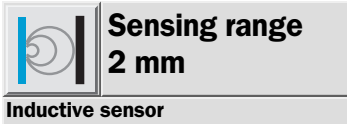
Reduction factor R_M

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

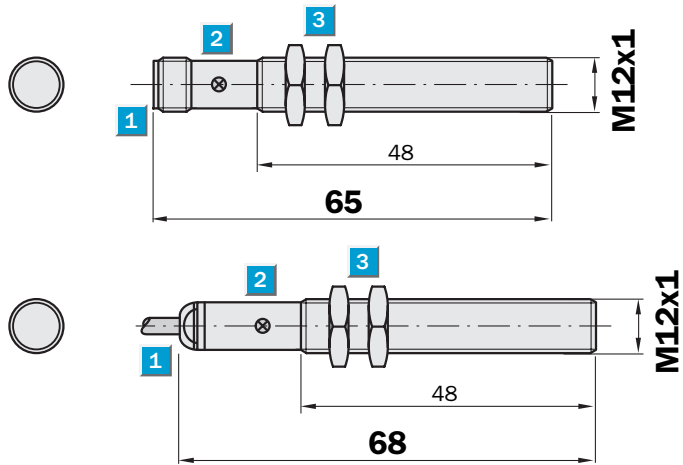
Ordering information

Type	Part Number
IME08-04NNOZT0K	1040897
IME08-04NNOZW2K	1040899
IME08-04NNSZT0K	1040893
IME08-04NNSZW2K	1040895
IME08-04NPOZT0K	1040889
IME08-04NPOZW2K	1040891
IME08-04NPSZT0K	1040885
IME08-04NPSZW2K	1040887



- 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

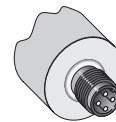
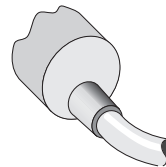
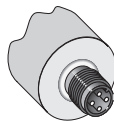


Connection type

IME12-02BNSZC0S
IME12-02BPSZC0S

IME12-02BNOZW2S
IME12-02BNSZW2S
IME12-02BPOZW2S
IME12-02BPSZW2S

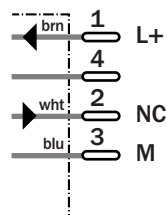
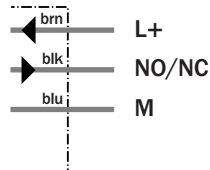
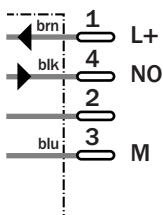
IME12-02BNOZC0S
IME12-02BPOZC0S



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME12-	02BNOZC0S	02BNOW2S	02BNSZC0S	02BNSZW2S	02BP0ZC0S	02BP0ZW2S	02BPSZC0S	02BPSZW2S		
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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

⁽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)

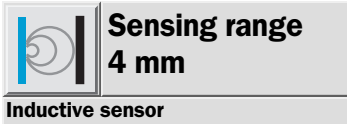
Reduction factor R_M

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

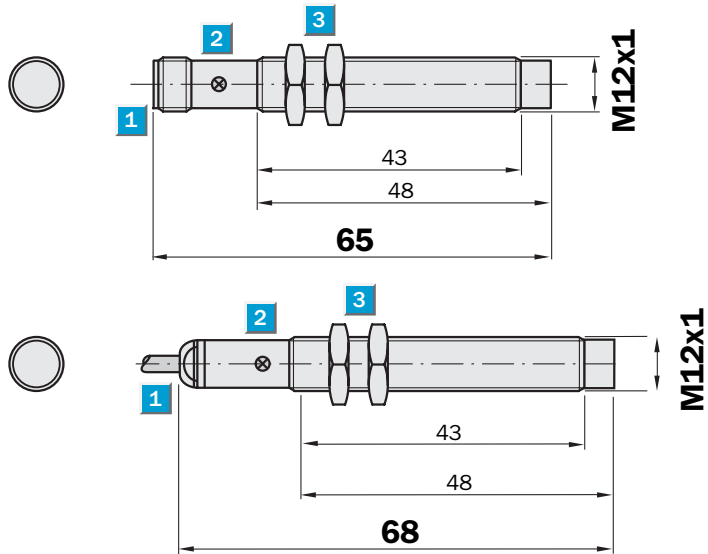
Ordering information

Type	Part Number
IME12-02BNOZC0S	1040743
IME12-02BNOW2S	1040746
IME12-02BNSZC0S	1040740
IME12-02BNSZW2S	1040742
IME12-02BP0ZC0S	1040736
IME12-02BP0ZW2S	1040738
IME12-02BPSZC0S	1040732
IME12-02BPSZW2S	1040734



- 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

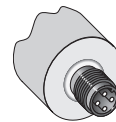
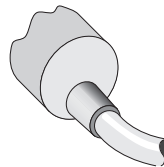
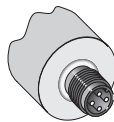


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal



Connection type

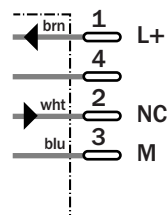
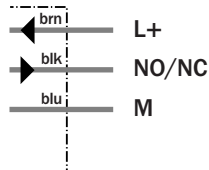
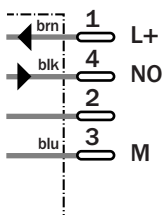
IME12-04NNSZC0S	IME12-04NNOZW2S	IME12-04NNOZC0S
IME12-04NPSZC0S	IME12-04NNSZW2S	IME12-04NPOZC0S
	IME12-04NPOZW2S	
	IME12-04NPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME12-	04NN OZC0S	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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

⁽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)

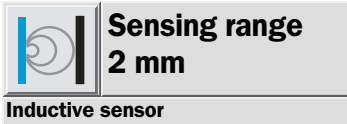
Reduction factor R_M

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

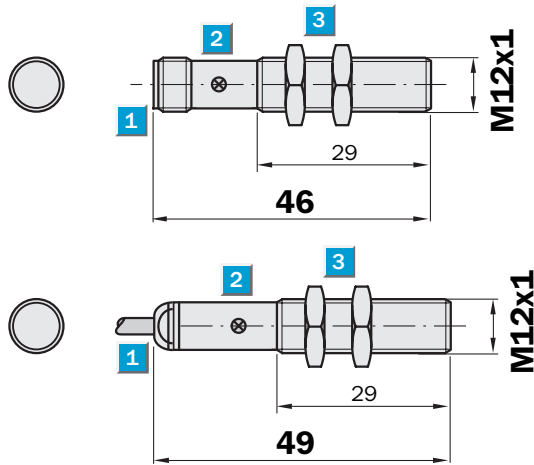
Ordering information

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



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

Dimensional drawing

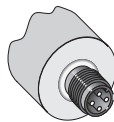


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

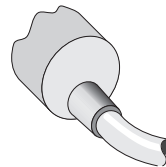
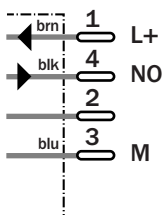


Connection type

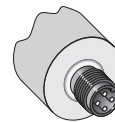
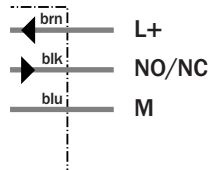
IME12-02BNSZCOK	IME12-02BNOZW2K	IME12-02BNOZCOK
IME12-02BPSZCOK	IME12-02BNSZW2K	IME12-02BPOZCOK
	IME12-02BPOZW2K	
	IME12-02BPSZW2K	



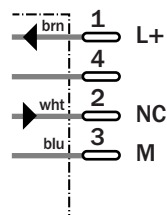
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME12-	02BNO ZCOK	02BNO ZW2K	02BNS ZCOK	02BNS ZW2K	02BPO ZCOK	02BPO ZW2K	02BPS ZCOK	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	$\leq 2 \%$ (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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

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)

