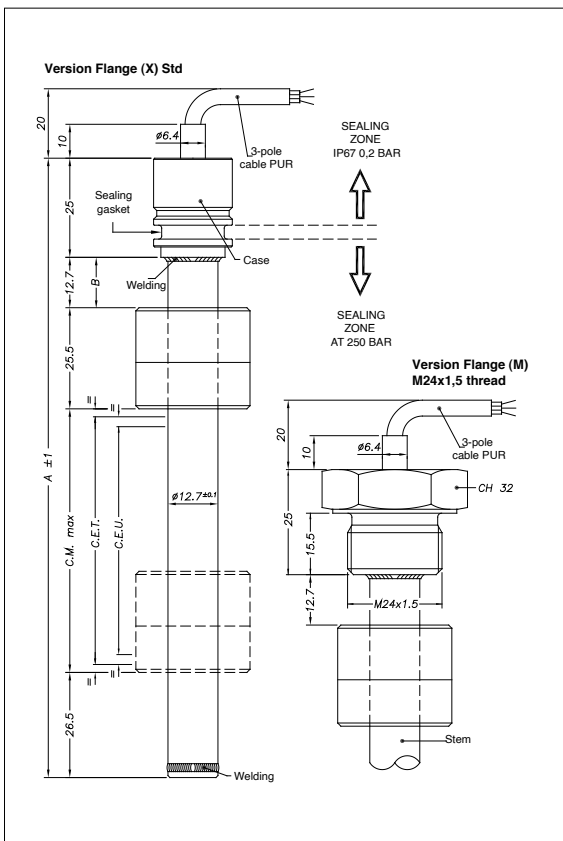




Applicative characteristics

- 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.

MECHANICAL DIMENSION



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 $I_c \leq 0.1 \mu A$.

TECHNICAL DATA

Useful electrical stroke (C.E.U.)

from 50 to 1000 mm
(for intermediate strokes see table "Electrical / Mechanical Data")

Independent linearity (within C.E.U.)

$\pm 0,35\%$

Resolution

Infinie

Repeatability

$\leq 0.08 \text{ mm}$

Hysteresis

$< 250 \mu m$

Life

$> 25 \times 10^6$ m strokes, or $> 100 \times 10^6$ maneuvers, whichever is less

Electrical connection

1 mt 3-pole shielded cable

Displacement speed

standard $\leq 5 \text{ m/s}$

Max. acceleration

$\leq 10 \text{ m/s}^2$ max displacement

Cursor dragging force

$\leq 0.5 \text{ N}$

Vibrations

5...2000Hz, $A_{max} = 0,75 \text{ mm}$ $a_{max} = 20 \text{ g}$

Shock

50 g, 11ms.

Displacement sensitivity (no hysteresis)

from 0.05 to 0.1 mm

Tracking error

see table

Tolerance on resistance

$\pm 20\%$

Recommended cursor current

$< 0,1 \mu A$

Maximum cursor current in case of bad performances

10mA

Maximum applicable voltage

see table

Electrical isolation

$> 100 \text{ M}\Omega$ at 500V~, 1bar, 2s

Dielectric strenght

$< 100 \mu A$ at 500V~, 50Hz, 2s, 1bar

Dissipation at 40°C (0W at 120°C)

