



Main features

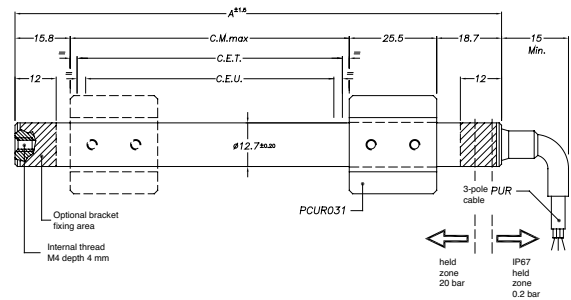
- Rectilinear displacement transducer without drag shaft, completely water-tight (IP67), designed to work in humid environments (CEI EN 60529)
- The PME series has an external magnetic actuator linked to an internal measurement cursor
- The magnetic cursor replaces the drag shaft used in traditional displacement transducers, making the instrument even more compact
- Installation is made simpler because there is no variation in the electrical output signal outside the Theoretical Electrical Stroke
- The instrument can be used in compressed air applications with max. working pressure of 20 bar.

TECHNICAL DATA

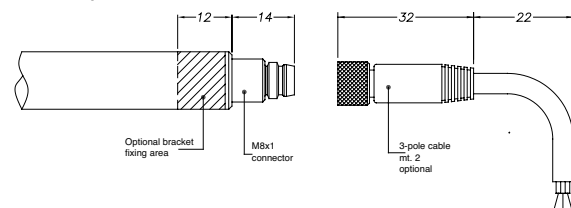
Useful electrical stroke (C.E.U.)	50 to 1000mm
Independent linearity (within C.E.U.)	see table
Resolution	infinite
Repeatability	≤ 0.08 mm
Hysteresis	≤ 0.25 mm
Electrical connection	PME12 F 1 m 3-pole shielded cable PME12 C 3-pole connector M8
Protection level	IP67 (CEI EN 60529)
Life	> 25x10 ⁶ mstrokes, or > 100x10 ⁶ maneuvers, whichever is less
Displacement speed	≤ 5 m/s
Max. acceleration	$\leq 10\text{m/s}^2$ displacement
Shock test DIN IEC68T2-27	50g, 11ms single stroke
Vibrations DIN IEC68T2-6	12g, 10...2000Hz
Cursor dragging force	≤ 0.5 N
Displacement sensitivity (no hysteresis)	0.05 to 0.1 mm
Tracking error	See table
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	>100M Ω at 500V~, 1bar, 2s
Dielectric strenght	< 100 μA at 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W 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	Anodised aluminium, PSU
Material for cursor	POM
Mounting	Brackets with adjustable distance

MECHANICAL DIMENSION

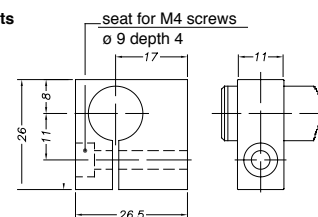
Cable output PME12 F version



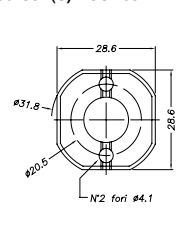
Connector output PME12 C version



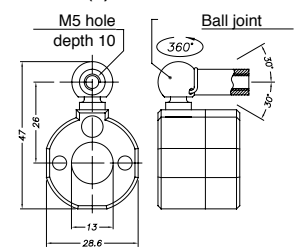
Mounting brackets



Cursor (S) PCUR031



Cursor (B) PCUR033



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 circuit $I_c \leq 0.1 \mu\text{A}$.

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	2	3																		
Max applicable voltage	V	40	60																			
Mechanical stroke CM	mm	C.E.U. + 5																				
Case Lenght (A)	mm	C.E.U. + 65																				

Connector output	Cable Output PME12 F	Cable Output PME12 C
3 (+)	blue	blue
2	yellow	black
1 (-)	brown	brown

Diagram labels: C.E.U., C.E.T., C.M., Connection side, PME12C output.

Displacement transducer

3-pole connector output M8 **C**

PUR 3-pole cable output 1m **F**

Model

PCUR031 cursor (Standard)	S
PCUR033 cursor (Joint)	B

Ex.: **PME-12-F-0400-S 0000X000XX00XXX**

PME 12 displacement transducer, cable output, useful electrical stroke (C.E.U.) 400 mm, PCUR031 cursor, no certificate attached, cable length 1 m.

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

PME mounting kit, brackets (2 pieces included in the confection)	STA001
Standard magnetic cursor or (1 pieces included in the confection)	PCUR031
Jointed magnetic cursor (1 pieces included in the confection)	PCUR033

Female connector + 2 m wired PVC cable	CAV010
---	---------------

The graph shows a linear relationship between acceleration and error. The x-axis represents acceleration in g, ranging from 0 to 22 with major ticks every 2 units. The y-axis represents error in mm, ranging from 0 to 2 with major ticks every 0.2 units. A single data series is plotted as a solid black line starting at (0,0) and ending at approximately (22, 1.8).

Acceleration (g)	Error (mm)
0	0.0
2	0.16
4	0.32
6	0.48
8	0.64
10	0.80
12	0.96
14	1.12
16	1.28
18	1.44
20	1.60
22	1.76

GEFRAN