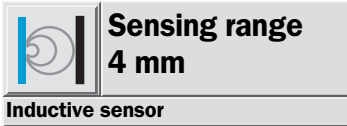
Reduction factor R_M

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

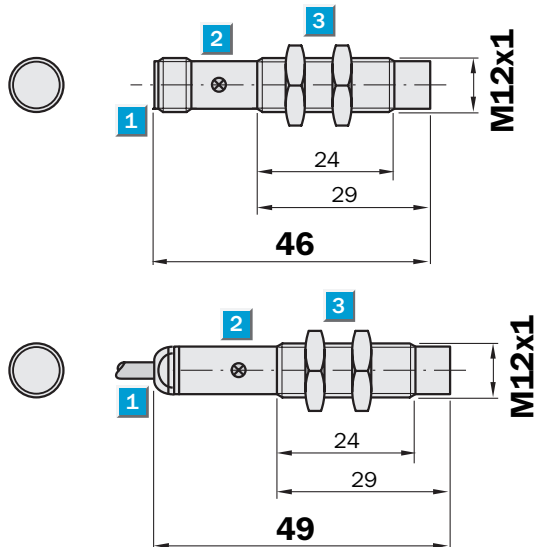
Ordering information

Type	Part Number
IME12-02BNOZCOK	1040744
IME12-02BNOZW2K	1040745
IME12-02BNSZCOK	1040739
IME12-02BNSZW2K	1040741
IME12-02BPOZCOK	1040735
IME12-02BPOZW2K	1040737
IME12-02BPSZCOK	1040731
IME12-02BPSZW2K	1040733



- 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

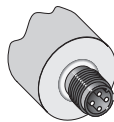


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

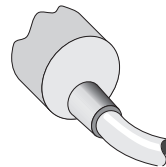
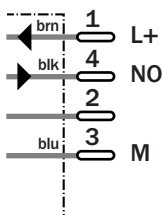


Connection type

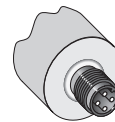
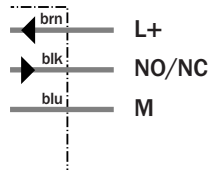
IME12-04NNSZCOK	IME12-04NNOZW2K	IME12-04NNOZCOK
IME12-04NPSZCOK	IME12-04NNSZW2K	IME12-04NPOZCOK
	IME12-04NPOZW2K	
	IME12-04NPSZW2K	



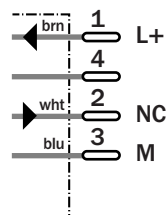
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME12-	04NNO ZC0K	04NNO ZW2K	04NNS ZC0K	04NNS ZW2K	04NPO ZC0K	04NPO ZW2K	04NPS ZC0K	04NPS 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	$\leq 2 \text{ V}^{(1)}$											
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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

⁽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)

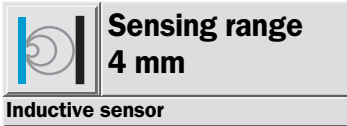
Reduction factor R_M

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

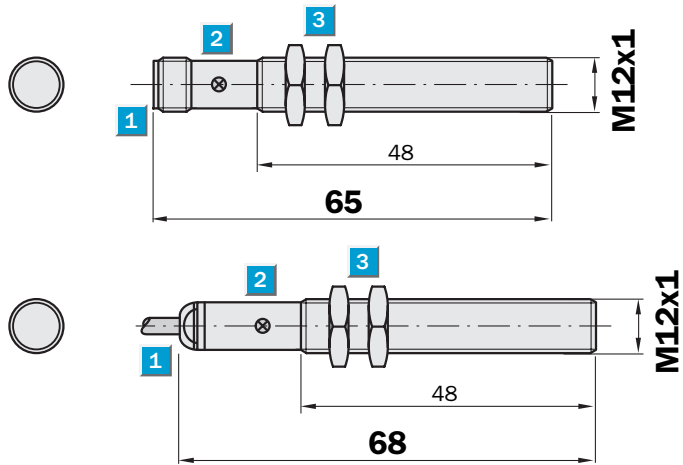
Ordering information

Type	Part Number
IME12-04NNOZC0K	1040759
IME12-04NNOZW2K	1040761
IME12-04NNSZC0K	1040755
IME12-04NNSZW2K	1040758
IME12-04NPOZC0K	1040751
IME12-04NPOZW2K	1040753
IME12-04NPSZC0K	1040747
IME12-04NPSZW2K	1040749



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

Dimensional drawing

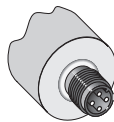


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

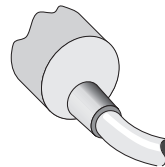
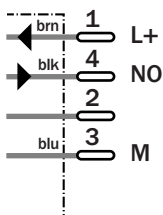


Connection type

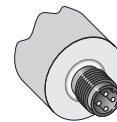
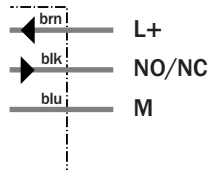
IME12-04BNSZC0S	IME12-04BN0ZW2S	IME12-04BN0ZC0S
IME12-04BPSZC0S	IME12-04BNSZW2S	IME12-04BPOZC0S
	IME12-04BPOZW2S	
	IME12-04BPSZW2S	



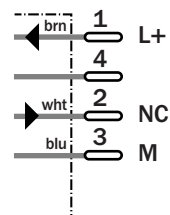
M12, 4-pin



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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁽⁴⁾											
Max. switching frequency	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

⁽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)

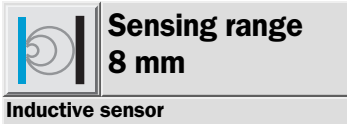
Reduction factor R_M

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

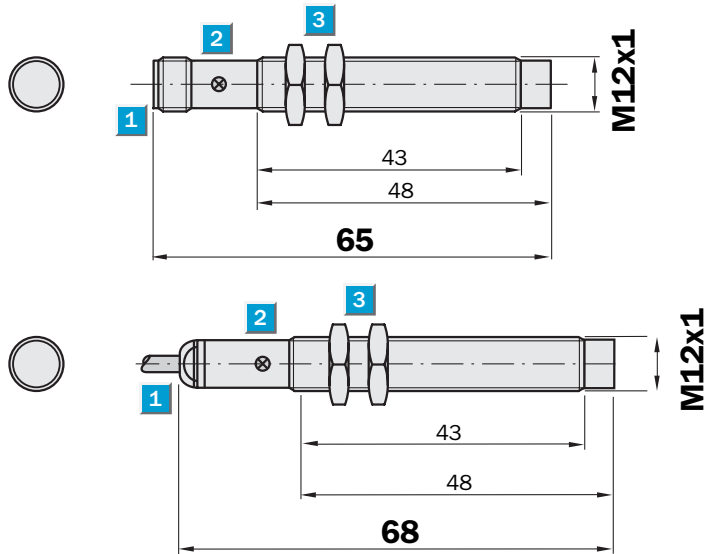
Ordering information

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



- 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

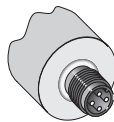


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

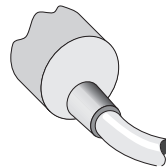
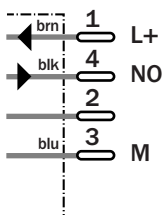


Connection type

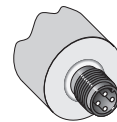
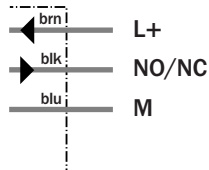
IME12-08NNSZC0S	IME12-08NNOZW2S	IME12-08NNOZC0S
IME12-08NPSZC0S	IME12-08NNSZW2S	IME12-08NPOZC0S
	IME12-08NPOZW2S	
	IME12-08NPSZW2S	



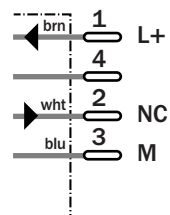
M12, 4-pin



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	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

⁽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)

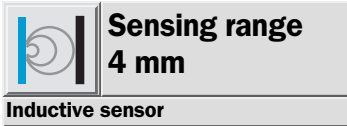
Reduction factor R_M

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

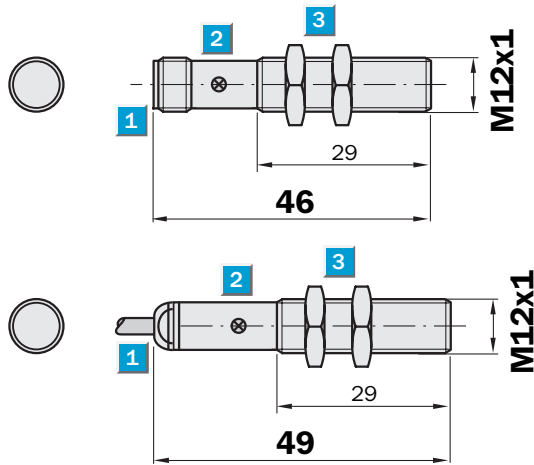
Ordering information

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



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

Dimensional drawing

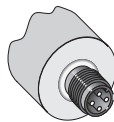


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

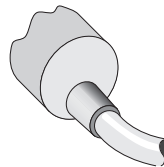
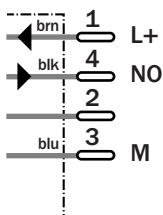


