GEFRAN PA1 RECTILINEAR DISPLACEMENT TRANSDUCER



#### Principal characteristics

- The transducer's compactness makes it suitable for installation in small spaces and for detecting small shifts.
- The joint with up-take of slack and M4 threading provides greater tolerances in movement.
- Installation is simplified by the lack of electrical signal variation at output outside theoretical electrical stroke.
- Ideal for small mechanical devices, valves, and test tools and benches.

#### **TECHNICAL DATA**

Useful electrical stroke (C.E.U.)	25/50/75/100/125/150			
Resolution	Infinite			
Independent linearity	see table			
(within C.E.U.)				
Displacement speed	≤ 5 m/s			
Displacement force	≤ 1.2 N			
Life	>25x10 <sup>e</sup> m strokes,or			
	100x10 <sup>6</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	< 0.1 µA			
current	- ,			
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	see table			
(0W at 120°C)				
Actual Temperature Coefficient	< 1,5ppm/°C			
of the output voltage	2-11 · · ·			
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			

#### **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  $lc \le 0.1 \ \mu$ A.

# **MECHANICAL / ELECTRICAL DATA**

MODEL		25	50	75	100	125	150		
Useful electrical stroke (C.E.U.) +1/-0	mm	25	50	75	100	125	150		
Theoretical electrical stroke (C.E.T.) ±1	mm	C.E.U. +1							
Resistance (sulla C.E.T.)	kΩ	1	5	5	5	5	5		
Independent linearity (within C.E.U.)	± %	0,2	0,1	0,1	0,1	0,05	0,05		
Dissipation at 40°C (0W at 120°C)	W	0,6	1,2	1,8	2,5	3	3,6		
Maximum applicable voltage	V	25 60							
Mechanical stroke (C.M.)	mm	C.E.U. +5							
Case length (A)	mm	C.E.U. +49,5							
Total length (B)	mm	113,2	163,2	213,2	263,2	313,2	363,2		

# **ELECTRICAL CONNECTIONS**

# Connector output O 3 (+) Blue O 2 Yellow C.E.U. C.E.T. C.M. 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



## Ex.:PA1 - C - 100

Displacement transducer model PA1, 5 pole connector output, useful electrical stroke (C.E.U.) 100mm

### ACCESSORIES

STANDARD ACCESSORIES	
Fixing kit for PA1: 4 brackets, M4x10 screws, grower	PKIT005
Coupling joint	PKIT020
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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