



Main features

- 50 to 1000 mm strokes
- Cursor magnetic drag
- Independent linearity up to $\pm 0,05\%$
- Repeatability: ≤ 0.08 mm
- Hysteresis: $\leq 0,25$ mm
- Tracking error (see table)
- Infinite resolution
- No variation of electrical output signal outside theoretical electrical stroke
- Working temperature: $-30...+100^{\circ}\text{C}$
- Electrical connection: 3-pole polyurethane screened cable with high flexibility (1m lenght)
- AISI 316 stem and nipple
- Lifetime: $> 25 \times 10^6$ meters or $> 100 \times 10^6$ operations whichever is the smallest (within C.E.U.)
- Max. working pressure 250bar, 400bar peak
- Suitable for use in explosive environments with presence of gas (groups IIA, IIB, IIC) and combustible powders. Standards for simple device: ATEX CEI EN 50020 2003 - paragraph 5.4 a

Rectilinear potentiometric displacement transducer without dragging shaft; completely waterproof (IP68); designed to work with high pressure applications (250bar static, 400bar peak) i.e. hydraulic cylinders. The PMI series is characterised by an external magnetic actuator coupled with an internal measurement cursor.

TECHNICAL DATA

Useful electrical stroke (C.E.U.)	50 to 1000 mm
Linearità indipendente (within C.E.U.)	see table
Displacement speed	≤ 5 m/s
Max. acceleration	$\leq 10\text{m/s}^2$ displacement
DIN vibration IEC 68T2-6	12g, 10...2000Hz
Cursor dragging force	$\leq 0,5$ N
Shock test DIN IEC68T2-27	50 g, 11ms. single shock
Displacement sensitivity (no hysteresis)	0.05 to 0.1 mm
Tolerance on resistance	$\pm 20\%$
Recommended cursor current	$< 0,1$ μA
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	$< 100\mu\text{A}$ at 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W at 120°C)	see table
Enviromental protection	IP 68, max. pressure 250 bar, 400 bar peak
Actual temperature coefficient of the output voltage	$< 1,5\text{ppm}/^{\circ}\text{C}$
Working temperature	$-30...+100^{\circ}\text{C}$
Storage temperature	$-50...+120^{\circ}\text{C}$

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 $I_c \leq 0.1$ μA .

MECHANICAL DIMENSION