Connection type

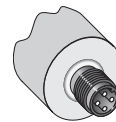
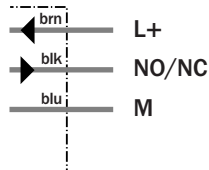
IME12-04BNSZCOK	IME12-04BNOZW2K	IME12-04BNOZCOK
IME12-04BPSZCOK	IME12-04BNSZW2K	IME12-04BPOZCOK
	IME12-04BPOZW2K	
	IME12-04BPSZW2K	



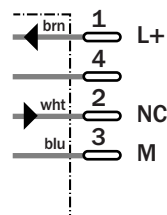
M12, 4-pin



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	$\leq 2 \text{ V}^{(1)}$											
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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	500 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

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)

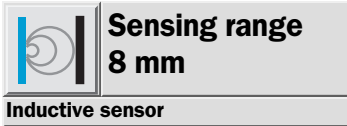
Reduction factor R_M

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

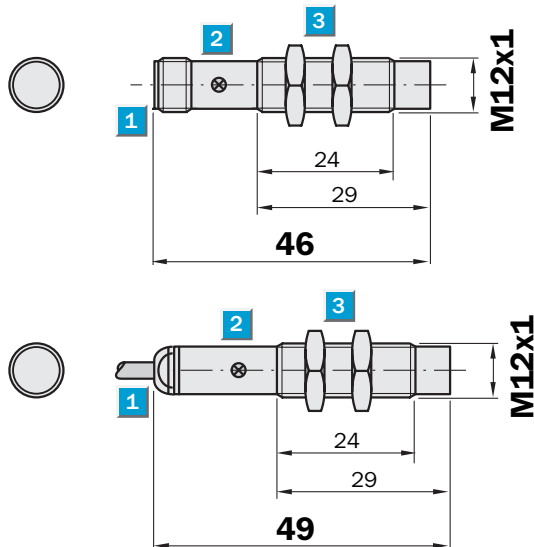
Ordering information

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



- 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

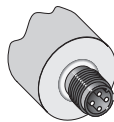


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 17, metal

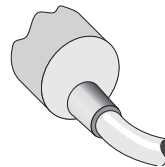
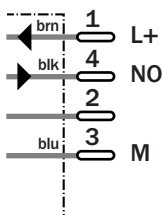


Connection type

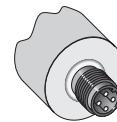
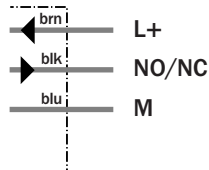
IME12-08NNSZCOK	IME12-08NNOZW2K	IME12-08NNOZCOK
IME12-08NPSZCOK	IME12-08NNSZW2K	IME12-08NPOZCOK
	IME12-08NPOZW2K	
	IME12-08NPSZW2K	



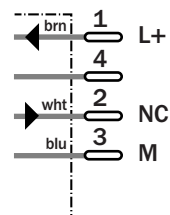
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME12-	08NNO ZC0K	08NNO ZW2K	08NNO ZW2K	08NNS ZW2K	08NPO ZC0K	08NPO ZW2K	08NPS ZC0K	08NPS ZW2K		
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	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	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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	13 Nm											

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)

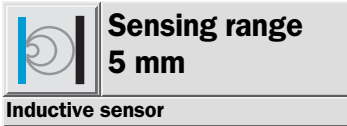
Reduction factor R_M

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

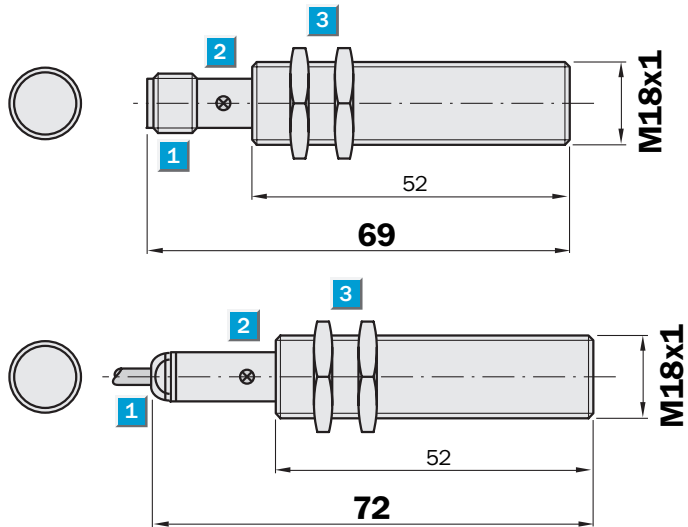
Ordering information

Type	Part Number
IME12-08NNOZC0K	1040791
IME12-08NNOZW2K	1040792
IME12-08NNOZW2K	1040787
IME12-08NNSZW2K	1040789
IME12-08NPOZC0K	1040783
IME12-08NPOZW2K	1040785
IME12-08NPSZC0K	1040779
IME12-08NPSZW2K	1040781



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

Dimensional drawing

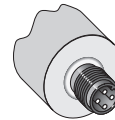
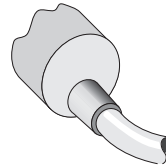
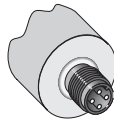


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal



Connection type

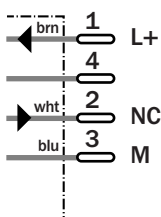
IME18-05BNOZC0S	IME18-05BNOZW2S	IME18-05BNSZC0S
IME18-05BPOZC0S	IME18-05BNSZW2S	IME18-05BPSZ0S
	IME18-05BPOZW2S	
	IME18-05BPSZW2S	



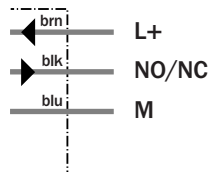
Accessories

Connector, M12, 4-pin
Mounting systems

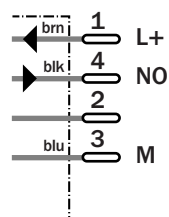
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Technical specifications		IME18-	05BNO ZC0S	05BNO ZW2S	05BNS ZC0S	05BNS ZW2S	05BPO ZC0S	05BPO ZW2S	05BPS Z0S	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}	$\leq 10 \%$											
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	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

⁽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)

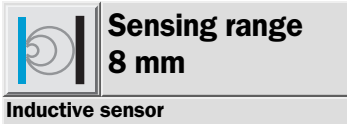
Reduction factor R_M

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

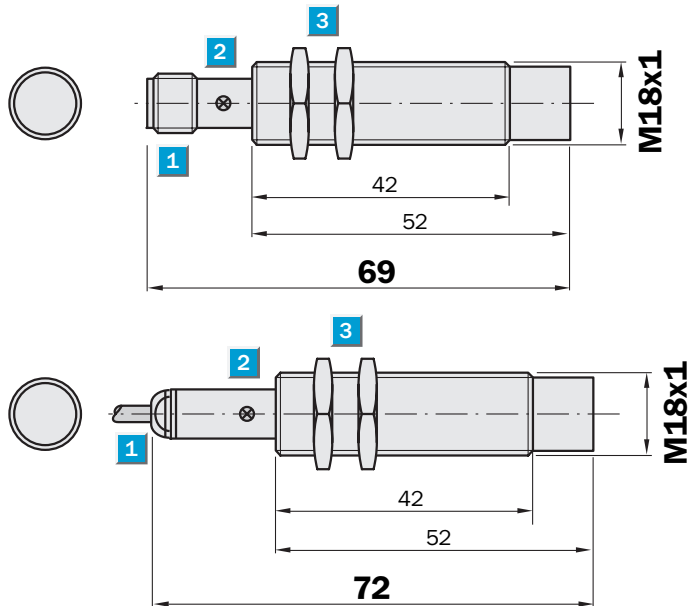
Ordering information

Type	Part Number
IME18-05BNOZC0S	1040946
IME18-05BNOZW2S	1040948
IME18-05BNSZC0S	1040942
IME18-05BNSZW2S	1040944
IME18-05BPOZC0S	1040938
IME18-05BPOZW2S	1040940
IME18-05BPSZ0S	1040934
IME18-05BPSZW2S	1040936



