

Micropulse BIW

Non-Contact Performance, Standard Form Factor, Linear Potentiometer Price

The Micropulse BIW uses patented pulsed-inductive measurement technology to provide 0-10 Vdc or 4-20 mA position feedback in a form factor identical to many wear-prone resistive linear potentiometers. Unlike linear potentiometers, the BIW's non-contact technology assures years of trouble free operation.



Features:

- Plunger-style form factor provides for drop-in replacement of linear potentiometers
- Non-Contact Sensing Technology
- No External Electronics
- Analog Outputs:
 - 0-10 Vdc / 10-0 Vdc
 - 4-20mA / 20-4 mA

Applications:

- The Micropulse BIW is ideal for applications such as:
- Plastic injection molding machinery
 - Packaging machinery
 - Hydraulic and pneumatic motion bases / flight simulators

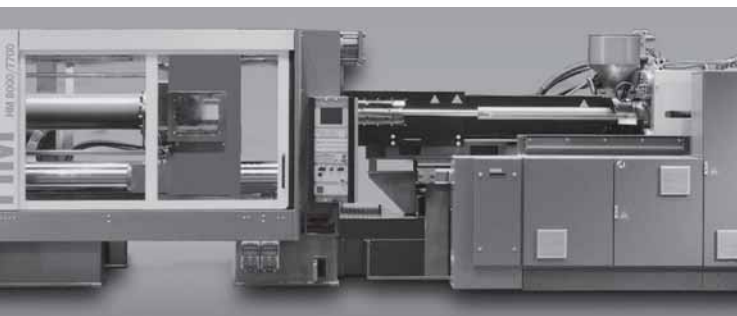
Principle of Operation

The BIW inductive linear position transducer is based on a new, patented principle of operation which detects the measured position without contact.

The BIW transducer contains a sender/ receiver element and an oscillator protected by an extruded aluminum housing.

The oscillator is attached to a sliding rod which is in turn attached to the moving member of the machine or equipment. The oscillator is excited by the sender component at a sampling rate of 32 kHz and couples the current position signal into the receiver element. The position is immediately available on the output as an absolute analog value.

The direction of the output signal – rising or falling – can be determined by how the output slope connections are made.

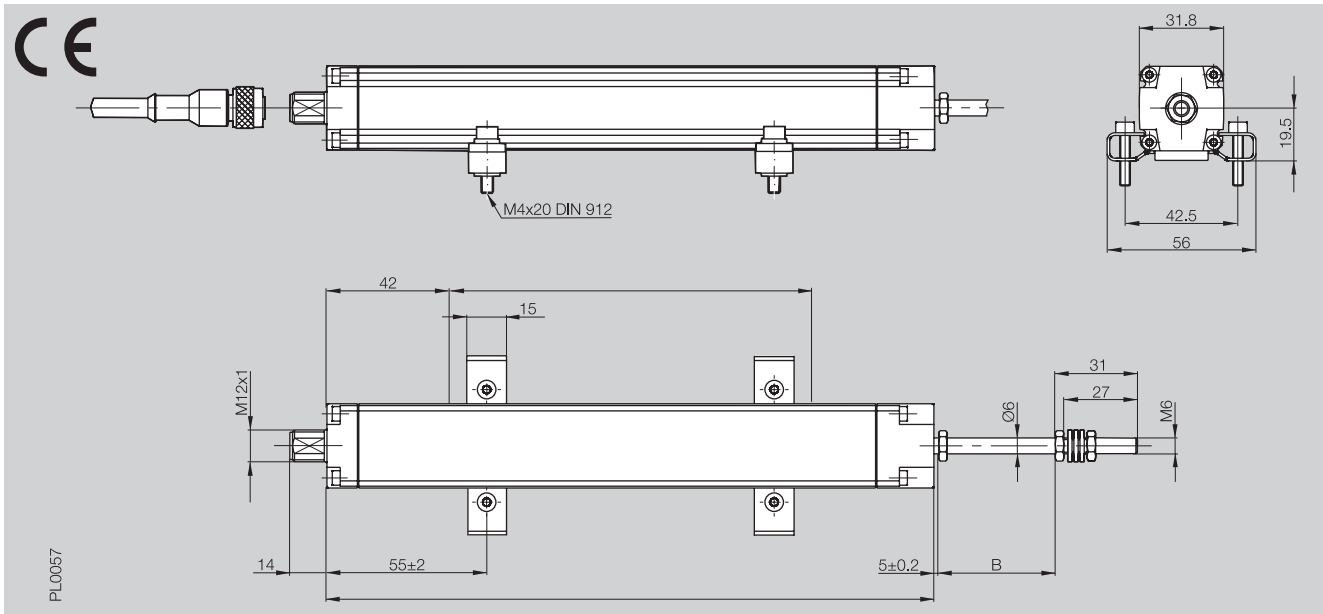


BIW



General Specifications .. pg 104
Accessories pg 105

Series	BIW	BIW
Output Signal	Analog Voltage	Analog Current
Transducer Interface	A/G	C/E



