GEFRAN

PME12

RECTILINEAR DISPLACEMENT TRANSDUCER WITH MAGNETIC DRAG

Main features

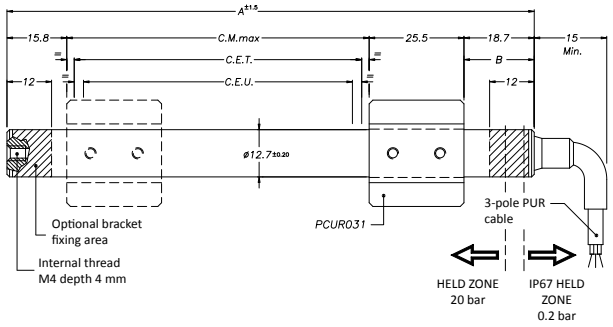
- Rectilinear displacement transducer without drag shaft, completely water-tight (IP67), designed to work in humid environments (CEI EN 60529)
- The PME series has an external magnetic actuator linked to an internal measurement cursor
- The magnetic cursor replaces the drag shaft used in traditional 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

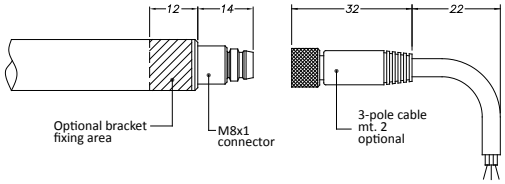
Useful electical stroke (C.E.U.)	from 50 to 1000 mm (for intermediate strokes see table "Electrical / Mechanical Data")
Independent linearity (within C.E.U.)	see table
Resolution	infinite
Repeatability	≤ 0.08 mm
Hysteresis	≤ 0.25mm
Electrical connection	PME12 F 1 m 3-pole shielded cable PME12 C 3-pole connector M8
Protection level	IP67 (CEI EN 60529)
Life	> 25x10⁶ mstrokes, or > 100x10⁶ maneuvers, whicheverl is less
Displacement speed	≤ 5 m/s
Max. acceleration	≤ 10m/s² 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	±20%
Recommended cursor current	< 0.1 μA
Maximum cursor current in case of bad performances	10mA
Maximum applicable voltage	See table
Electrical isolation	>100MΩ at 500V=, 1bar, 2s
Dielectric strenght	< 100μA at 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W 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	Anodised aluminium, PSU
Material for cursor	POM
Mounting	Brackets with adjustable distance

MECHANICAL DIMENSION

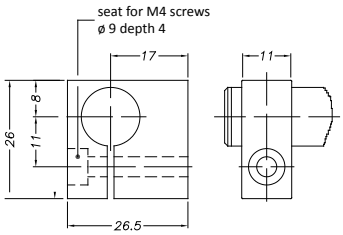
Cable output PME12 F version



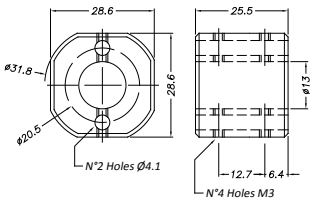
Connector output PME12 C version



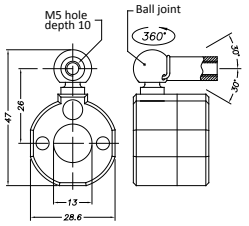
Mouting brackets



Cursor (S) PCUR031



Cursor (B) PCUR033

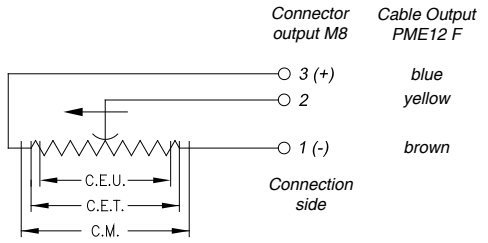


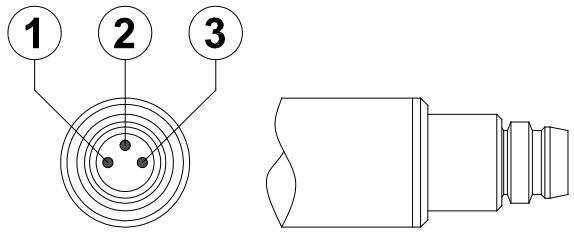
Important: All the data reported in the catalogue linearity and temperature coefficients are valid for sensor utilization as a ratiometric device with a max. current across the cursor circuit Ic ≤ 0.1 μA.

MECHANICAL / ELECTRICAL DATA

MODEL		50	75	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	1,5	2	3																	
Max applicable voltage	V	40	60																			
Mechanical stroke CM	mm	C.E.U. + 5																				
Case Lenght (A)	mm	C.E.U. + 65																				

ELECTRICAL CONNECTIONS





PME12C output

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 external magnetic cursor PCUR031 hooks onto the internal cursor of the sensor, it is necessary to insert and position it at the minimum coupling height of 29mm with respect to the electrical output.

ORDER CODE

Displacement transducer **P M E 1 2** □ □ □ □ □ □

3-pole connector output M8	**C**
PUR 3-pole cable output 1m	**F**

Model

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

0 0 0 0 x 0 0 0 x x □ □ **x x x**

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**

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.

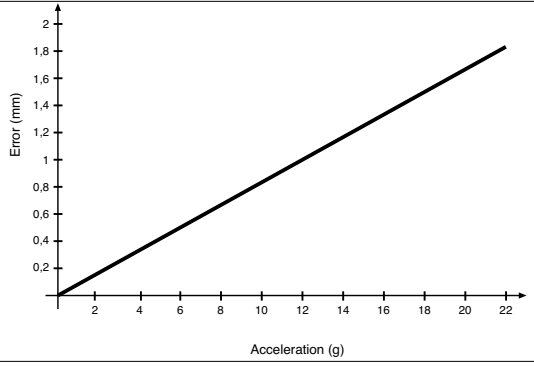
ACCESSORIES

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**

ACCESSORIES (on request)

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

TRACKING ERROR



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

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