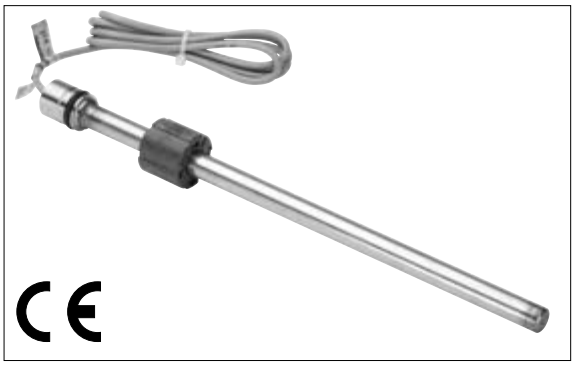
GEFRAN

PMI-SLE

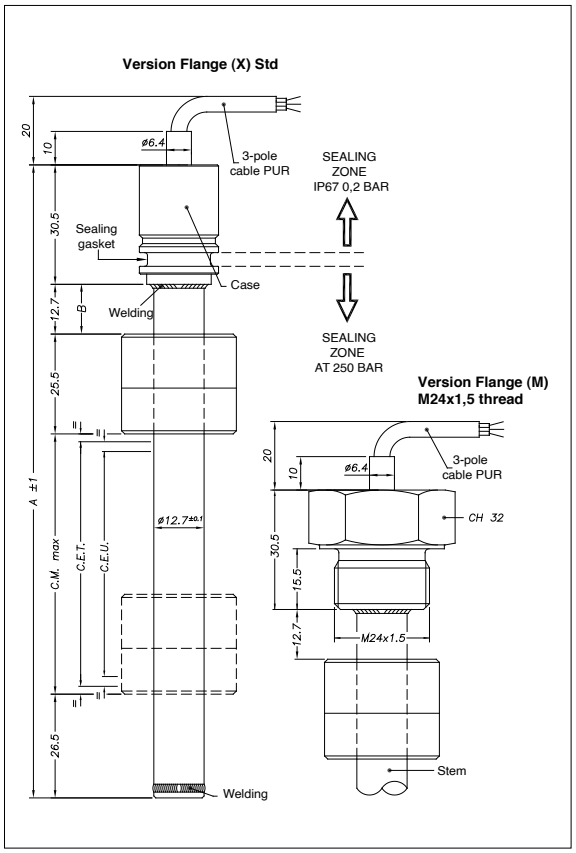
RECTILINEAR DISPLACEMENT TRANSDUCER WITH MAGNETIC DRAG (analog output)



Applicative characteristics

- *The PMI-SLE transducer, is the amplified version of the PMI-SL, a product designed for all inside cylinder applications which require a smaller transducer (the rod diameter is only 12,7 mm).*
- *The PMI Slim offers the same robustness: 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



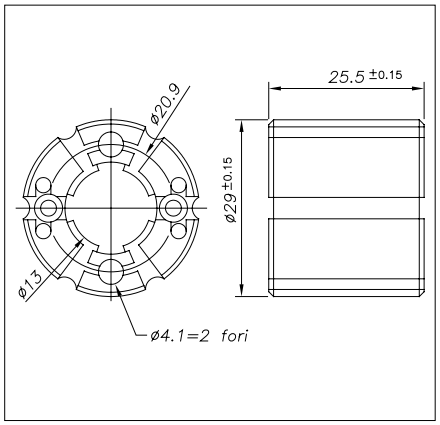
TECHNICAL DATA

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.)	
± 0,35%	
Resolution	
Infinite	
Repeatability	
≤ 0.08 mm	
Hysteresis	
< 250μm	
Life	
> 25x10^6 m strokes, or > 100x10^6 maneuvers, whichever is less	
Displacement sensitivity (no hysteresis))	
from 0.05 to 0.1 mm	
Tracking error	
see table	
Displacement speed	
standard ≤ 5 m/s	
Max. acceleration	
≤ 10m/s^2 max displacement	
Cursor dragging force	
≤ 0.5 N	
Vibrations	
5...2000Hz, Amax =0,75 mm amax. = 20 g	
Shock	
50 g, 11ms.	
Power supply voltage	
10...30Vdc (see the load diagram)	
Max power consumption	
35mA	
Min load allowed	
see the load diagram	
Output signal	4...20 mA
- ZERO position (4mA):	between 1% and 3% of the C.E.U.
- SPAN position (20mA):	between 96% and 99% of the C.E.U.
Electrical connection	
1 mt. 3-pole shielded cable	
Sampling time	
≤ 1 ms	
Noise on output	
< 0.08%FS RMS	
Electrical isolation	
> 100 MΩ at 45 Vdc = 1 bar, 2 s	
Zero and FSO temperature drift	
< 0.02%FS/°C	
Polarity inversion protection	
Yes	
Pulse overvoltage protection	
Yes	
Working temperature	
-30...+80°C	
Storage temperature	
-40...+100°C	
Protection level	
IP67	
Material for transducer case	
Steel AISI 304	