- 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

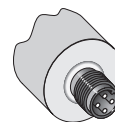
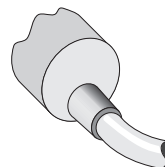
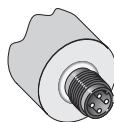


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal



Connection type

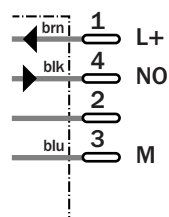
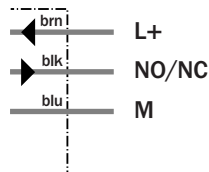
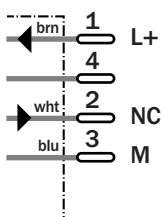
IME18-08NNOZC0S	IME18-08NNOZW2S	IME18-08NNSZC0S
IME18-08NPOZC0S	IME18-08NNSZW2S	IME18-08NPSZC0S
	IME18-08NPOZW2S	
	IME18-08NPSZW2S	



M12, 4-pin

3 x 0.25 mm²

M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME18-	08NN OZC0S	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}	$\leq 10 \%$											
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	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

⁽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)

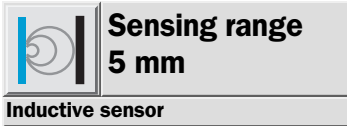
Reduction factor R_M

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

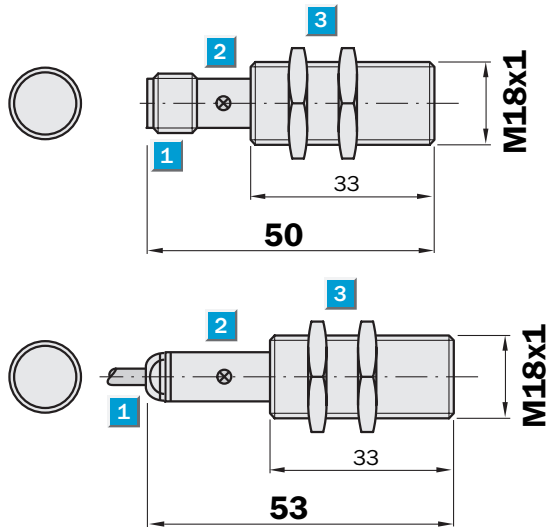
Ordering information

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



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

Dimensional drawing

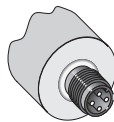


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

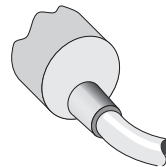
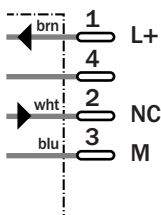


Connection type

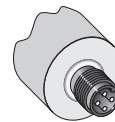
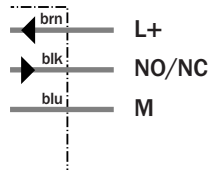
IME18-05BNOZCOK	IME18-05BNOZW2K	IME18-05BNSZCOK
IME18-05BPOZCOK	IME18-05BNSZW2K	IME18-05BPSZCOK
	IME18-05BPOZW2K	
	IME18-05BPSZW2K	



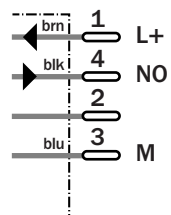
M12, 4-pin



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}	$\leq 10 \%$											
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	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

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)

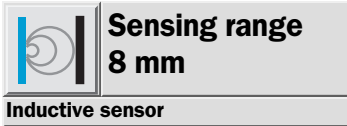
Reduction factor R_M

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

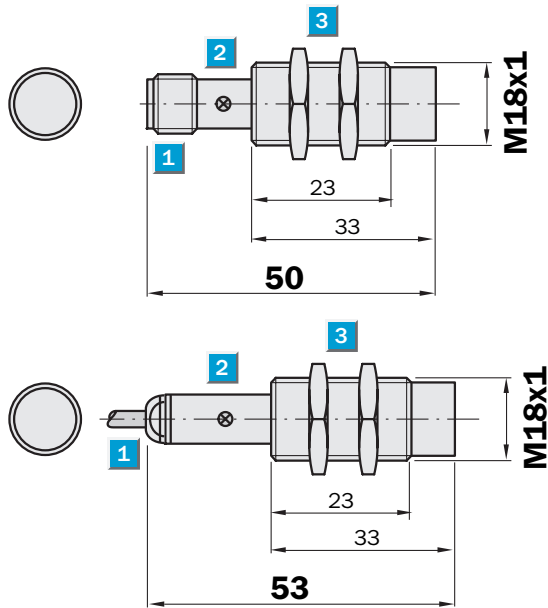
Ordering information

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



- 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

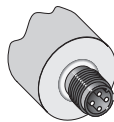


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

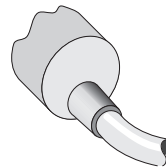
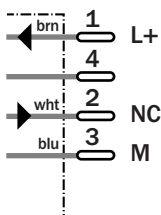


Connection type

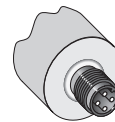
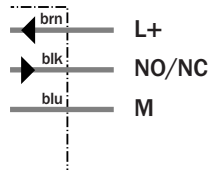
IME18-08NNOZCOK	IME18-08NNOZW2K	IME18-08NNSZCOK
IME18-08NPOZCOK	IME18-08NNSZW2K	IME18-08NPSZCOK
	IME18-08NPOZW2K	
	IME18-08NPSZW2K	



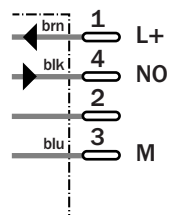
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME18-	08NN OZCOK	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}	$\leq 10 \%$											
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	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

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)

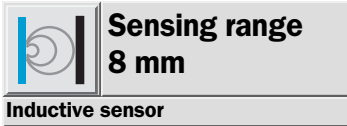
Reduction factor R_M

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

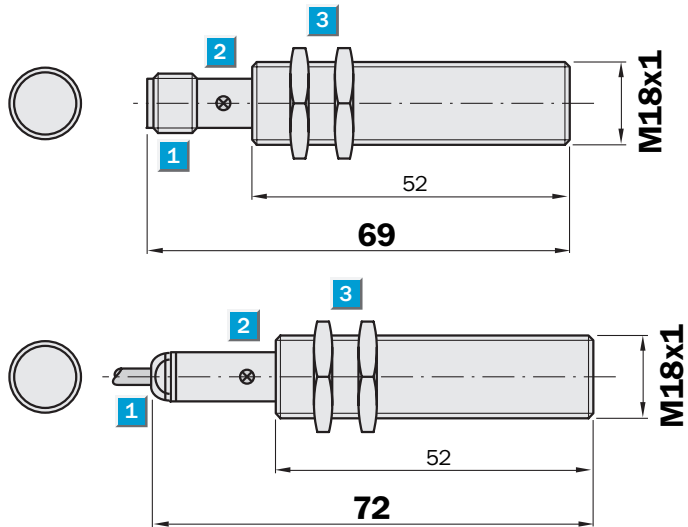
Ordering information

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



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

Dimensional drawing

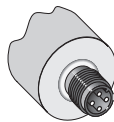


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

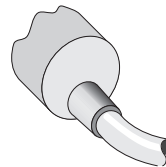
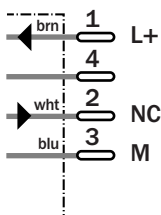


Connection type

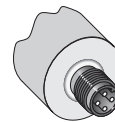
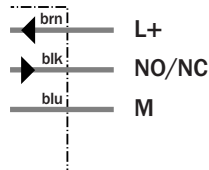
IME18-BNOZCOS	IME18-08BNOZW2S	IME18-08BNSZCOS
IME18-08BPOZCOS	IME18-08BNSZW2S	IME18-08BPSZCOS
	IME18-08BPOZW2S	
	IME18-08BPSZW2S	



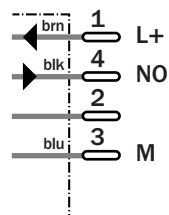
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME18-	BNOZC 0S	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}	$\leq 10 \%$											
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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁽⁴⁾											
Max. switching frequency	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

