**PY3** RECTILINEAR DISPLACEMENT TRANSDUCER WITH BEARING TIP



#### Principal characteristics

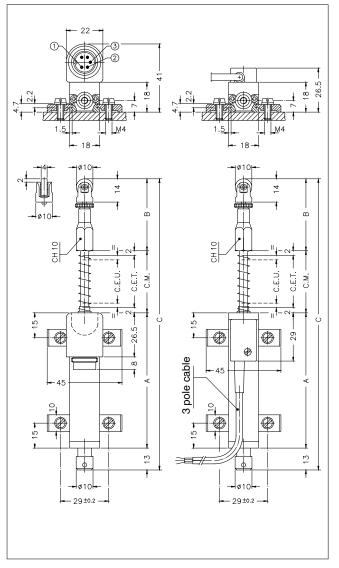
- The side connection creates a through-rod structure with double rod support, guaranteeing greater overall strength of the transducer.
- The return spring automatically returns the rod to zero position, making the transducer suitable for comparator applications.
- The tip with roller bearing is suitable for applications where the object to be measured may be subject to shifts transverse to the transducer axle (shaft is prevented from rotating).
- Ideal for checking the flatness or thickness of panels of various materials. Can also be used for valves or mechanical parts when the rod cannot be attached to the moving object.

#### **TECHNICAL DATA**

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Useful electrical stroke (C.E.U.)	from 10 to 100 mm (for intermediate strokes see table "Electrical / Mechanical Data")		
Resolution	Infinite		
Independent linearity (within C.E.U.)	see table		
Displacement speed	≤ 10 m/s		
Displacement force	≤ 4 N		
Protection level	IP40		
Life	>25x10 <sup>e</sup> m strokes,or 100x10 <sup>e</sup> operations, whichever is less (within C.E.U.)		
Vibrations	52000Hz, Amax =0,75 mm amax. = 20 g		
Shock	50 g, 11ms.		
Tolerance on resistance	± 20%		
Recommended cursor current	< 0,1 µA		
Maximum cursor current	10mA		
Maximum applicable voltage	see table		
Electrical isolation	>100MΩ a 500V=, 1bar, 2s		
Dielectric strength	< 100 µA a 500V~, 50Hz, 2s, 1bar		
Dissipation at 40°C (0W at 120°C)	see table		
Actual Temperature Coefficient of the output voltage	< 1,5ppm/°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 with variable longitudinal axis		

#### **MECHANICAL DIMENSIONS**

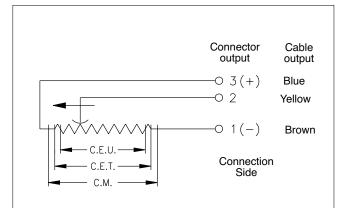


Important: all the data reported in the catalogue linearity, lifetime, temperature coefficient are valid for a sensor utilization as a ratiometric device with a max current across the cursor lc  $\leq$  0.1  $\mu$ A.

## **MECHANICAL / ELECTRICAL DATA**

Model		10	25	50	75	100
Useful electrical stroke (C.E.U.) +1/-0	mm	10	25	50	76	101
Theoretical electrical stroke (C.E.T.) ±1	mm	C.E.U. +1				
Resistance (C.E.T.)	kΩ	1 5				
Independent linearity (within C.E.U.)	± %	0.3	0.2 0.07 0.1		.1	
Dissipation at 40° (0W at 120°C)	W	0.2	0.6	1.2	1.8	2.4
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 51				
Total length (C)	mm	119	149	207	262	318

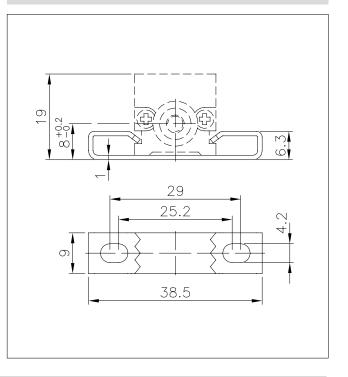
#### **ELECTRICAL CONNECTIONS**



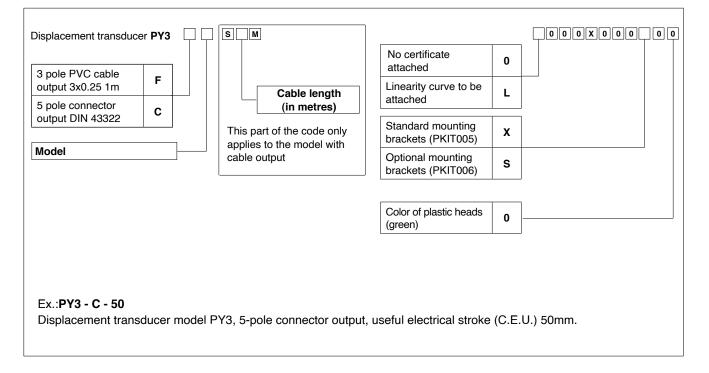
### INSTALLATION INSTRUCTIONS

- 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.

### **OPTIONAL FIXING KIT PKIT006**



#### ORDER CODE



# A 0050000150

ACCESSORIES	
STANDARD ACCESSORIES	
Fixing kit: 4 brackets, M4x10 screws, washer	PKIT005
Fixing kit: 2 "wraparound" brackets (0000X000S00 configurator option)	PKIT006
Bearing tip	PTAS001
OPTIONAL ACCESSORIES	
5-pin axial female PCB connector DIN43322 IP40 clamp for wire ø4 - ø6 mm	CON011
5-pin axial female PCB connector DIN43322 IP65 clamp PG7 for wire ø4 - ø6 mm	CON012
5-pin 90° radial female PCB connector DIN43322 IP40 clamp for wire ø4 - ø6 mm	CON013

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



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