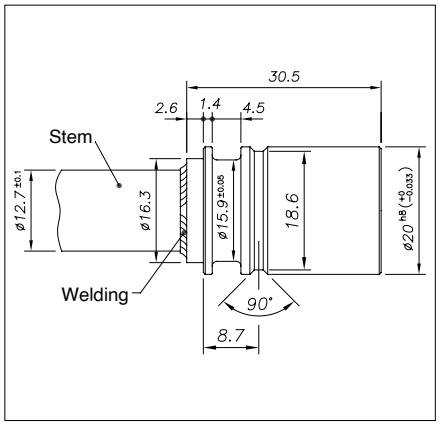
MECHANICAL / ELECTRICAL DATA

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																	
Mechanical stroke (C.M.)	mm	C.E.U. + 5																	
Lenght "A" ±1	mm	C.E.U. + 100.2																	

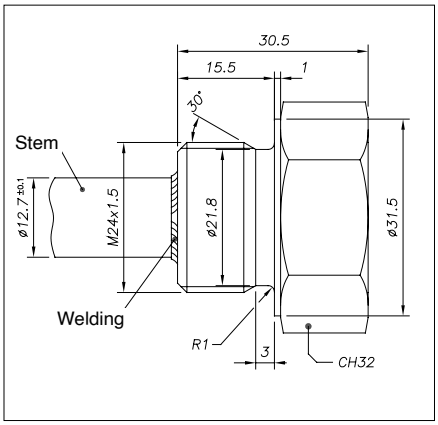
PCUR010 CURSOR



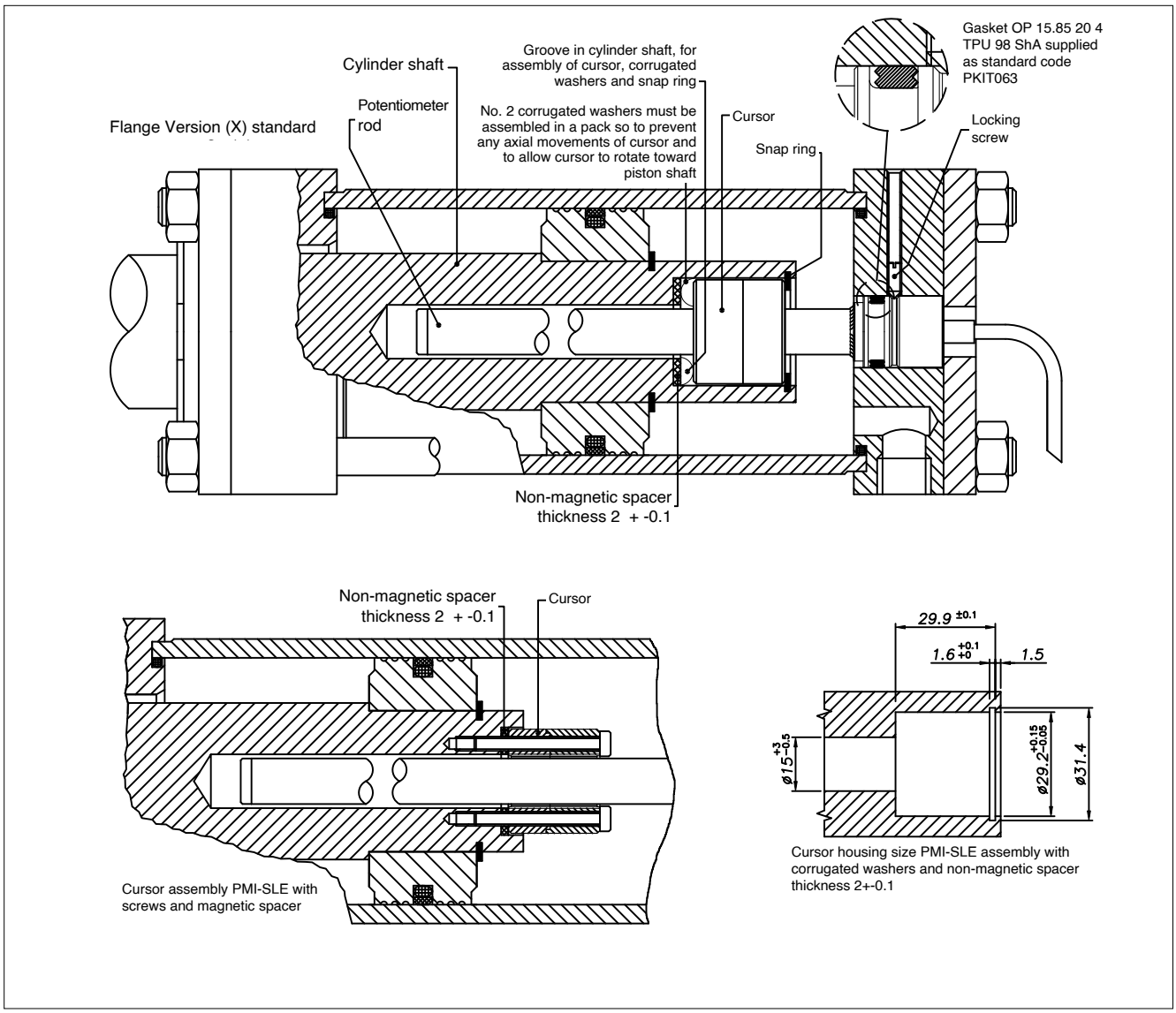
STANDARD FLANGE (X)