⁽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)

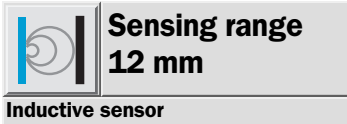
Reduction factor R_M

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

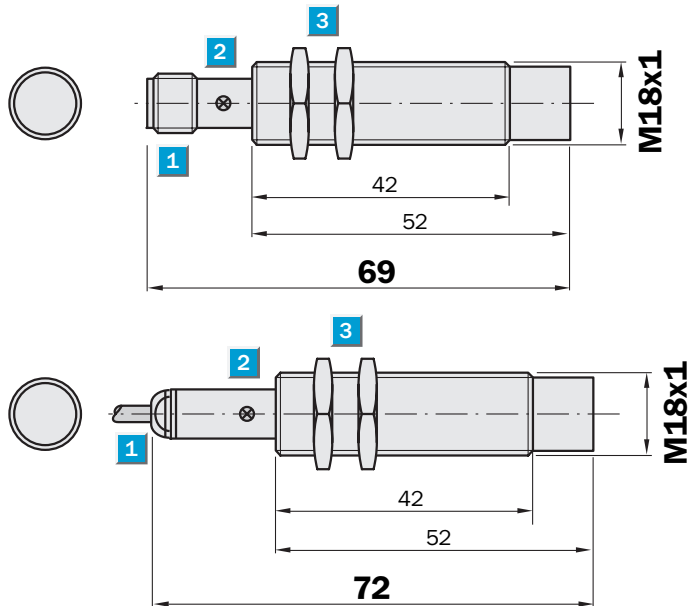
Ordering information

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



- 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

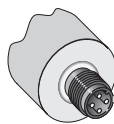


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

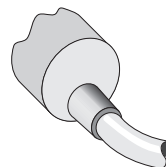
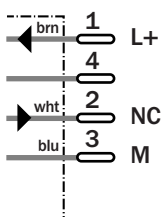


Connection type

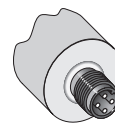
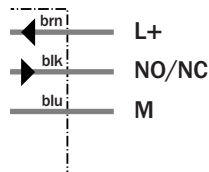
IME18-12NNOZC0S	IME18-12NNOZW2S	IME18-12NNSZC0S
IME18-12NPOZC0S	IME18-12NNSZW2S	IME18-12NPSZC0S
	IME18-12NPOZW2S	
	IME18-12NPSZW2S	



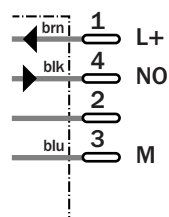
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME18-	12NN OZC0S	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}	$\leq 10 \%$											
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	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

⁽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)

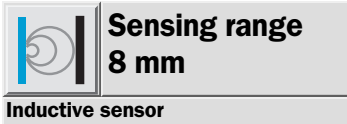
Reduction factor R_M

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

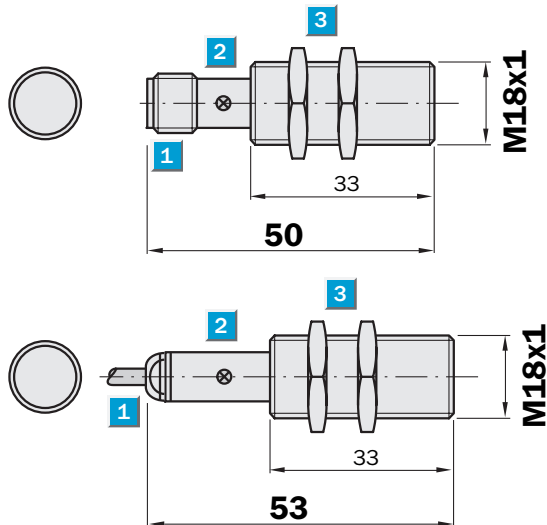
Ordering information

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



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

Dimensional drawing

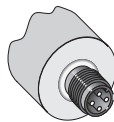


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

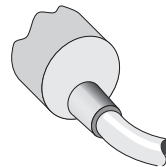
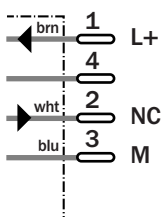


Connection type

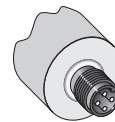
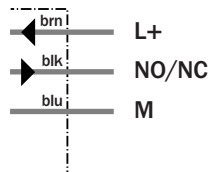
IME18-08BNOZCOK	IME18-08BNOZW2K	IME18-08BNSZCOK
IME18-08BPOZCOK	IME18-08BNSZW2K	IME18-08BPSZCOK
	IME18-08BPOZW2K	
	IME18-08BPSZW2K	



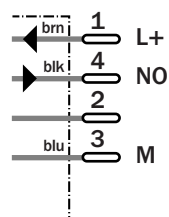
M12, 4-pin



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}	$\leq 10 \%$											
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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

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)

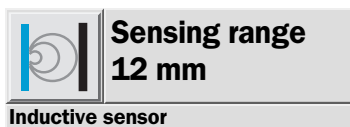
Reduction factor R_M

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

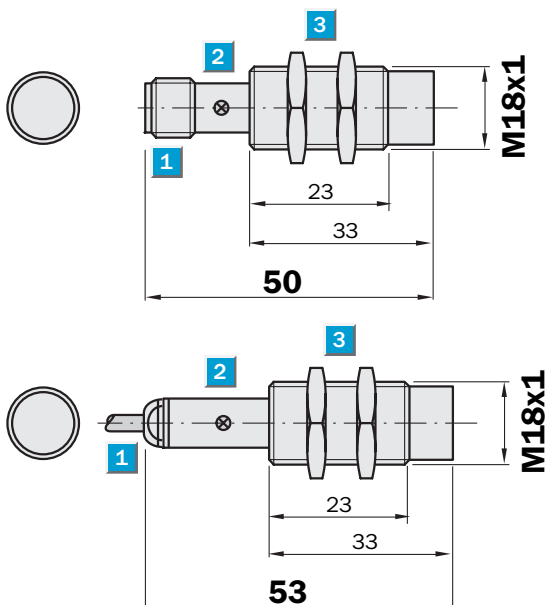
Ordering information

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



- 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

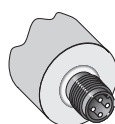


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 24, metal

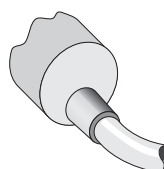
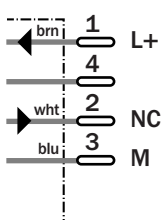


Connection type

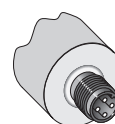
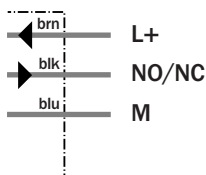
IME18-12NNOZCOK	IME18-12NNOZW2K	IME18-12NNSZCOK
IME18-12NPOZCOK	IME18-12NNSZW2K	IME18-12NPSZCOK
	IME18-12NPOZW2K	
	IME18-12NPSZW2K	



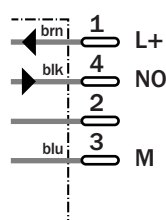
M12, 4-pin



3 x 0.25 mm²



M12, 4-pin



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME18-	12NN OZCOK	12NNO ZW2K	12NNS ZCOK	12NNS ZW2K	12NPO ZCOK	12NPO ZW2K	12NPS ZCOK	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}	$\leq 10 \%$											
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	Non-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁽⁴⁾											
Max. switching frequency	300 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	40 Nm											

⁽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)

