



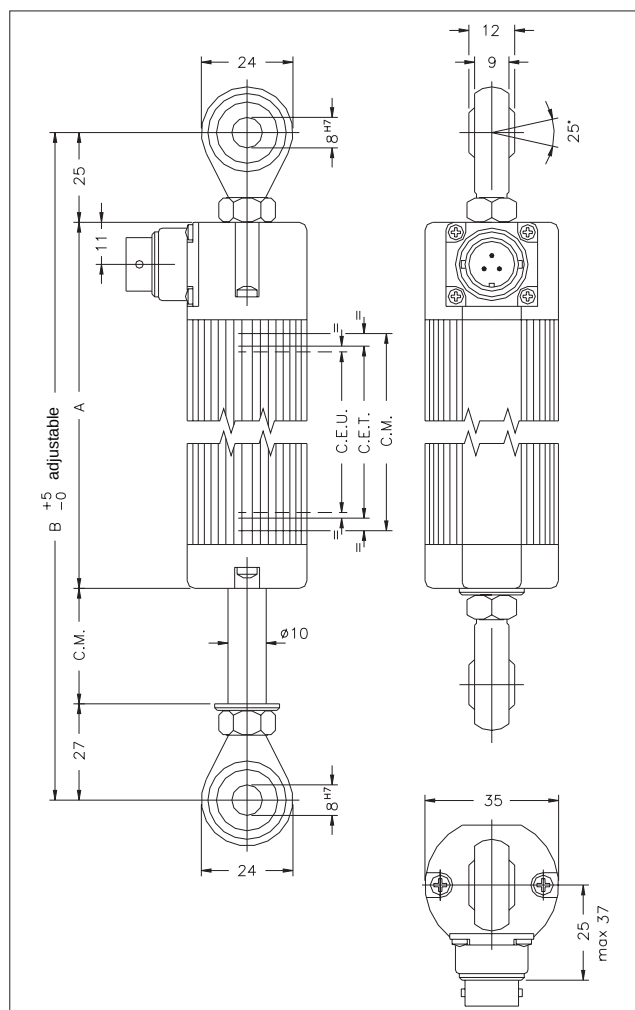
### Main features

- 50 to 750 mm. stroke
- Mechanical fixing and selfaligning linkage using 2 ball-joints
- Maximum angular movement up to  $\pm 30^\circ$
- Independent linearity  $\pm 0,05\%$
- Repetibility 0,01 mm.
- Infinite resolution
- No variation of electrical signal outside theoretical electrical stroke
- Displacement speed up to 5 m/s
- Working temperature:  $-30...+100^\circ\text{C}$
- Electrical connections:  
PC H 3-pole connector  
PC M 4-pole connector to standard DIN43650-ISO4400  
PC B 5-pole connector (DIN43322)  
PC F 3-pole screened cable (1 m length)
- Life duration:  $> 25 \times 10^6$  meters or  $> 100 \times 10^6$  operations, whichever is the smaller (within C.E.U.)
- Grade of protection IP65

### TECHNICAL DATA

|                                                                |                                                                                   |
|----------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Useful electrical stroke (C.E.U.)                              | 50/100/130/150/175/200/225/275/300/375/400/450/500/600/750                        |
| Independent linearity (within C.E.U.)                          | $\pm 0,05\%$                                                                      |
| Displacement speed                                             | $\leq 5 \text{ m/s}$                                                              |
| Displacement force                                             | $\leq 10 \text{ N}$                                                               |
| Vibrations                                                     | 5...2000Hz, $A_{\text{max}} = 0,75 \text{ mm}$<br>$a_{\text{max}} = 20 \text{ g}$ |
| Shock                                                          | 50 g, 11ms.                                                                       |
| Tolerance on resistance                                        | $\pm 20\%$                                                                        |
| Recommended cursor current                                     | $< 0,1 \mu\text{A}$                                                               |
| Maximum cursor current                                         | 10mA                                                                              |
| Maximum applicable voltage                                     | 60V                                                                               |
| Electrical isolation                                           | $> 100 \text{ M}\Omega$ at 500V=, 1bar, 2s                                        |
| Dielectri strength                                             | $< 100 \mu\text{A}$ at 500V~, 50Hz, 2s, 1bar                                      |
| Dissipation at $40^\circ\text{C}$ (0W at $120^\circ\text{C}$ ) | 3W                                                                                |
| Temp. Coeffi. of the resistance                                | $-200 \pm 200 \text{ ppm}/^\circ\text{C}$                                         |
| Actual Temperature Coefficient of the output voltage           | $< 1,5 \text{ ppm}/^\circ\text{C}$                                                |
| Working temperature                                            | $-30...+100^\circ\text{C}$                                                        |
| Storage temperature                                            | $-50...+120^\circ\text{C}$                                                        |
| Case material                                                  | Anodised aluminium<br>Nylon 66 GF 40                                              |
| Control rod material                                           | Stainless steel<br>AISI 303                                                       |
| Fixing                                                         | 2 selfloading and selfaligning ball-joints                                        |