THREADED FLANGE (M)

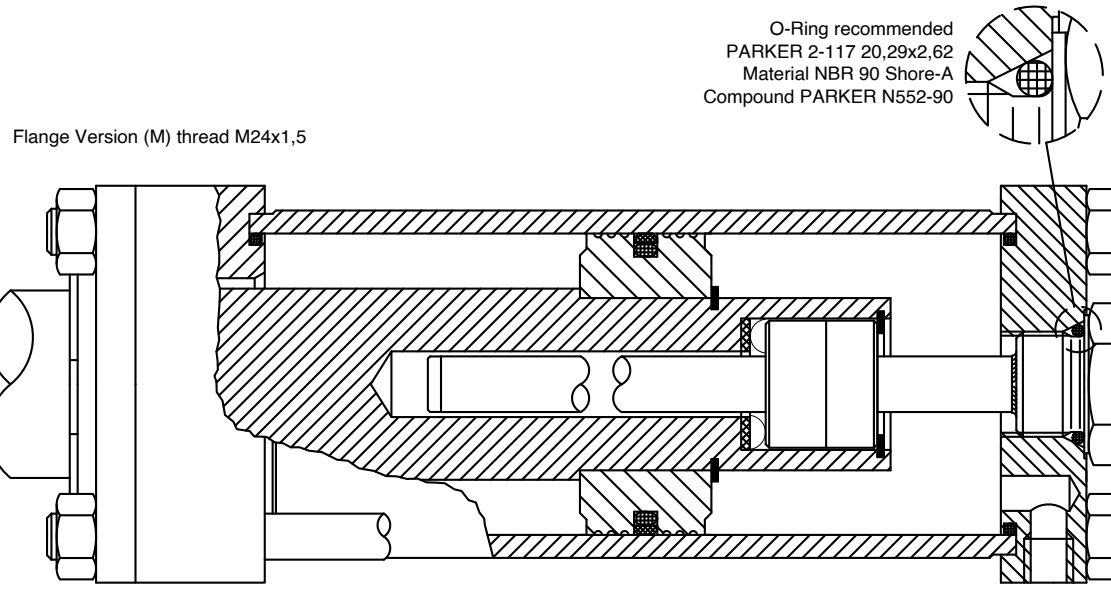


INSTALLATION INSIDE THE CYLINDER

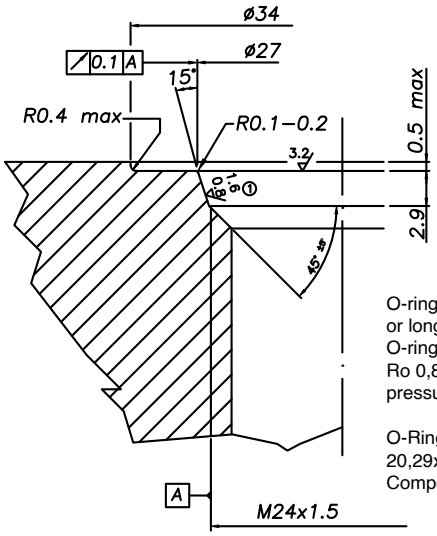


INSTALLATION INSIDE THE CYLINDER

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

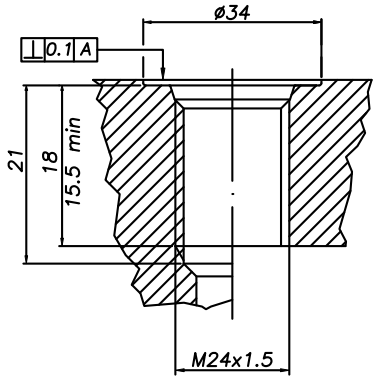


Flange Version (M) thread M24x1,5

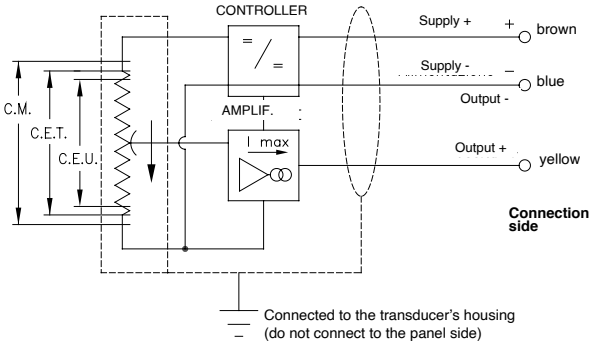


O-ring surface must be free of spiral or longitudinal scratches Ro 1,6µm for O-rings with NOT PULSING pressure Ro 0,8µm for O-rings with PULSING pressure

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



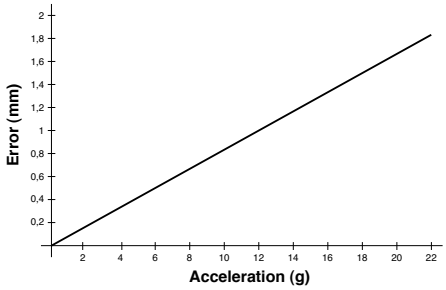
ELECTRICAL CONNECTIONS



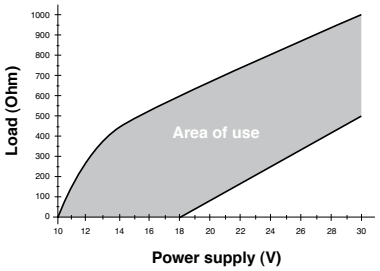
