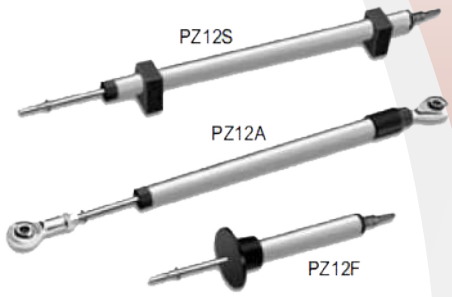
PZ12 - Linear Motion Position Sensors

Ixthus Instrumentation

- Pulling Rod Type
- Mini design for limited space
- ∅ 12.9 Section, Standard 10-150 mm
- Anodised Aluminium Housing
- Long Life, High Resolution
- Excellent Repeatability
- Three mounting methods



This mini position transducer is designed for direct absolute measurement and available in stroke length up to 150 mm. The mini design is suitable for mounting in instruments or machines with limited space. An improved technique for making a connection to the resistance track (Double Trimming Technique) ensures the higher degrees of reliability and linearity, while multi-fingers wipers stabilize output signals, even in the most adverse working conditions.

There are three ways of mountings to suit different applications:

- The PZ12S can the mounted by two adjustable brackets
- The PZ12A can be mounted by self-aligning ball joints
- The PZ12F can be flange mounted

Specifications

Mechanical	
Typical Life Cycle	> 100 x 10^6 cycles, > 25 x 10^6 m
Stroke	10 - 150 mm
Linearity up to	± 0.05 %
High Resolution	Infinite
Repeatability	± 0.01 mm
Max. operating speed	5 m/s
Environmental	
Housing	Anodised Aluminium Housing
Operating Temperature	-30... +100° C
Storage Temperature	-50...+120° C
Vibration	IEC 68-2-6:1982 10g
Shock	IEC 68-2-29:1968 40g
Rating	IP60, optional IP65
Misc	Fuse Protection optional

Electrical	
Current resistance	≤ 10mA
Current wiper	≤ 1 mA
Operating Force	≤ 0.5N (IP60) ≤ 5N (IP65)
Power Consumption	3W - 10W
Output Smoothness	<± 0.1% against input voltage
Input Voltage	60 V max
Insulation Voltage	500V - 1min Residue < 5 µ A

Ordering information

(Please use the characters in the chart below to construct your product code)

Sample Code: PZ12 - S - 100 - P - 3M

Series	Mounting type	Length	Rating	Cable length
PZ12	S - Mounting by brackets A - Mounting by selfaligning ball-joints F - Mounting by flange FS - Cable	10 100 25 125 50 150 75	Blank = IP60 P = Water Proof IP65	blank = 1 m standard cable 3M = 3 m screened cable

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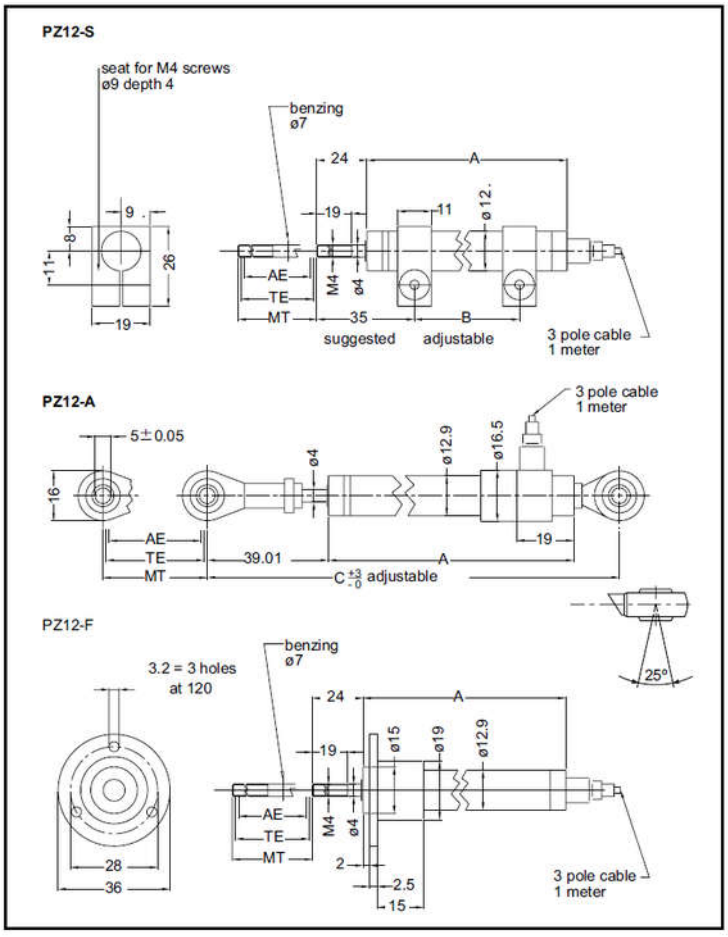
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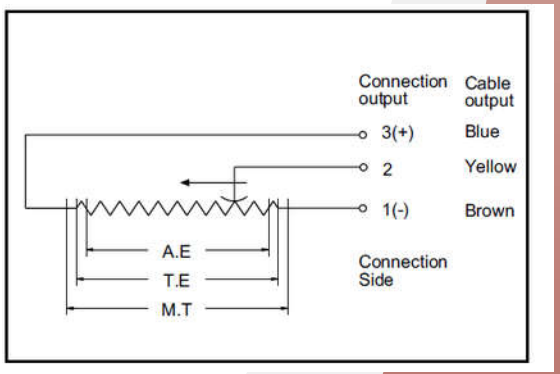
Ordering information cont.

PZ12 series		10	25	50	75	100	125	150
Total Electrical Travel(T.E)	mm	11	26	51	76	101	126	151
Active Electrical Travel (A.E)	mm	10	25	50	75	100	125	150
Resistance ±20%	kΩ	1	1	2	3	4	5	5
Independent Linearity	±%	0.3	0.2	0.1	0.1	0.1	0.05	0.05
Mechanical Travel (M.T)	mm	15	30	55	80	105	130	155
Resolution		infinite						
Recommended Cursor Current	μA	< 1						
Temperature Range	°C	-30 to +100						
Dimensions (A) PZ12-S	mm	59.5	74.5	99.5	124.5	149.5	174.5	199.5
Dimensions (A) PZ12-A	mm	87	102	127	152	177	202	227
Dimensions (A) PZ12-F	mm	59.5	74.5	99.5	124.5	149.5	174.5	199.5
Dimensions (B)	mm	27	42	67	92	117	142	167
Dimensions (C)	mm	138	153	178	203	228	253	278
Net Weight PZ12-S	gm	30	45	55	65	75	85	95
Net Weight PZ12-A	g m	55	70	80	90	100	110	120
Net Weight PZ12-F	gm	45	60	70	80	90	100	110

* Dimensions for reference only

Dimensions and Electrical connections





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