



Main features

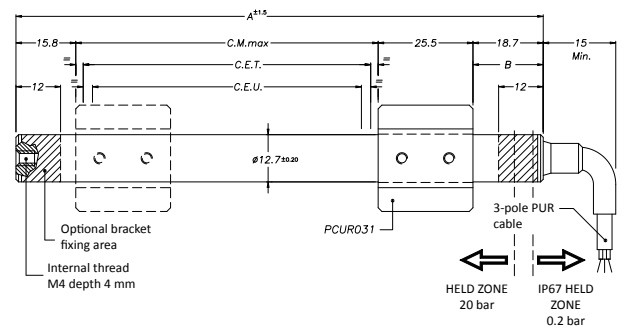
- Rectilinear displacement transducer without drag shaft, completely water-tight (IP67), designed to work in humid environments (CEI EN 60529)
- The PME series has an external magnetic actuator linked to an internal measurement cursor
- The magnetic cursor replaces the drag shaft used in traditional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

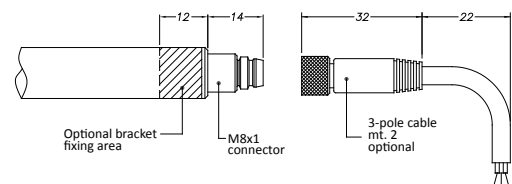
| | |
|--|---|
| Useful electrical stroke (C.E.U.) | from 50 to 1000 mm (for intermediate strokes see table "Electrical / Mechanical Data") |
| Independent linearity (within C.E.U.) | see table |
| Resolution | infinite |
| Repeatability | ≤ 0.08 mm |
| Hysteresis | ≤ 0.25mm |
| Electrical connection | PME12 F 1 m 3-pole shielded cable PME12 C 3-pole connector M8 |
| Protection level | IP67 (CEI EN 60529) |
| Life | > 25x10 ⁶ mstrokes, or > 100x10 ⁶ maneuvers, whichever is less |
| Displacement speed | ≤ 5 m/s |
| Max. acceleration | ≤ 10m/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 | ±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 strength | < 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

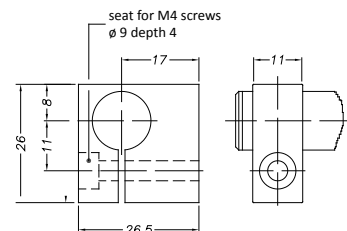
Cable output PME12 F version



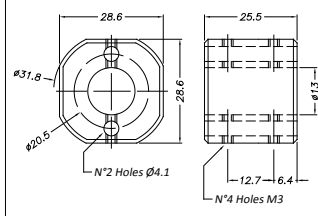
Connector output PME12 C version



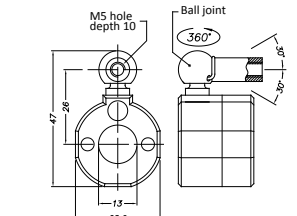
Mounting brackets



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 $I_c \leq 0.1$ mA.

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 Length (A) | mm | C.E.U. + 65 | | | | | | | | | | | | | | | | | | | | | |

ELECTRICAL CONNECTIONS

Connector output M8
Cable Output PME12 F

3 (+)
2
1 (-)

blue
yellow
brown

Connection side

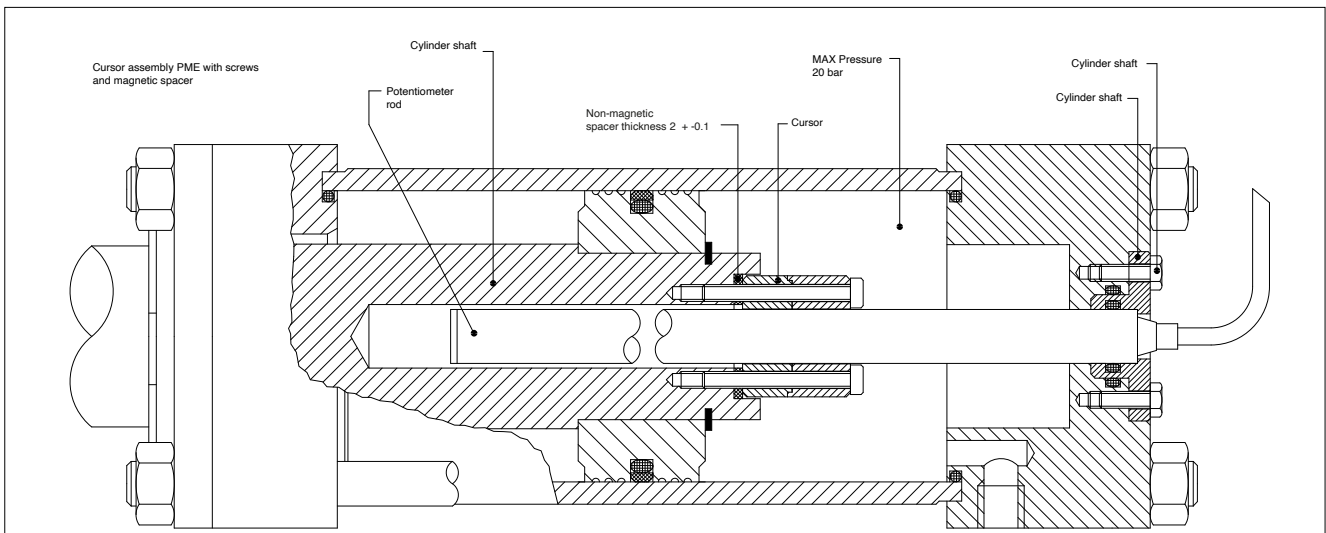
C.E.U.
C.E.T.
C.M.