Ordering Code	BIW1-A/G310-M_ _ _ -P1-S115	BIW1-C/E310-M_ _ _ -P1-S115
Output	0...+10 V (order code A) -10...+10 V (order code G)	0...20 mA (order code C) 4...20 mA (order code E)
Output Load	6 mA	≤ 500 Ω
System Resolution	5 μm	
Repeatability	10 μm	
Non-linearity	≤ ±200 μm up to 500 mm nominal stroke typ. ±0.02 %, max. ±0.04 % 508...2540 mm nominal stroke	
Sampling Rate	typ. 32 kHz	
Supply Voltage	18...30 Vdc	
No-load Current	≤ 60 mA	
Operating Temperature	-4 to +185 °F	
Storage Temperature	-40 to +212 °F	
Pin Assignments	Pin	Color
	1	YE
	2	GY
	3	PK
	4	RD
	5	GN
	6	BU
	7	BN
	8	WH
		Slope selector
		0 V (signal common)
		not used
		Slope selector
		Output signal
		GND
		+24 Vdc
		not used
Shock Load	100 g/2 ms	
Vibration	12 g, 10...2000 Hz	
Dielectric Strength	500 V (GND to housing)	
Enclosure Rating per IEC 60529	IP 54	
Housing Material	Anodized aluminum	
Mounting	Mounting clamps	
Connection Type	Connector M12, 8-pin standard	
Housing Length A	Nominal stroke + 100 mm	
Mechanical Stroke B	Nominal stroke + 10 mm	

- Included:
- Transducer
 - User's guide
 - 2 Mounting clamps

Ordering example:
BIW1_310-M_ _ _ -P1-S115

Data Protocol

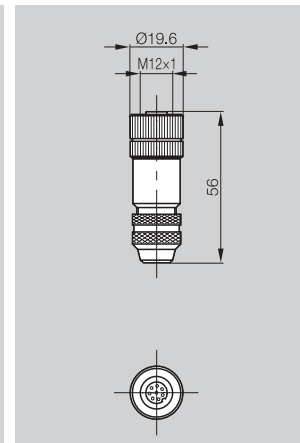
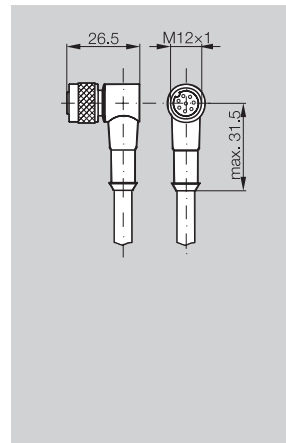
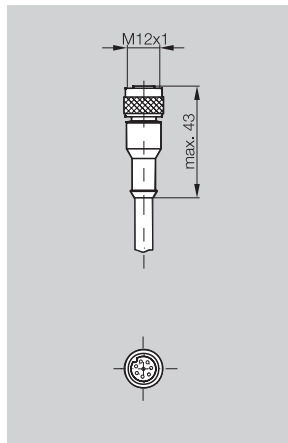
- A 0...+10 V
- G -10...+10 V
- C 0...20 mA
- E 4...20 mA

Standard nominal strokes [mm]

- 0075, 0100, 0130, 0150, 0175, 0225, 0300, 0360, 0375, 0400, 0450, 0500, 0600, 0650, 0750

Metric to Inch Conversion: inches = mm/25.4

Connectors/Accessories for Series	BKS-S115-PU-__ BIW-____-S115	BKS-S116-PU-__ BIW-____-S115	BKS-S115-00 BIW-____-S115
Type	8-pin, Straight, female	8-pin, Right angle, female	8-pin, female

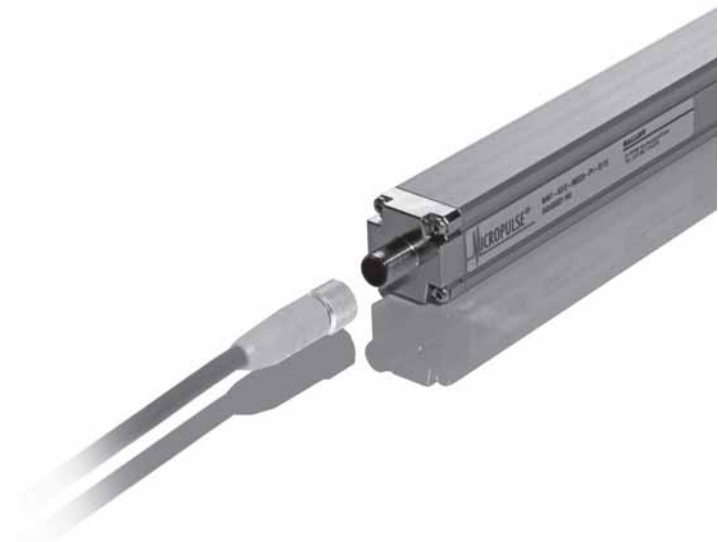


Ordering Code	BKS-S115-PU-__	BKS-S116-PU-__	BKS-S115-00
Screw Terminal			max. 0.75 mm ²
Housing Material	PUR	PUR	CuZn nickel plated
Contacts	CuZn	CuZn	CuZn
Contact Finish	0.8 µm Au	0.8 µm Au	
Cable Strain Relief			PG 9
Cable Diameter			6...8 mm
Enclosure Rating per IEC 60529	IP 67	IP 67	IP 67 (when attached)
Knurled Coupling Ring	CuZn	CuZn	
Finish	2.5 µm Ni	2.5 µm Ni	
O-ring	Viton	Viton	Viton
Cable		Molded-on PUR	
No. of Wires × Conductor Cross Section		8 × 0.25 mm ²	
Type		LIYY-CF11Y	
Conductor Configuration		14 × 0,15 mm	
Outer Diameter		6,6 ±0,2 mm	
Min. Bending Radius		dynamic 4 × D, static 3 × D	

Please indicate cable length
in ordering code
02 = Length 2 m; 05 = Length 5 m;
10 = Length 10 m; 15 = Length 15 m;
20 = Length 20 m; 25 = Length 25 m

Pin assignments	Pin	Color	
	1	YE	
	2	GY	
	3	PK	
	4	RD	
	5	GN	
	6	BU	
	View of female	8	WH

Adapter BKS-S15 to BKS-S32
Ordering code: BKS-S115/GS32-PU-00.2



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