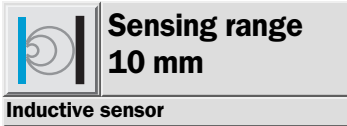
Reduction factor R_M

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

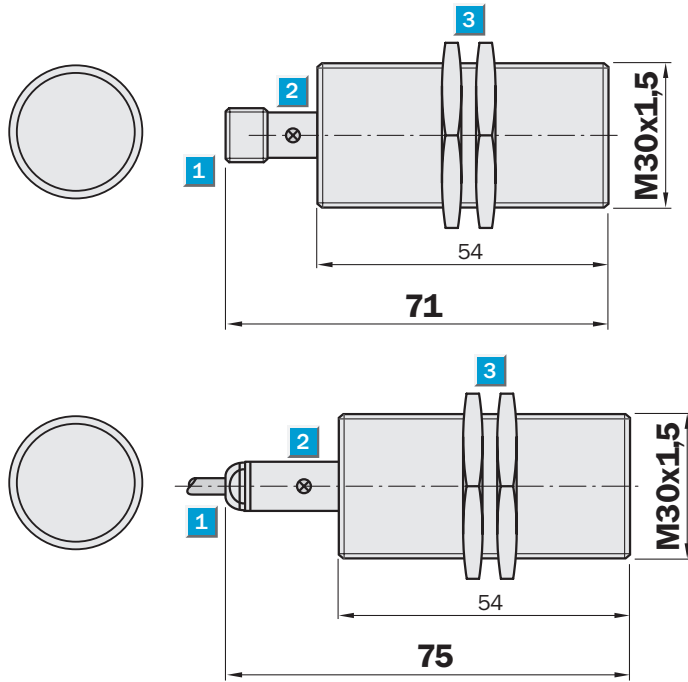
Ordering information

Type	Part Number
IME18-12NNOZCOK	1040993
IME18-12NNOZW2K	1040995
IME18-12NNSZCOK	1040989
IME18-12NNSZW2K	1040991
IME18-12NPOZCOK	1040985
IME18-12NPOZW2K	1040987
IME18-12NPSZCOK	1040981
IME18-12NPSZW2K	1040983



- 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

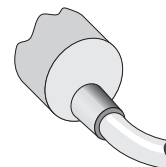
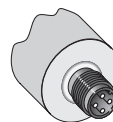
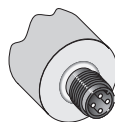


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

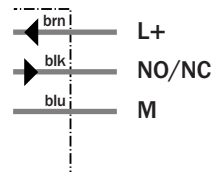
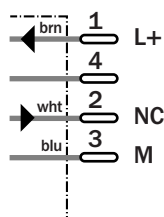
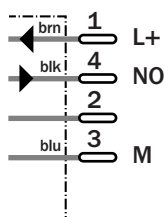
IME30-10BNSZC0S	IME30-10BNOZC0K	IME30-10BNOZW2S
IME30-10BPSZC0S	IME30-10BPOZC0S	IME30-10BNSZW2S
		IME30-10BPOZW2S
		IME30-10BPSZW2S



M12, 4-pin

M12, 4-pin

3 x 0.5 mm²



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME30-	10BNO ZC0K	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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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:

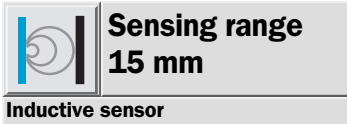
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

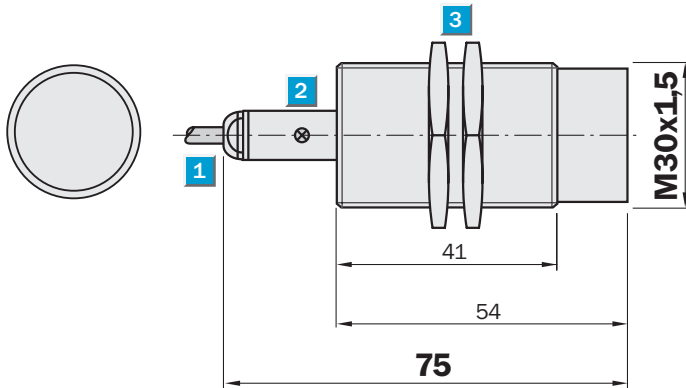
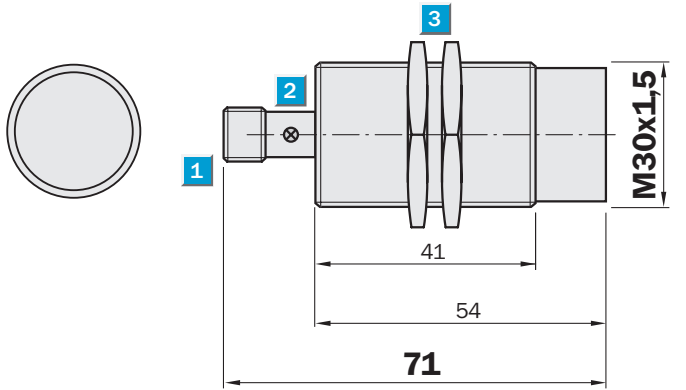
Ordering information

Type	Part Number
IME30-10BNOZC0K	1041010
IME30-10BNOZW2S	1041012
IME30-10BNSZC0S	1041006
IME30-10BNSZW2S	1041008
IME30-10BPOZC0S	1041002
IME30-10BPOZW2S	1041004
IME30-10BPSZC0S	1040998
IME30-10BPSZW2S	1041000



- 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

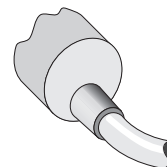
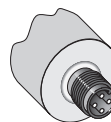
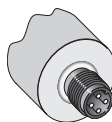


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

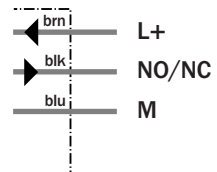
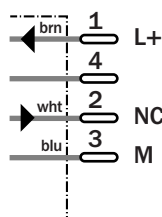
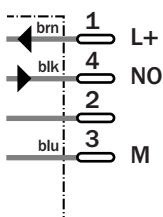
IME30-15NNSZC0S	IME30-15NNOZC0S	IME30-15NNOZW2S
IME30-15NPSZC0S	IME30-15NPOZC0S	IME30-15NNSZW2S
		IME30-15NPOZW2S
		IME30-15NPSZW2S



M12, 4-pin

M12, 4-pin

3 x 0.5 mm²



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME30-	15NN OZC0S	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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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:

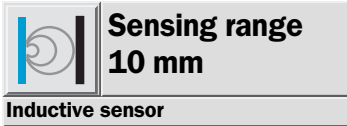
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

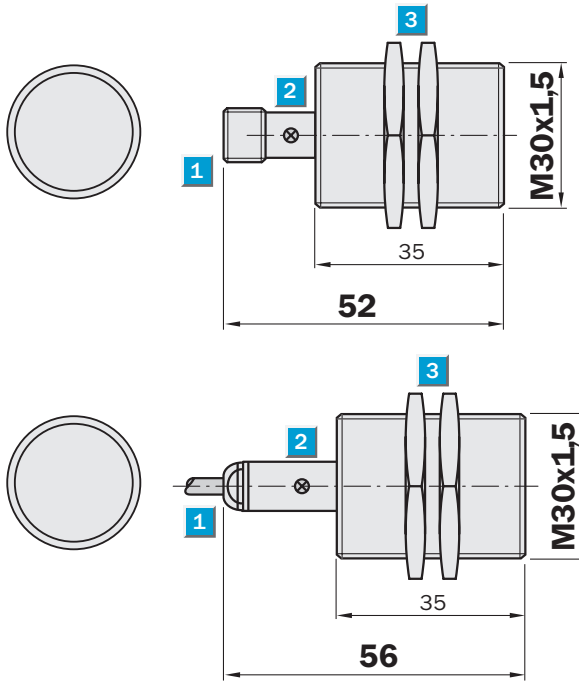
Ordering information

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

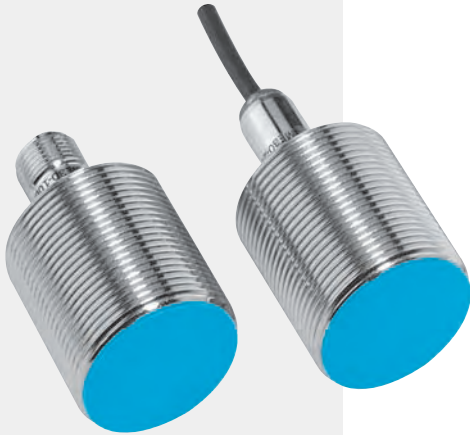


- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation flush

Dimensional drawing

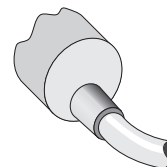
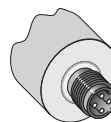
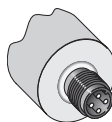