INSTALLATION INSTRUCTIONS

- Respect the indicated electrical connections
- 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 4/20mA output.
- 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



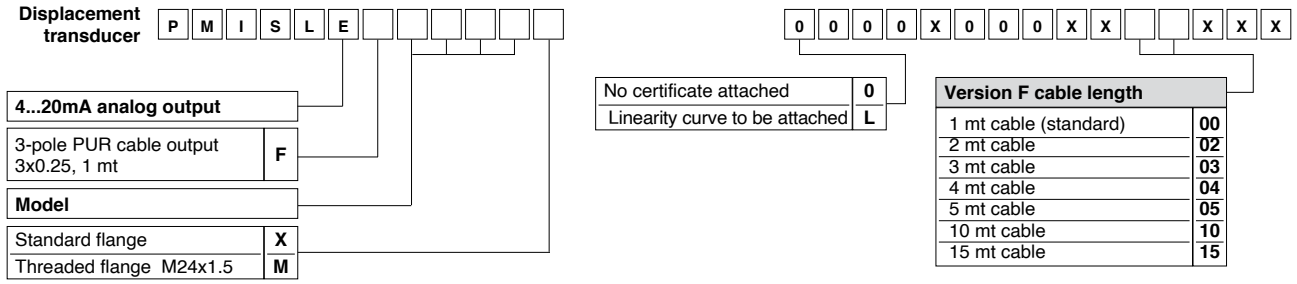
LOAD DIAGRAM



ACCESSORIES (series)

Standard magnetic cursor	**PCUR010**

ORDERING CODE



Ex.: **PMI-SLE-F-0400-X 0000X000XX00XXX**
PMI SLE displacement transducer, 4...20mA analog output, useful electrical stroke (C.E.U.) 400mm, standard flange, no certificate attached, cable length 1 mt.

Sensors are manufactured in compliance with:
- EMC 2004/108/CE compatibility directive
- RoHS 2002/95/CE directive