## **GEFRAN**

# **PMI12**

# RECTILINEAR DISPLACEMENT TRANSDUCER WITH MAGNETIC DRAG



### Main characteristics

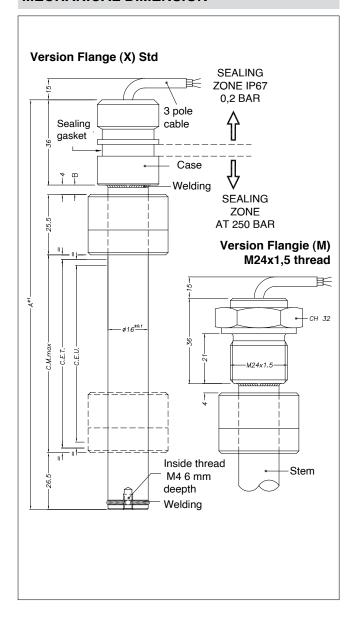
- The PMI-12 transducer is designed for use inside oilpressure cylinders, applications that demand high strength.
- The AISI316 stainless steel body and elevated protection level permit installation in cylinders with pressures up to 250 bar (400 bar peak).
- Available with internal flanges or external threads to guarantee mechanical compatibility with all principal cylinder types.
- Patented

### **TECHNICAL DATA**

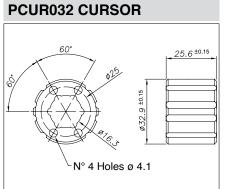
Useful electical stroke (C.E.U.)	from 50 to 1000 mm (for intermediate strokes see table "Electrical / Mechanical Data")
Independent linearity (within C.E.U.)	see table
Resolution	Infinite
Repeatibility	≤ 0.08 mm
Electrical connection	1 mt. 3-pole shielded cable
Displacement speed	standard ≤ 5 m/s
Max. acceleration	≤ 10m/s² max displacement
Cursor dragging force	≤ 0.5 N
Vibrations	52000 Hz, Amax = 0.75 mm amax = 20 g
Shock	50 g, 11 ms
Displacement sensitivity (no hysteresis)	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 strength	< 100 µA at 500 V~ 50 Hz, 2 s, 1 bar
Dissipation at 40°C (0 W at 120°C)	see table
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
1	

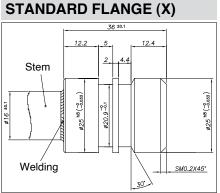
**Important:** All the data reported in the catalogue linearity and temperature coefficients are valid for a sensor utilization as a ratiometric device with a max current across the cursor circuit lc  $\leq 0.1~\mu A.$ 

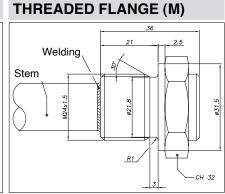
### **MECHANICAL DIMENSION**



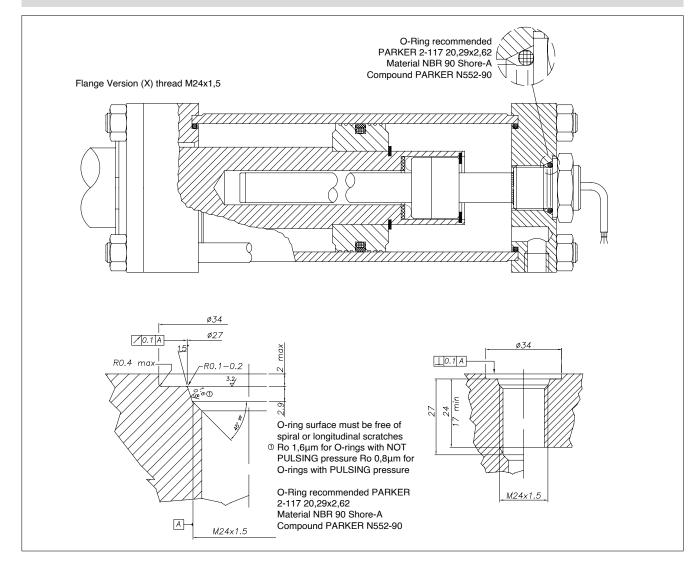
MECHANICAL / ELECTRICAL DATA																						
MODEL		50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000	
Useful electrical stroke (C.E.U.) + 1 / -0	mm		Model																			
Theoretical electrical stroke (C.E.T.) ± 1	mm		C.E.U. + 1																			
Resistance ( C.E.T.)	kΩ	5							10						20							
Independent linearity (within C.E.U.)	±%	0,1							0,05													
Dissipation at 40°C (0W at 120°C)	W	1	1 2 3																			
Max applicable voltage	V	40	40 60																			
Mechanical stroke CM	mm		C.E.U. + 5																			
Case Lenght (A)	mm		C.E.U. + 97																			