see table

Actual Temperature coefficient of the output voltage

$\leq 5 \text{ ppm/}^\circ\text{C}$ typical

Working temperature

$-30...+100^\circ\text{C}$

Storage temperature

$-50...+120^\circ\text{C}$

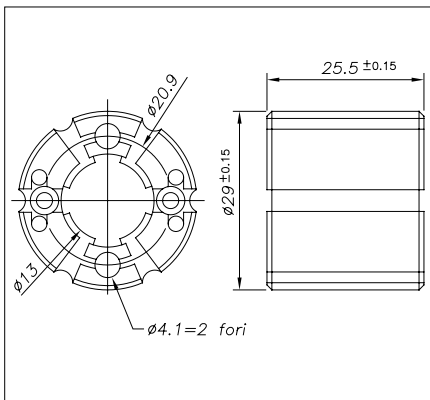
Material for transducer case

AISI 304

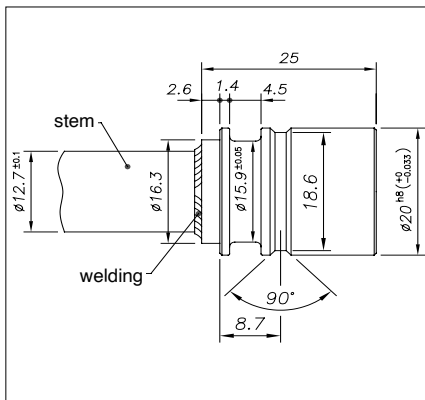
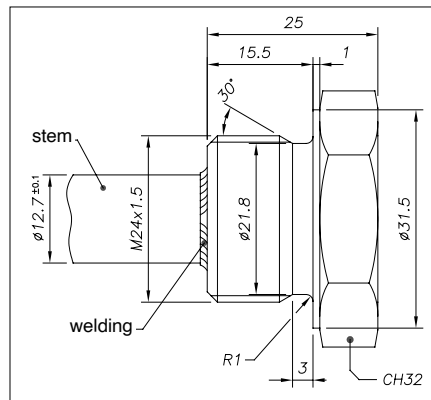
MECHANICAL / ELECTRICAL DATA

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																	

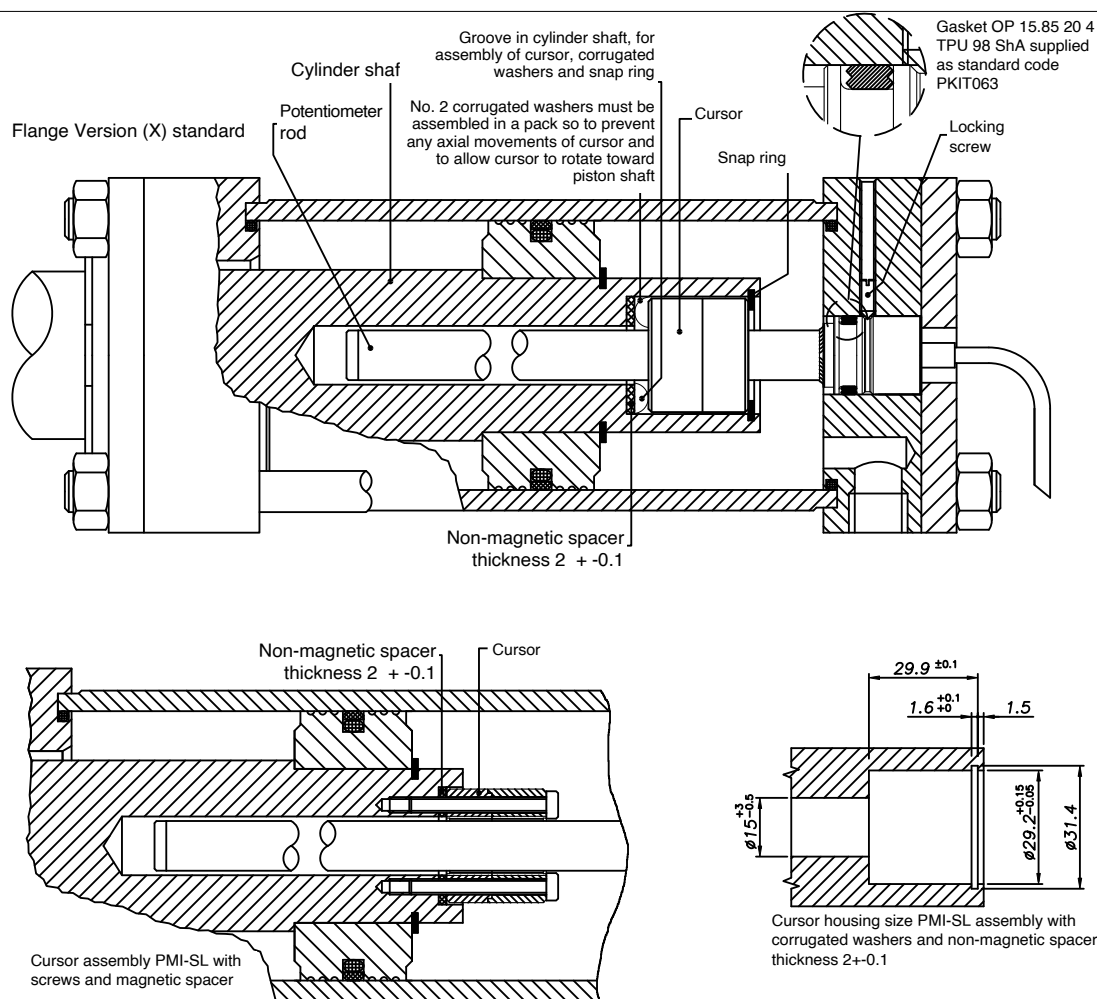
PCUR010 CURSOR



STANDARD FLANGE (X)