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

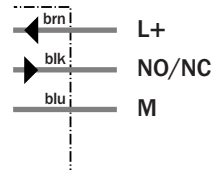
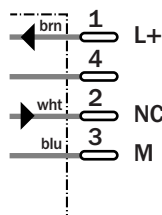
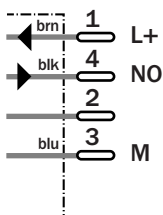
IME30-10BNSZCOK	IME30-10BNOZCOK	IME30-10BNOZW2K
IME30-10BPSZCOK	IME30-10BPOZCOK	IME30-10BNSZW2K
		IME30-10BPOZW2K
		IME30-10BPSZW2K



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	10BPO ZC0K	10BPO 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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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:

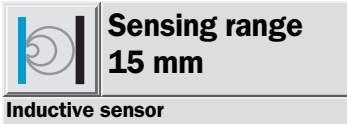
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

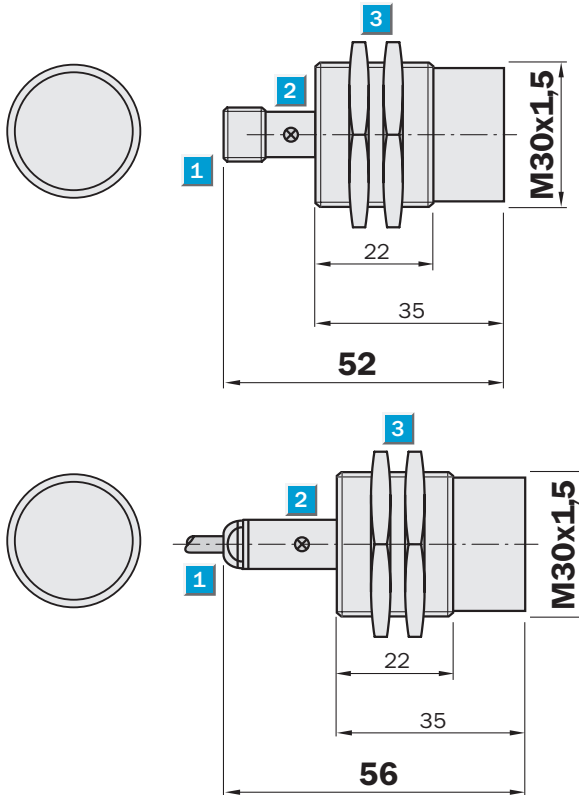
Ordering information

Type	Part Number
IME30-10BNOZC0S	1041009
IME30-10BNOZW2K	1041011
IME30-10BNSZC0K	1041005
IME30-10BNSZW2K	1041007
IME30-10BPOZC0K	1041001
IME30-10BPOZW2K	1041003
IME30-10BPSZC0K	1040997
IME30-10BPSZW2K	1040999



- 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

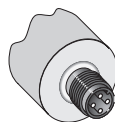


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal

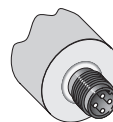
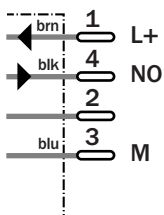


Connection type

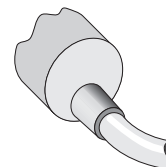
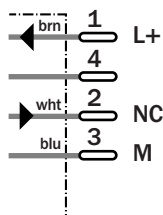
IME30-15NNSZCOK	IME30-15NNOZCOK	IME30-15NNOZW2K
IME30-15NPSZCOK	IME30-15NPOZCOK	IME30-15NNSZW2K
		IME30-15NPOZW2K
		IME30-15NPSZW2K



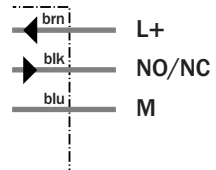
M12, 4-pin



M12, 4-pin



3 x 0.5 mm²



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME30-	15NN OZCOK	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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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:

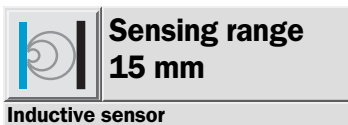
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

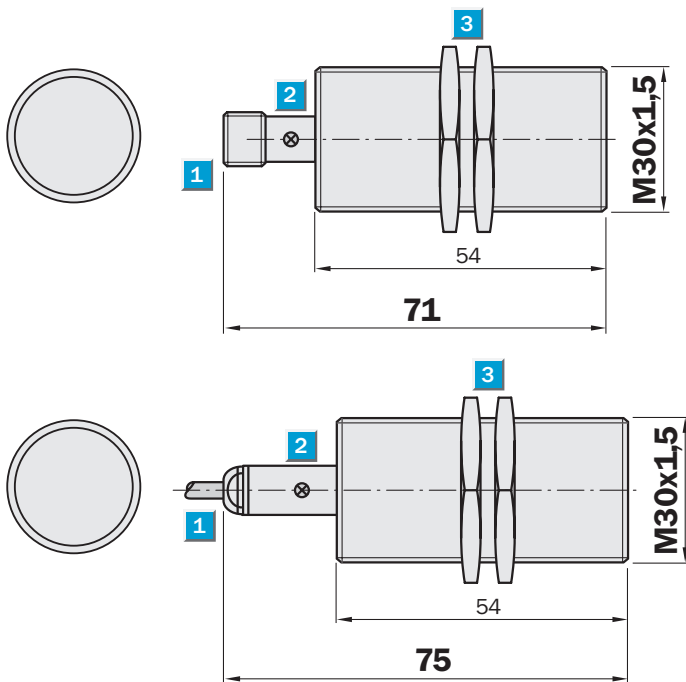
Ordering information

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



- 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 quasi-flush

Dimensional drawing

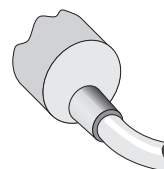
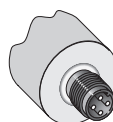
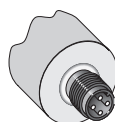


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

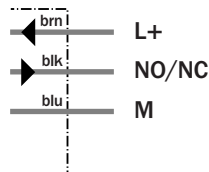
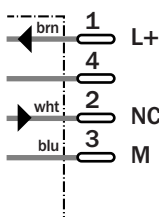
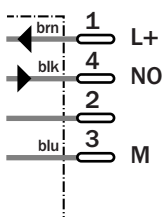
IME30-15BNSZC0S	IME30-15BNOZC0S	IME30-15BNOZW2S
IME30-15BPSZC0S	IME30-15BPOZC0S	IME30-15BNSZW2S
		IME30-15BPOZW2S
		IME30-15BPSZW2S



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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁽⁴⁾											
Max. switching frequency	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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:

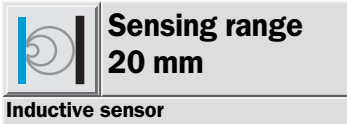
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

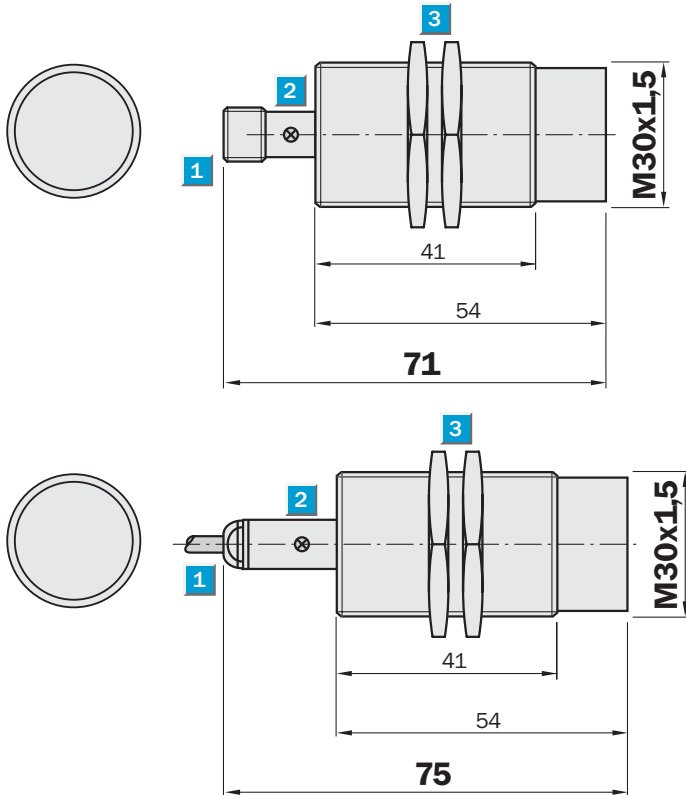
Ordering information

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



- 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

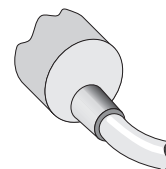
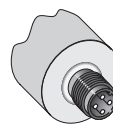
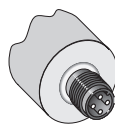