PME12C output

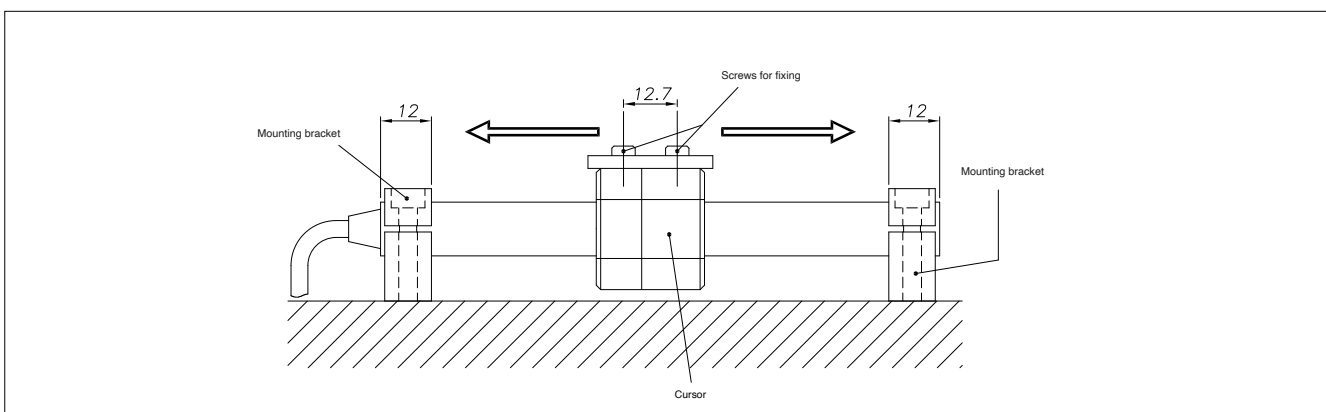
INSTALLATION INSTRUCTIONS

- 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.

INSTALLATION INSIDE THE CYLINDER



INSTALLATION WITH ACCESSORY BRACKETS



ORDER CODE

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|----------|----------|----------|----------|----------|--|--|--|--|--|--|--|--|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|----------|----------|----------|
| Displacement transducer | P | M | E | 1 | 2 | | | | | | | | | 0 | 0 | 0 | 0 | x | 0 | 0 | 0 | x | x | | | x | x | x |
| 3-pole connector output M8 | C | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PUR 3-pole cable output 1m | F | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Model | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCUR031 cursor (Standard) | S | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PCUR033 cursor (Joint) | B | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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.

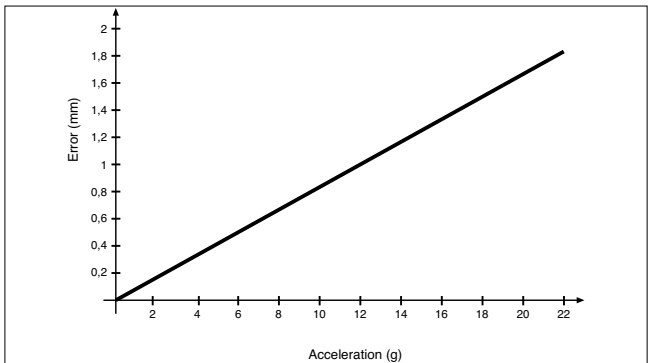
ACCESSORIES

| | |
|--|----------------|
| 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