



# PY1

## RECTILINEAR DISPLACEMENT TRANSDUCER



### Features Include:

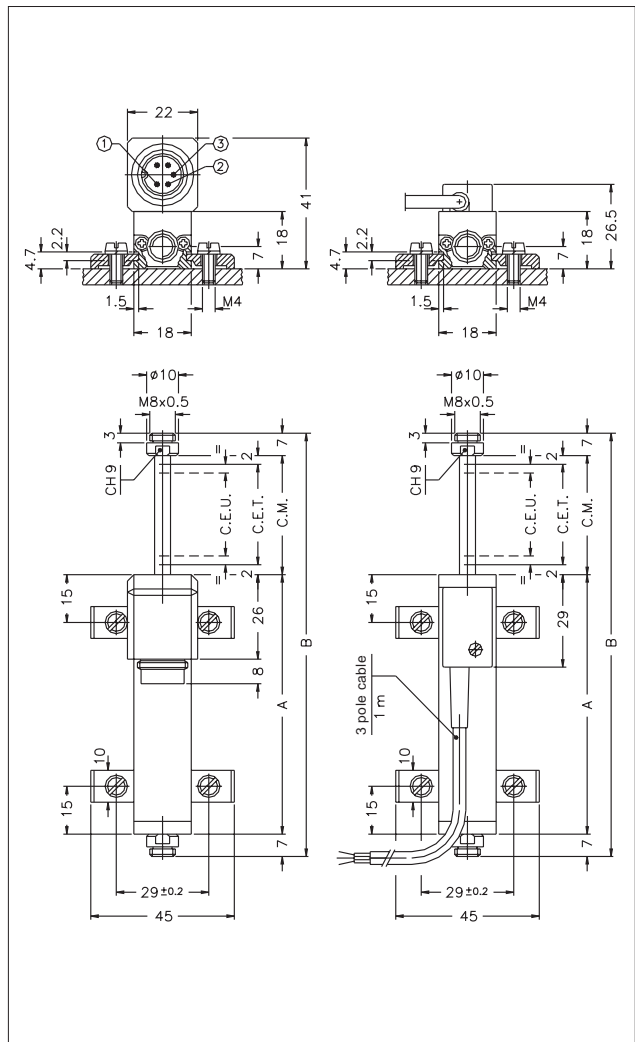
- 25 to 150 mm. stroke
- Mechanical linkage using joint with take up of play, M4 thread
- Independent linearity up to  $\pm 0,05\%$
- Infinite resolution
- No variation of electrical signal outside theoretical electrical stroke
- Displacement speed up to 10 m/s
- Working temperature:  $-30...+100^{\circ}\text{C}$
- Electrical connections:  
 PY1 F 3 wire 1m screened cable  
 PY1 C 5-pole connectors DIN43322
- Life duration:  $> 100 \times 10^6$  operations (within C.E.U.)
- Double support of the control rod
- Grade of protection IP40

### TECHNICAL DATA

Useful electrical stroke (C.E.U.)	25/50/75/100/150
Independent linearity (within C.E.U.)	see table
Displacement speed	$\leq 10$ m/s
Displacement force	$\leq 0.30\text{N}$
Vibrations	5...2000Hz, $A_{\text{max}} = 0,75$ mm $a_{\text{max}} = 20$ 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

**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  $I_c \leq 0.1 \mu\text{A}$ .

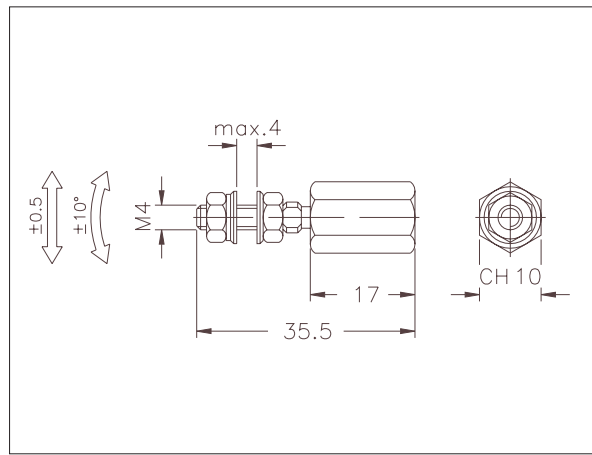
### MECHANICAL DIMENSIONS



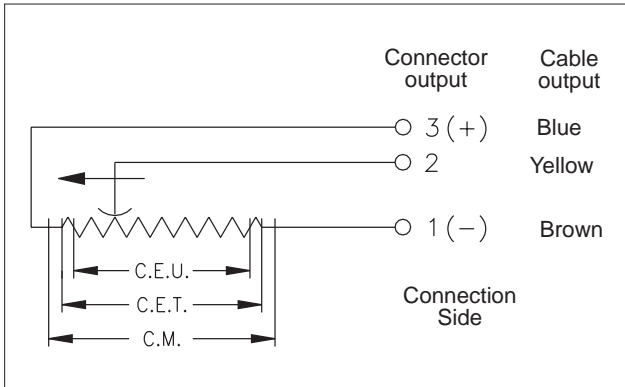
## MECHANICAL / ELECTRICAL DATA

MODEL		25	50	75	100	150
Useful electrical stroke (C.E.U.) +3/-0	mm	25	50	75	100	150
Theoretical electrical stroke (C.E.T.) ±1	mm	C.E.U. + 1				
Resistance (C.E.T.)	kΩ	1	5	5	5	5
Independent linearity (within C.E.U.)	± %	0,2	0,1	0,1	0,1	0,05
Dissipation at 40° (0W at 120°C)	W	0,6	1,2	1,8	2,5	3,6
Maximum applicable voltage	V	25	60			
Mechanical stroke (C.M.)	mm	C.E.U. + 5				
Case length (A)	mm	C.E.U. + 38				
Total length (B)	mm	107	157	207	257	357

## COUPLING JOINT



## ELECTRICAL CONNECTIONS



## ORDER CODE

Displacement transducer **PY1**

Cable output	<b>F</b>
Connector output DIN43322	<b>C</b>

**Model**

3-pole PVC cable output 3x0,25 1meter	<b>S</b>
Connector output	<b>----</b>

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

**Example: PY1 - C - 100**  
Displacement transducer model PY1, 5-pole connector output, useful electrical stroke (C.E.U.) 100mm.

## ACCESSORIES

STANDARD ACCESSORIES	Code
Fixing kit for PY1 4 brackets, M4x10 screws, grower	<b>PKIT005</b>
Coupling joint	<b>PKIT020</b>

OPTIONAL ACCESSORIES	Code
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 10mm.

## Measurement & Control Technology

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