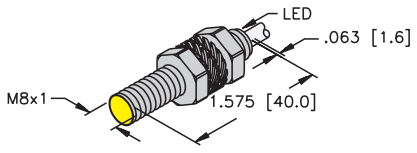
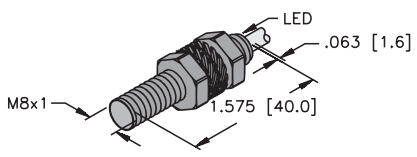
Inductive Sensors



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**

Industrial Automation

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Industrial Automation

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 #
10-55 VDC	1000	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	4
	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
	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
	3000	≤150	-25 to +70	IP 67	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
	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
	3000	≤150	-25 to +70	IP 67	AG	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
20-132 VAC 10-140 VDC	20	≤100	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	5
10-30 VDC	3000	≤150	-25 to +70	IP 67	SS	PA 12	TROG	N/A	YE	2M/PUR	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

Wiring Diagrams

Diagram 1

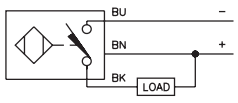


Diagram 2

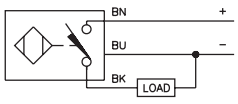


Diagram 3

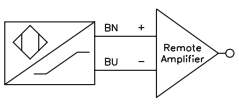


Diagram 4

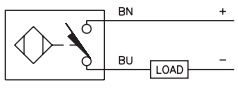


Diagram 5

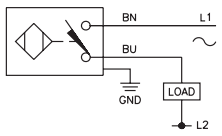
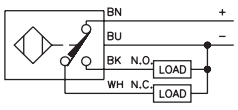
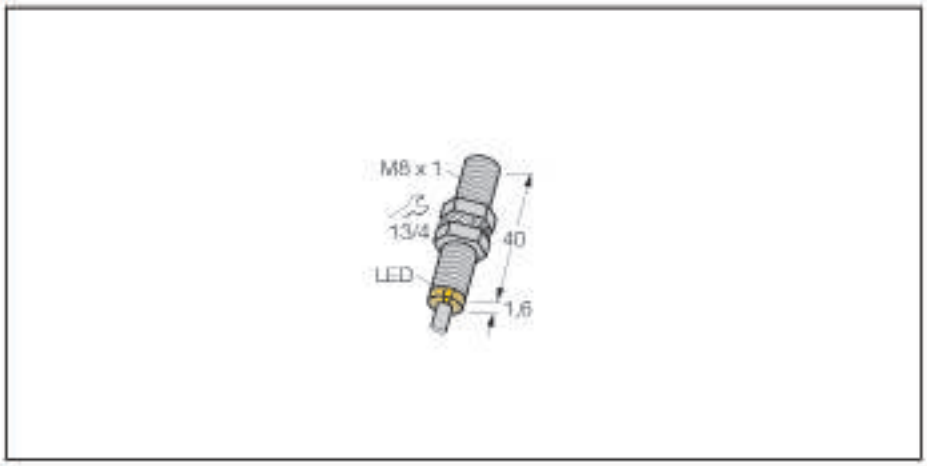


Diagram 6



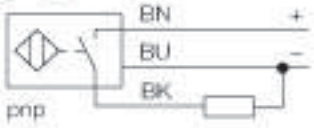
Inductive sensor
with extended switching distance
Bi2-EG08-AP6X

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



Type	Bi2-EG08-AP6X
Ident-No.	4602040
Rated operating distance Sn	2 mm
Mounting condition	flush
Assured sensing range	≤ (0,81 x Sn) mm
Correction factors	St37 = 1, V2A – 0.7, Ms – 0.4, Al – 0.3
Temperature drift	≤ ± 10 %
Hysteresis	3... 15 %
Repeatability	≤ 2 %
Ambient temperature	-25...+ 70°C
Operating voltage	10... 30VDC
Residual ripple	≤ 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_e	≤ 1.8V
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	Ø 4, LiYY-11Y, PUR, 2 m
Cable cross section:	3 x 0.25mm^2
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Degree of protection	IP67
Display switch state	LED yellow

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.