### MECHANICAL DIMENSIONS

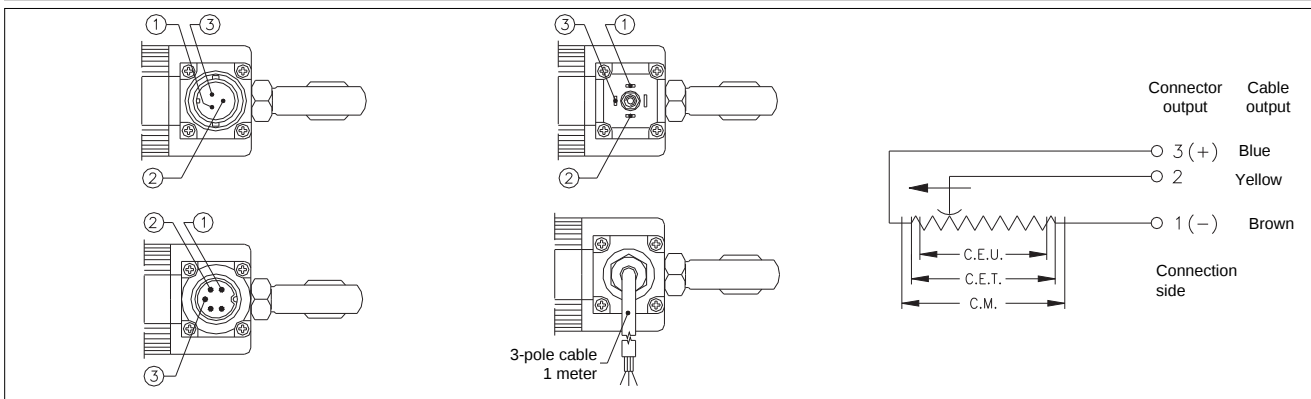


**Important:** all the data reported in the catalogue linearity, lifetime, temperature coefficient are valid for a sensor utilization as a ratiometric device with a max current across the cursor  $I_c \leq 0.1 \mu\text{A}$ .

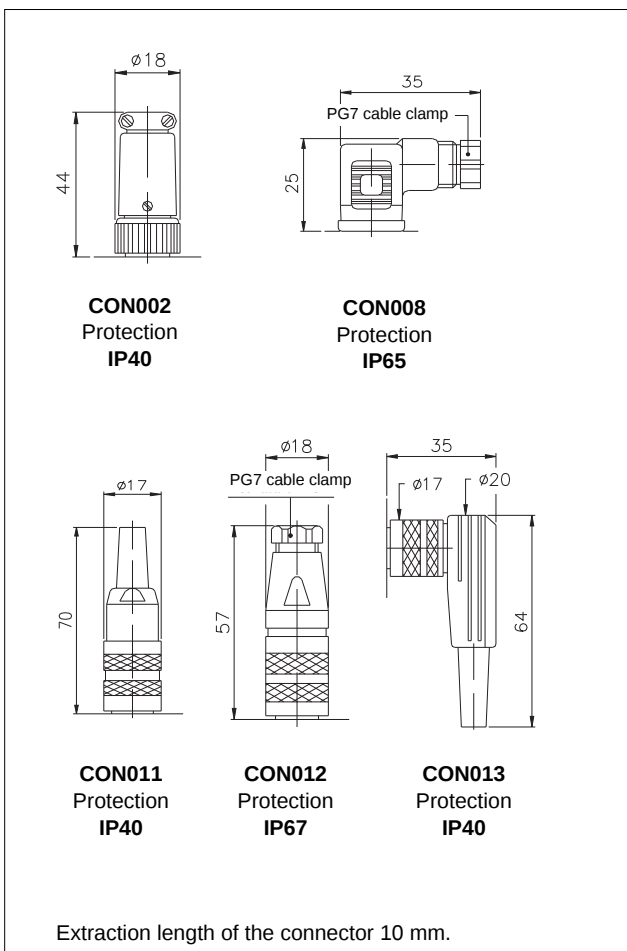
## MECHANICAL / ELECTRICAL DATA

| MODEL                                          |            | 50           | 100 | 130 | 150 | 175 | 200          | 225 | 275 | 300 | 375 | 400 | 450 | 500 | 600 | 750 |
|------------------------------------------------|------------|--------------|-----|-----|-----|-----|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Useful electrical stroke (C.E.U.) +3/-0        | mm         | 50           | 100 | 130 | 150 | 175 | 200          | 225 | 275 | 300 | 375 | 400 | 450 | 500 | 600 | 750 |
| Theoretical electrical stroke (C.E.T.) $\pm 1$ | mm         | C.E.U. + 3   |     |     |     |     | C.E.U. + 4   |     |     |     |     | 380 | 406 | 457 | 508 | 762 |
| Resistance (C.E.T.)                            | k $\Omega$ | 5            |     |     |     |     | 5            |     |     |     |     | 5   | 5   | 5   | 5   | 10  |
| Mechanical stroke (C.M.)                       | mm         | C.E.U. + 9   |     |     |     |     | C.E.U. + 10  |     |     |     |     | 386 | 412 | 463 | 518 | 772 |
| Case length (A)                                | mm         | C.E.U. + 129 |     |     |     |     | C.E.U. + 130 |     |     |     |     | 512 | 538 | 589 | 664 | 918 |
| Min. distance between ball-joints (B)          | mm         | C.E.U. + 181 |     |     |     |     | C.E.U. + 182 |     |     |     |     | 564 | 590 | 641 | 716 | 970 |

## ELECTRICAL CONNECTIONS



## OPTIONAL ACCESSORIES



## ORDER CODE

Displacement transducer

PC

|                                             |          |
|---------------------------------------------|----------|
| 3-pole connector output                     | <b>H</b> |
| 4-pole connector output<br>DIN43650 ISO4400 | <b>M</b> |
| 5-pole connector output<br>DIN45322         | <b>B</b> |
| 3-pole PVC cable output<br>3x0,25 1m        | <b>F</b> |

Model

If requested, it is possible to supply models with non-standard mechanical and/or electrical features.

Example: **PC - M - 275**

Displacement transducer model PC, 4 pole connector output DIN43650 - ISO 4400, useful electrical stroke (C.E.U.) 275mm.

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



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