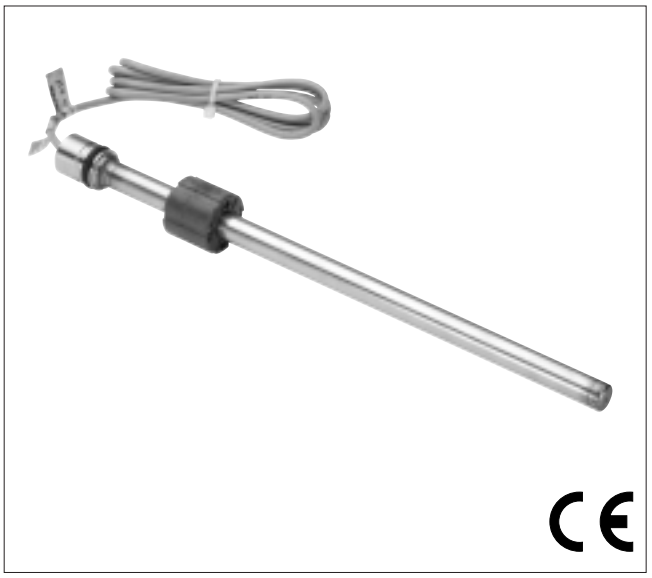
GEFRAN

PMI-SL

RECTILINEAR DISPLACEMENT TRANSDUCER WITH MAGNETIC DRAG



Applicative characteristics

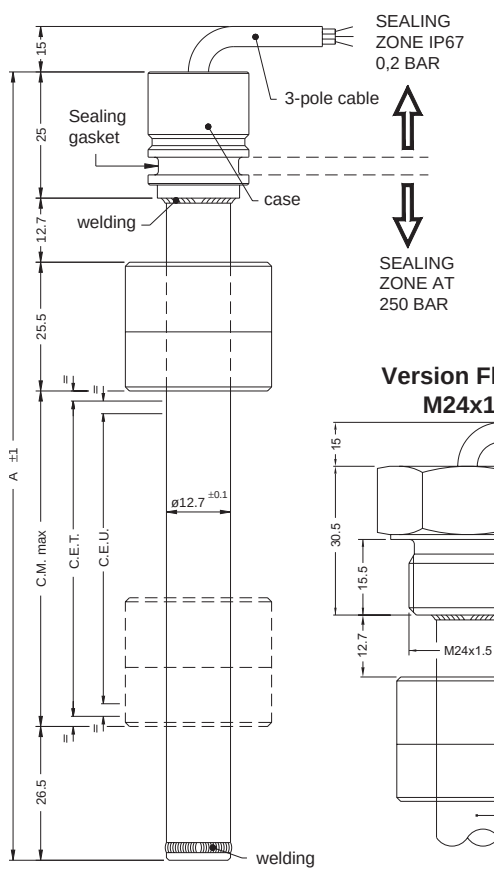
- *The PMI-SL transducer, an evolution of the PMI-12, is designed for all inside cylinder applications which require a smaller transducer. For this reason, the diameter has been reduced to 12.7 mm.*
- *The PMI Slim offers the same robustness as the PMI-12: AISI 316 stainless steel body, IP67 protection level, and pressure resistance up to 250 bar (400 bar peak)*
- *Available with flanged or threaded heads, to guarantee mechanical compatibility with all main cylinder types*
- *Patented solution*
- *Ideal for applications inside hydraulic cylinders, demanding simple solutions which guarantee measurement repeatability*

TECHNICAL DATA

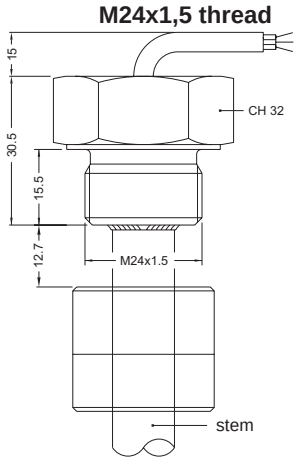
Useful electrical stroke (C.E.U.)	50/100/150/200/250/300/350/400/ 450/500/550/600/750/800/850/ 900/950/1000
Independent linearity (within C.E.U.)	± 0.35%
Resolution	Infinite
Repeatability	≤ 0.08 mm
Hysteresis	< 250µm
Life	> 25x10⁶ m strokes, or > 100x10⁶ maneuvers, whichever is less
Electrical connection	1 mt. 3-pole shielded cable
Displacement speed	standard ≤ 5 m/s
Max. acceleration	≤ 10m/s² max displacement
Cursor dragging force	≤ 0.5 N
Vibrations	5...2000 Hz, Amax = 0.75 mm amax = 20 g
Shock	50 g, 11 ms
Displacement sensitivity (no hysteresis)	from 0.05 to 0.1 mm
Tracking error	see table
Tolerance on resistance	± 20%
Recommended cursor current	< 0.1 µA
Maximum cursor current in case of bad performances	10 mA
Maximum applicable voltage	see table
Electrical isolation	> 100 MΩ at 500 V = 1 bar, 2 s
Dielectric strenght	< 100 µA at 500 V~ 50 Hz, 2 s, 1 bar
Dissipation at 40°C (0 W at 120°C)	see table
Thermal coefficient of resistance	-200...+200 ppm/°C typical
Actual Temperature Coefficient of the output voltage	≤ 5 ppm/°C typical
Working temperature	-30...+100°C
Storage temperature	-50...+120°C
Material for transducer case	Steel AISI 316 / AISI 304