**THREADED FLANGE (M)**

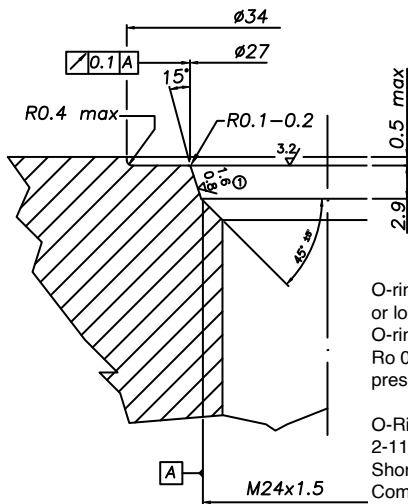
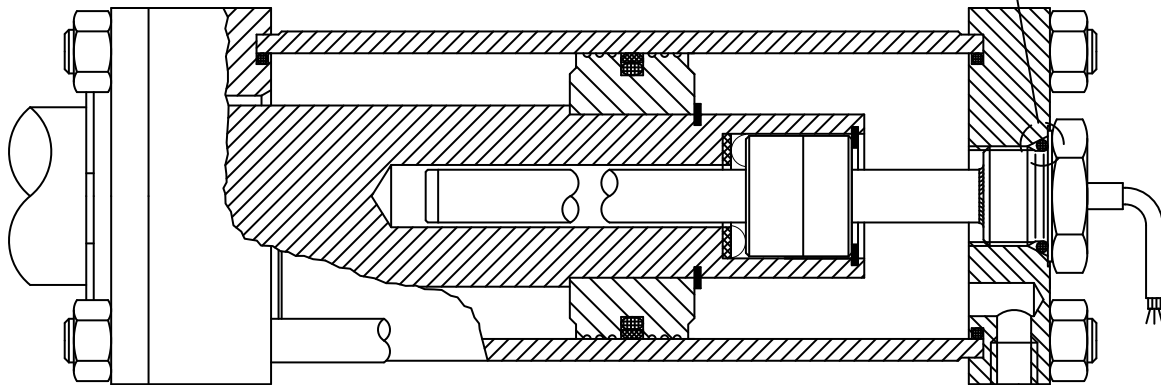
INSTALLATION INSIDE THE CYLINDER



INSTALLATION INSIDE THE CYLINDER

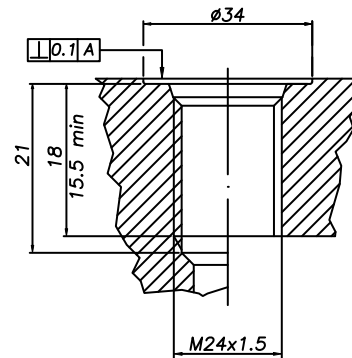
Flange Version (M) thread M24x1,5

O-Ring recommended
PARKER 2-117 20,29x2,62
Material NBR 90 Shore-A
Compound PARKER N552-90

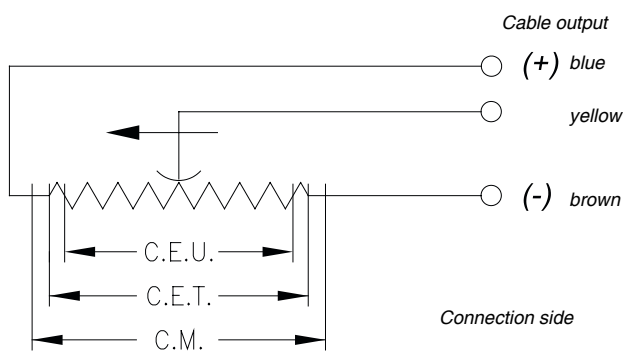


O-ring surface must be free of spiral or longitudinal scratches $R_{0.16\mu m}$ for O-rings with NOT PULSING pressure
 $R_{0.08\mu m}$ for O-rings with PULSING pressure

O-Ring recommended PARKER 2-117 20,29x2,62 Material NBR 90 Shore-A Compound PARKER N552-90



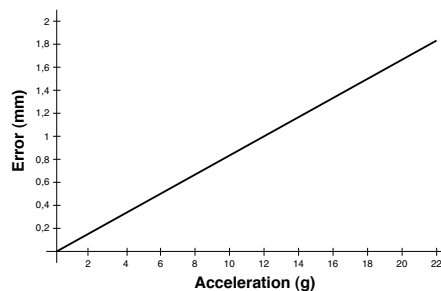
ELECTRICAL CONNECTIONS



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.
- To ensure that the PCUR010 external magnetic cursor fastens to the sensor's internal cursor, insert the external magnetic cursor and position it at least at fastening height "B" (12.7 mm) from the electrical output

TRACKING ERROR



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

No certificate attached

0

Linearity curve to be attached

L

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

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.

ACCESSORIES (standard)

Standard magnetic cursor

PCUR010

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