

Inductive Sensors



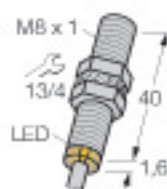
Housing Style	Part Number	ID Number	Features	Sensing Range (mm)	Output
8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable 	Bi 2-EG08-AG41X	S4562000		2	2-Wire DC
	Bi 2-EG08-AG41X/S1589	S4562088	weldguard	2	
	Bi 1.5-EG08-AN6X	S4602340		1.5	3-Wire DC NPN
	Bi 1.5U-EG08-AN6X	S4600510	Uprox	1.5	
	Bi 2-EG08-AN6X	S4602140	Ext. Range	2	
	Bi 2-EG08-AN6X/S1589	S4602181	weldguard	2	
	Bi 2U-EG08-AN6X	S4602035	Uprox	2	
	Bi 1.5-EG08-AN7X	S1766110	TTL Compatible	1.5	
	Bi 1.5-EG08-AP6X	S4602240		1.5	3-Wire DC PNP
	Bi 1.5U-EG08-AP6X	S4600500	Uprox	1.5	
	Bi 2-EG08-AP6X	S4602040	Ext. Range	2	
	Bi 2-EG08-AP6X/S100	S4602047	High Temp. 100°C	2	
	Bi 2-EG08-AP6X/S957	S4602008	Flush Mount	2	
	Bi 2-EG08-AP6X/S1589	S4602085	weldguard	2	
	Bi 2-EG08-AP6X/S1610	S4602086-1	armorguard	2	
	Bi 2U-EG08-AP6X	S4602032	Uprox	2	
	Bi 1.5-EG08-Y1	S1003500		1.5	2-Wire DC NAMUR
	Bi 2-EG08-AZ14X	S4100001		2	2-Wire AC/DC
	Bi 2-EG08-VP6X	S1604610	Comp. Outputs	2	4-Wire DC PNP
8 mm - Embeddable, Miniature Threaded Barrel, Potted-In Cable, Teflon Coated 	Bi 2-EGT08-AG41X	S4602540		2	2-Wire DC
	Bi 1.5-EGT08-AP/S100	S4602256	High Temp. 100°C	1.5	3-Wire DC PNP

Voltage	Switching Freq. (Hz)	Operating Current (mA)	Operating Temp. (°C)	Protection	Housing	Face	End Cap	Power LED	Output LED	Cable Length/ Cable Mat.	Wiring Diagram #	Wiring Diagrams
10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	4	Diagram 1
	1000	≤100	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	4	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	Diagram 2
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	1	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	1	
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	Diagram 3
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +100	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
	3000	≤150	-25 to +70	IP 67	SS	WG	TROG	N/A	YE	2M/PUR	2	
	2000	≤150	-30 to +85	IP 68	SS	PA 12	TROG	N/A	YE	2M/PUR	2	
5-30 VDC	5000	Remote	-25 to +70	IP 67	SS	PA 12	TROG	N/A	N/A	2M/PUR	3	Diagram 4
20-132 VAC 10-140 VDC	20	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	5	Diagram 5
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	6	Diagram 6
10-55 VDC	1000	≤100	-25 to +70	IP 67	TC	PA 12	TC	N/A	YE	2M/PUR	4	
10-30 VDC	2000	≤150	-25 to +100	IP 67	TC	PA 12	TC	N/A	YE	2M/PUR	2	

Inductive sensor with extended switching distance Bi2-EG08-AP6X

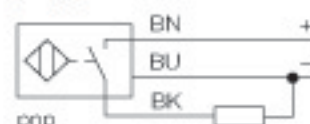
TURCK
WORKS

Industrial
Automation



- threaded barrel, M8 x 1
- stainless steel, 1.4404
- large detection range
- 3-wire DC, 10...30 VDC
- normally open, pnp output
- cable connection

Wiring diagram



Functional principle

Inductive sensors are designed for wear-free and non-contact detection of metal objects. For this purpose they use a high-frequency electro-magnetic AC field that interacts with the target. With inductive sensors, this field is generated by an LC resonant circuit with a ferrite core coil.

Type	Bi2-EG08-AP6X
Ident-No.	4602040
Rated operating distance S_n	2 mm
Mounting condition	flush
Assured sensing range	$\leq (0.81 \times S_n)$ mm
Correction factors	$S_{37} = 1, V_{2A} = 0.7, M_s = 0.4, A_I = 0.3$
Temperature drift	$\leq \pm 10 \%$
Hysteresis	3... 15 %
Repeatability	$\leq 2 \%$
Ambient temperature	-25...+ 70°C
Operating voltage	10... 30VDC
Residual ripple	$\leq 10 \% U_{SS}$
DC rated operational current	≤ 150 mA
No-load current I_0	≤ 15 mA
Residual current	≤ 0.1 mA
Rated insulation voltage	≤ 0.5 kV
Short-circuit protection	yes / cyclic
Voltage drop at I_0	≤ 1.8 V
Wire breakage / Reverse polarity protection	yes / complete
Output function	3-wire, normally open, pnp
Switching frequency	≤ 3 kHz
Housing	threaded barrel, M8 x 1
Dimensions	41.6 x 8 mm
Housing material	metal, AISI 316L
Material active face	plastic, plastic, PA12-GF20
End cap	plastic, PP
Tightening torque of housing nut	10 Nm
Connection	cable
Cable quality	$\varnothing 4, LiFY-11Y, PUR, 2$ m
Cable cross section:	3×0.25 mm ²
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Degree of protection	IP67
Display switch state	LED yellow