

# GEFRAN

## PY3

### RECTILINEAR DISPLACEMENT TRANSDUCER WITH BEARING TIP



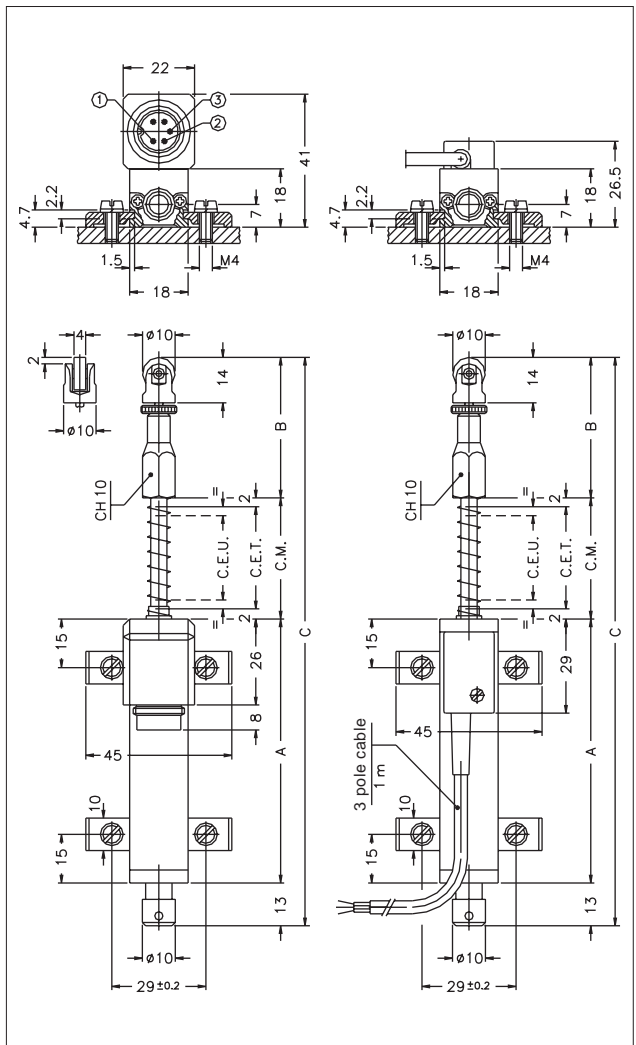
#### Main features

- 10 to 50 mm. stroke
- Double support of the control rod and return spring
- Tip with M2.5 thread and stainless steel precision bearing
- Independent linearity up to  $\pm 0,1\%$
- Infinite resolution
- No variation of electrical signal outside theoretical electrical stroke
- Inhibited rotation of the control rod
- Displacement speed up to 10 m/s
- Working temperature:  $-30...+100^{\circ}\text{C}$
- Electrical connections:  
PY3 F 3-pole 1m. screened cable 1m.  
PY3 C 5-pole connector DIN43322
- Life duration:  $> 100 \times 10^6$  operations (within C.E.U.)
- Grade of protection IP40
- Suitable for use in explosive environments with presence of gas (groups IIA, IIB, IIC) and combustible powders.  
Standards for simple device:  
ATEX CEI EN 50020 2003 - paragraph 5.4 a

#### TECHNICAL DATA

Useful electrical stroke (C.E.U.)	10/25/50
Independent linearity (within C.E.U.)	see table
Displacement speed	$\leq 10$ m/s
Displacement force	$\leq 4$ N
Vibrations	5...2000Hz, $A_{max} = 0,75$ mm $a_{max} = 20$ 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	see table
Electrical isolation	$> 100\text{M}\Omega$ at 500V~, 1bar, 2s
Dielectric strength	$< 100 \mu\text{A}$ at 500V~, 50Hz, 2s, 1bar
Dissipation at 40°C (0W at 120°C)	see table
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 Nylon 66 G25
Control rod material	Stainless steel AISI 303
Fixing	Brackets with variable longitudinal axis

#### 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		10	25	50
Useful electrical stroke (C.E.U.) +1/-0	mm	10	25	50
Theoretical electrical stroke (C.E.T.) ±1	mm	C.E.U. + 1		
Resistance (C.E.T.)	kΩ	1	1	5
Independent linearity (within C.E.U.)	± %	0,3	0,2	0,1
Dissipation at 40° (0W at 120°C)	W	0,2	0,6	1,2
Maximum applicable voltage	V	14	25	60
Mechanical stroke (C.M.)	mm	C.E.U. + 5		
Case length (A)	mm	C.E.U. + 38		
Tip length (B)	mm	43	43	51
Total length (C)	mm	119	149	207

## ACCESSORIES

### STANDARD ACCESSORIES

Fixing kit for PY3:

4 brackets, M4x10 screws, grower

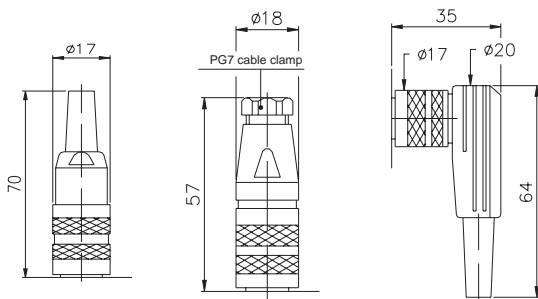
Bearing tip

### Code

**PKIT005**

**PTAS001**

### OPTIONAL ACCESSORIES



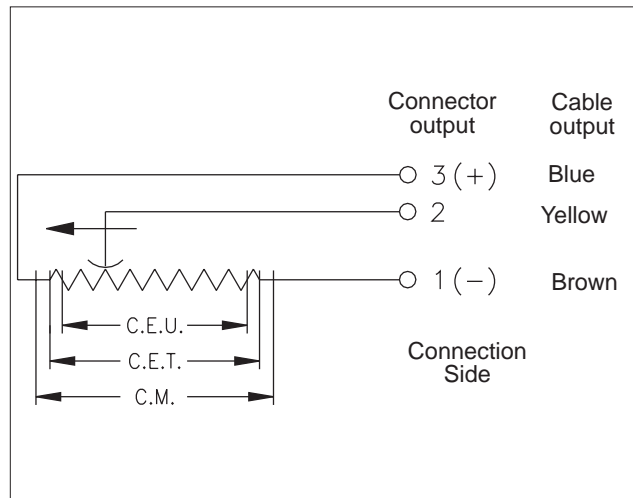
**CON011 - IP40 Prot.**  
(5 pole Female conn.)

**CON012 - IP67 Prot.**  
(5 pole Female conn.)

**CON013 - IP40 Prot.**  
(5 pole Female conn.)

Extraction length of the connector 10 mm.

## ELECTRICAL CONNECTIONS



## ORDER CODE

Displacement transducer

**PY3**

Cable output

**F**

Connector output  
DIN43322

**C**

Model

3-pole PVC cable output  
3 x 0,25 1m

**S**

Connector  
output

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

Example: **PY3 - C - 50**

Displacement transducer model PY3, 5-pole connector output, useful electrical stroke (C.E.U.) 50mm.

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

**GEFRAN**

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