MECHANICAL DIMENSION

Version Flange (X) Std



Version Flange (M) M24x1,5 thread

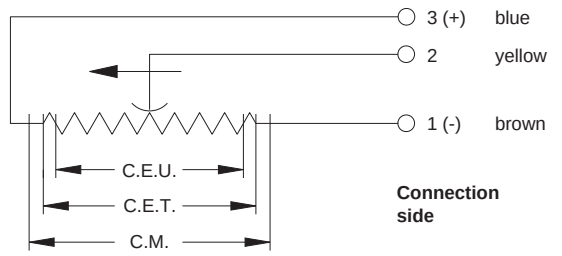


Important: all the data reported in the catalogue linearity and temperature coefficients are valid for sensor utilization as a ratiometric device with a max current across the cursor Ic ≤ 0.1 µA.

MECHANICAL / ELECTRICAL DATA

MODEL		50	100	150	200	250	300	350	400	450	500	550	600	750	800	850	900	950	1000
Useful electrical stroke (C.E.U.) + 1/-0	mm	**Model**																	
Theoretical electrical stroke (C.E.T.) ± 1	mm	C.E.U. + 1																	
Independent linearity (within C.E.U.)	± %	0.35																	
Dissipation at 40°C (0W at 120°C)	W	1	2					3											
Max applicable voltage	V	40	60																
Resistance (C.E.T.)	kΩ	5						10						20					
Mechanical stroke (C.M.)	mm	C.E.U. + 5																	
Case Lenght "A" ±1	mm	C.E.U. + 94.7																	

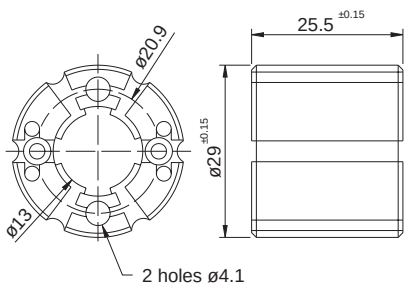
ELECTRICAL CONNECTIONS



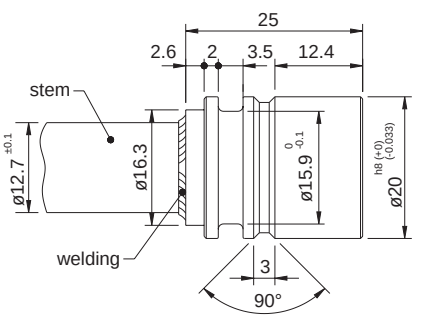
INSTALLATION INSTRUCTIONS

- Make the specified electrical connections (DO NOT use the transducer as a variable resistance)
- When calibrating the transducer, be careful to set the stroke so that the output does not drop below 1% or rise above 99% of the voltage level.

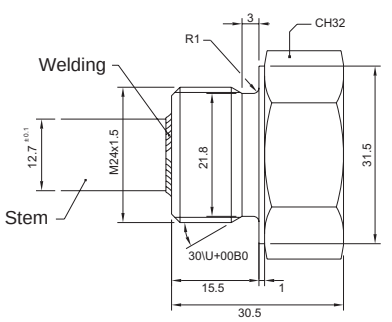
PCUR010 CURSOR



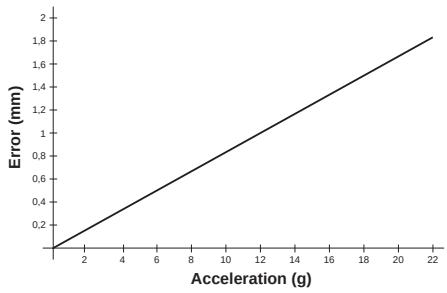
STANDARD FLANGE (X)



THREADED FLANGE (M)



TRACKING ERROR



ACCESSORIES (standard)

Standard magnetic cursor	**PCUR010**

ORDER CODE

Displacement transducers | P | M | I | S | L | | | | | | |

3-pole PUR cable output 3x0,25 1 mt	**F**

Model

Standard flange	**X**
Threaded flange M24x1,5	**M**

0	0	0	0	X	0	0	0	X	X			X	X	X

No certificate attached	**0**
Linearity curve to be attached	**L**

Version F cable length	
1 mt cable (standard)	**00**
2 mt cable	**02**
3 mt cable	**03**
4 mt cable	**04**
5 mt cable	**05**
10 mt cable	**10**
15 mt cable	**15**

Ex.: **PMI-SL-F-0400-X 0000X000XX00XXX**
PMI SL displacement transducer, cable output, useful electrical stroke (C.E.U.)
400mm, standard flange, no certificate attached, cable length 1 mt.

GEFRAN spa
via Sebina, 74
25050 PROVAGLIO D'ISEO (BS) - ITALIA
ph. 0309888.1 - fax. 0309839063
Internet: http://www.gefran.com