



#### Principal characteristics

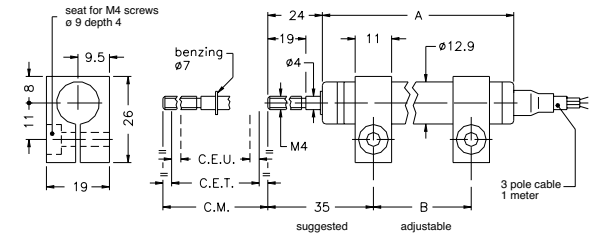
- The 1/2" cylindrical housing, plus the option of all fastening systems (brackets, joints or flange), makes the PZ12 series highly versatile for a wide range of applications.
- The optimized mechanical structure makes the product suitable for developing various special executions (contact Gefran customer service for details).
- Installation is simplified by the lack of electrical signal variation at output outside theoretical electrical stroke.
- Ideal for wood and glass working and finishing machines and for car test benches.

#### TECHNICAL DATA

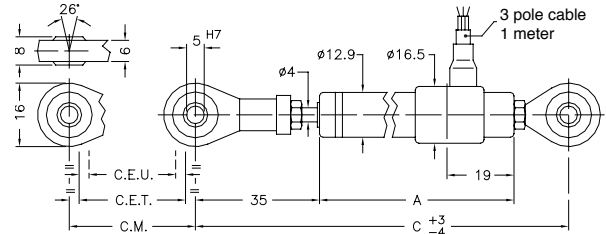
|  |   |
|--|---|
| Useful electrical stroke (C.E.U.)                    | 25/50/75/100/125/150/200/250  |
| Resolution   | infinite  |
| Protection   | IP60  |
| Independent linearity (within C.E.U.)                | see table   |
| Displacement speed                                   | $\leq 10$ m/s   |
| Displacement force                                   | $\leq 0.5$ N  |
| Life   | $>25 \times 10^6$ strokes, or $100 \times 10^6$ operations, whichever is less (within C.E.U.) |
| Vibrations   | 5...2000Hz, $A_{max} = 0,75$ mm<br>amax. = 20 g   |
| Shock  | 50 g, 11ms.   |
| Tolerance on resistance                              | $\pm 20\%$  |
| Recommended cursor current                           | $< 0,1 \mu A$   |
| Maximum cursor current                               | 10mA  |
| Max. applicable voltage                              | see table   |
| Electrical isolation                                 | $>100M\Omega$ at 500V=, 1bar, 2s  |
| Dielectric strength                                  | $< 100 \mu A$ at 500V~, 50Hz, 2s, 1bar  |
| Dissipation at 40°C (0W at 120°C)                    | see table   |
| Actual Temperature Coefficient of the output voltage | $< 1,5ppm/^{\circ}C$  |
| Working temperature                                  | -30...+100°C  |
| Storage temperature                                  | -50...+120°C  |
| Case material  | Anodised aluminium Nylon 66 G 25  |
| Control rod material                                 | Stainless steel AISI 303  |
| Fixing   | Brackets, selfaligning ball-joints or flange  |

#### MECHANICAL DIMENSIONS

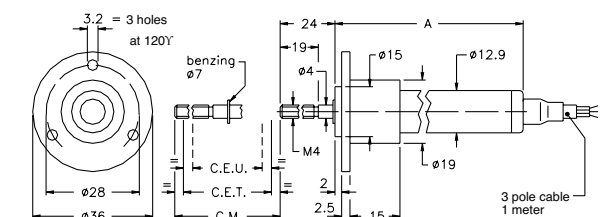
##### PZ12-S



##### PZ12-A



##### PZ12-F



**Important:** all the data reported in the catalogue linearity, lifetime, temperature coefficient are valid for a sensor utilization as a ratiometric device with a max current across the cursor  $I_c \leq 0.1 \mu A$ .

## MECHANICAL / ELECTRICAL DATA

| MODEL                                      |               | 25        | 50   | 75   | 100   | 125   | 150   | 200   | 250   |       |
|--|---------------|-----------|------|------|-------|-------|-------|-------|-------|-------|
| Useful electrical stroke (C.E.U.) + 1 / -0 | mm            | 25        | 50   | 75   | 100   | 125   | 150   | 200   | 250   |       |
| Theoretical electrical stroke (C.E.T.) ± 1 | mm            | C.E.U. +1 |      |      |       |       |       |       |       |       |
| Resistance (C.E.T.)                        | kΩ            | 1         | 2    | 3    | 4     | 5     | 6     | 8     | 6     |       |
| Independent linearity (within C.E.U.)      | ± %           | 0,2       | 0,1  | 0,1  | 0,1   | 0,05  | 0,05  | 0,05  | 0,05  |       |
| Dissipation at 40°C (0W at 120°C)          | W             | 0,5       | 1    | 1,5  | 2     | 2,5   | 3     | 3     | 3     |       |
| Maximum applicable voltage                 | V             | 20        | 40   | 60   |       |       |       |       |       |       |
| Mechanical stroke (C.M.)                   | mm            | C.E.U. +5 |      |      |       |       |       |       |       |       |
| Case length (A)                            | mod. PZ12 - S | mm        | 74,5 | 99,5 | 124,5 | 149,5 | 174,5 | 199,5 | 249,5 | 299,5 |
|  | mod. PZ12 - A | mm        | 102  | 127  | 152   | 177   | 202   | 227   | 277   | 327   |
|  | mod. PZ12 - F | mm        | 74,5 | 99,5 | 124,5 | 149,5 | 174,5 | 199,5 | 249,5 | 299,5 |
| Recommended distance between brackets (B)  | mm            | 42        | 67   | 92   | 117   | 142   | 167   | 217   | 267   |       |
| Minimum distance between ball-joints (C)   | mm            | 153       | 178  | 203  | 228   | 253   | 278   | 328   | 378   |       |
| Weight                                     | mod. PZ12 - S | g         | 45   | 55   | 65    | 75    | 85    | 95    | 115   | 135   |
|  | mod. PZ12 - A | g         | 70   | 80   | 90    | 100   | 110   | 120   | 140   | 160   |
|  | mod. PZ12 - F | g         | 60   | 70   | 80    | 90    | 100   | 110   | 130   | 150   |

## ELECTRICAL CONNECTIONS

Connection side

### INSTALLATION INSTRUCTIONS

- Respect the indicated 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 beyond 99% of the supply voltage.

## ORDER CODE

Displacement transducer **PZ12**

|                                      |          |
|--------------------------------------|----------|
| Mounting by brackets                 | <b>S</b> |
| Mounting by selfaligning ball-joints | <b>A</b> |
| Mounting by flange                   | <b>F</b> |

Model

|                                 |          |
|---------------------------------|----------|
| No certificate attached         | <b>0</b> |
| Linearity curve to be attached  | <b>L</b> |
| Cable length 1 mt               | <b>0</b> |
| Cable length 2 mt               | <b>2</b> |
| Cable length 3 mt               | <b>3</b> |
| Other lengths on request        | ....     |
| Colour of plastic heads (green) | <b>0</b> |
| Colour of plastic heads (black) | <b>N</b> |

Example: **PZ12 - S - 25**  
Displacement transducer model PZ12, mounting by brackets, useful electrical stroke (C.E.U.) 25mm

## ACCESSORIES

|  | Code          |
|--|---------------|
| Mounting brackets for PZ12-S (2 pieces included in the confection) | <b>STA074</b> |

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