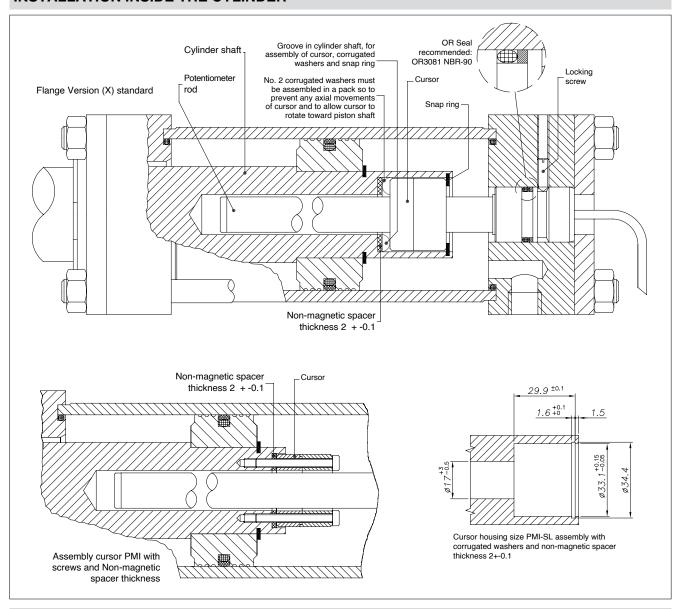




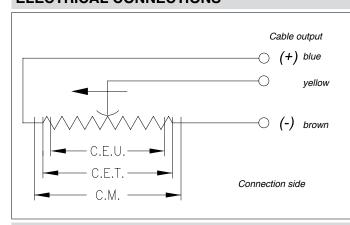
### **INSTALLATION INSIDE THE CYLINDER**



### **INSTALLATION INSIDE THE CYLINDER**



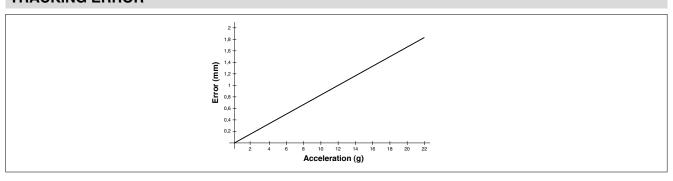
### **ELECTRICAL CONNECTIONS**



### **INSTALLATION INSTRUCTIONS**

- Respect the indicated 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 beyond 99% of the supply voltage.

### TRACKING ERROR



# Displacement transducers PMI 12 F Dimensions 1/2" CABLE LENGHT (1mt F standard version) Foutput 00 =1mt 02 =2mt 03 =3mt 04 =4mt 05 =5mt 10 =10mt 15 =15mt Model FLANGE Standard X Threaded M24x1,5 M If requested, it is possible to supply models with non-standard mechanical and/or electrical features

Ex.:PMI-12-F-400-X 0000-X000-XX-00-XXX

PMI 12 model transducer, useful electrical stroke (C.E.U.) 400mm.

### **ACCESSORIES**

### Series

· Standard magnetic cursor:

PCUR032

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice