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

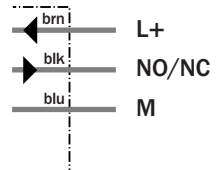
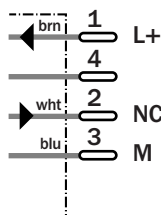
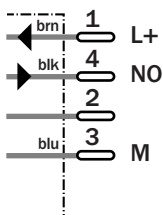
IME30-20NNSZC0S	IME30-20NNOZC0S	IME30-20NNOZW2S
IME30-20NPSZC0S	IME30-20NPOZC0S	IME30-20NNSZW2S
		IME30-20NPOZW2S
		IME30-20NPSZW2S



M12, 4-pin

M12, 4-pin

3 x 0.5 mm²



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME30-	20NN OZC0S	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}	$\leq 10 \%$											
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	$\leq 125 \text{ ms}$											
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, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

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:

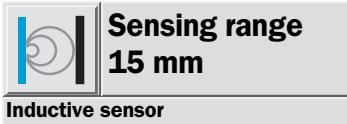
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

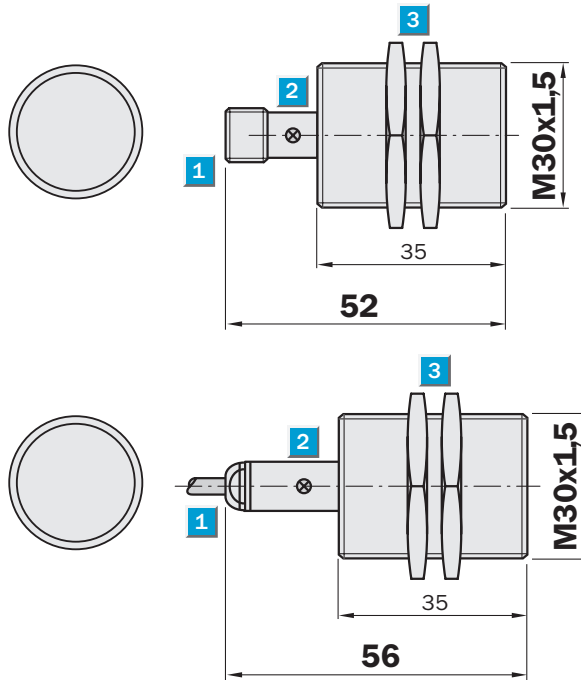
Ordering information

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

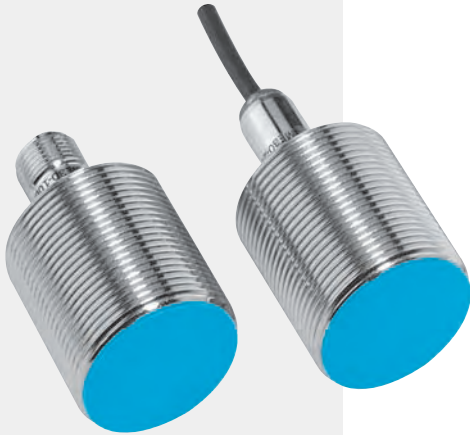


- Enhanced sensing range
- Short-circuit protection (pulsed)
- Robust brass housing, nickel-plated with fine thread M30 x 1.5 mm
- Enclosure rating IP 67
- Installation quasi-flush

Dimensional drawing

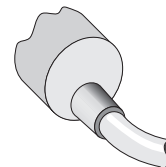
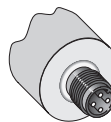
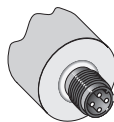


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

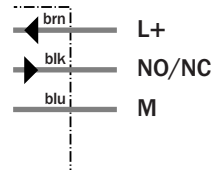
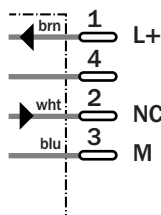
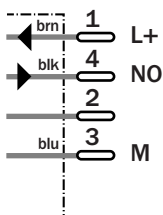
IME30-15BNSZCOK	IME30-15BNOZCOK	IME30-15BNOZW2K
IME30-15BPSZCOK	IME30-15BPOZCOK	IME30-15BNSZW2K
		IME30-15BPOZW2K
		IME30-15BPSZW2K



M12, 4-pin

M12, 4-pin

3 x 0.15 mm²



Accessories

Connector, M12, 4-pin

Mounting systems

Technical specifications		IME30-	15BNOZCOK	15BNOW2K	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}	$\leq 10 \%$											
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	$\leq 125 ms$											
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	Quasi-flush											
Connection type	Connector, M12, 4-pin											
	Cable, PVC, 2 m											
Enclosure rating	IP 67 ⁴⁾											
Max. switching frequency	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

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:

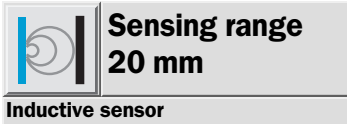
St37 (Fe)	1
Stainless steel (V2A)	Approx. 0.8
Aluminum (solid)	Approx. 0.45
Copper (Cu)	Approx. 0.4

Installation note

Mounting based on non-ferromagnetic materials

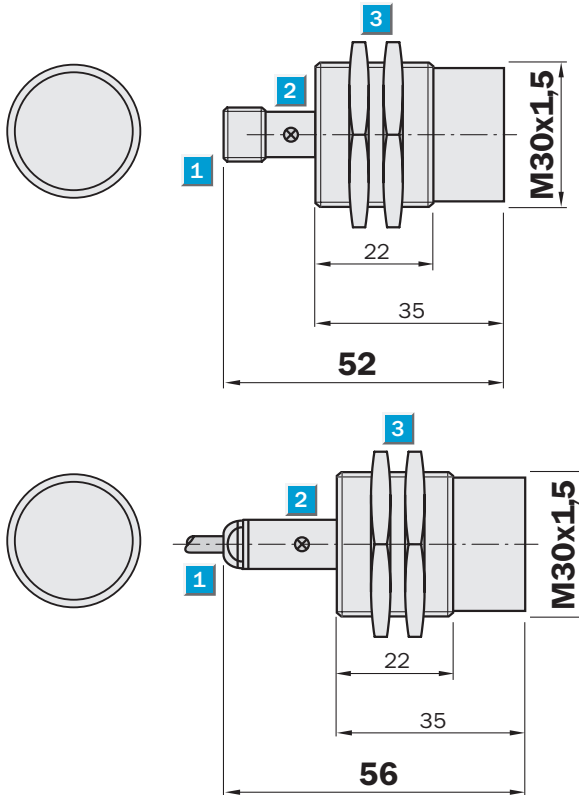
Ordering information

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



- 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

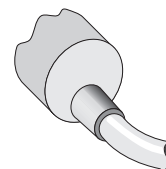
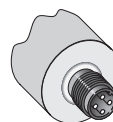
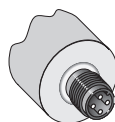


- 1 Connection
- 2 Display LED
- 3 Fastening nuts (2 x); width across 36, metal



Connection type

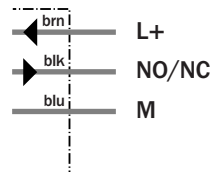
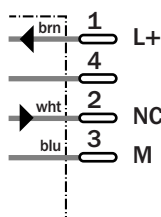
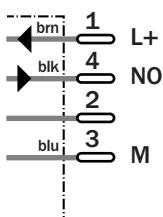
IME30-20NNSZCOK	IME30-20NNOZCOK	IME30-20NNOZW2K
IME30-20NPSZCOK	IME30-20NPOZCOK	IME30-20NNSZW2K
		IME30-20NPOZW2K
		IME30-20NPSZW2K



M12, 4-pin

M12, 4-pin

3 x 0.5 mm²



Accessories

Connector, M12, 4-pin
Mounting systems

Technical specifications		IME30-	20NN OZCOK	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}	$\leq 10 \%$											
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	$\leq 125 ms$											
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	100 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	-20 °C ... +65 °C											
Housing material	Brass nickel-plated, plastic											
Tightening torque	100 Nm											

⁽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

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