Precision Rotative Transducers, Conductive Plastic, Economic Series (ECO)

FEATURES

- Size 05 - 09 - 13
- Reasonable Cost
- Long Life
- Accuracy ± 1% down to ± 0.25%
- Bush or Servo Mounting
- Rear Mounted Terminals
- Following MIL-R-39023 and NFC 93-255 requirements

The “ECO” models are a comprehensive range of rotational motion transducers for industrial applications.

All mechanical and electrical parameters can be adapted to meet your specifications.

SIZE	05		09			13		
MODEL	50 ES	50 CB	78 ES	78 CS	78 CB	156 ES	156 CS	156 CB

ELECTRICAL SPECIFICATIONS								
Theoretical electrical angle (TEA)	actual electrical angle (AEA) - 2°							
Independent linearity (over TEA)	A ≤ ± 1%		B ≤ ± 0.5%			C ≤ ± 0.25%		
Actual electrical angle (AEA)	330° ± 5°		340° ± 5°			350° ± 3°		
Ohmic values (R_T)	1kΩ - 5kΩ - 10kΩ - on request other values							
Ohmic value tolerances at 20°C	± 10%	± 20 %	± 10%	± 20%		± 10%	± 20%	
Output smoothness	≤ 0.05%							
Maximum power rating at 70°C	0.2W		0.3W			0.5W		
Wiper current	recommended: a few µA - 1mA max. (continuous)							
Tap (current or voltage)	NA		1 on request					
Resistance load on wiper	minimum 10^3 x R_T							
End voltage	≤ 0.2%	≤ 0.5%	≤ 0.2%	≤ 0.5%		≤ 0.2%	≤ 0.5%	
Insulation resistance	≥ 1000MΩ, 500VDC							
Dielectric strength	≥ 500VRMS, 50Hz							

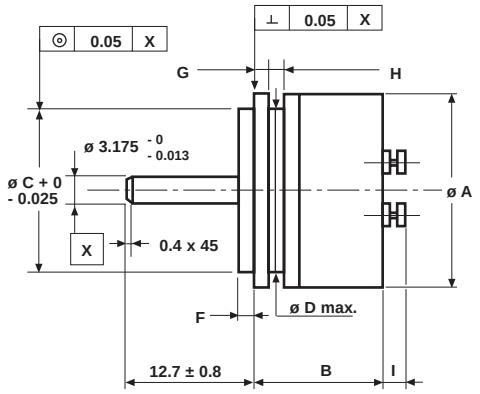
MECHANICAL SPECIFICATIONS								
Mechanical angle (MA)	360° continuous							
on request: stops	NA		340° ± 3°			350° ± 3°		
Mounting type	servo	bushing	servo		bushing	servo		bushing
Shaft guiding	ball	sleeve	ball	sleeve		ball	sleeve	
	bearings	bearings	bearings	bearings		bearings	bearings	
Shaft	stainless steel							
Housing	plastic moulding							
Termination	turrets							
Wiper	precious metal multi-finger contact							
Starting torque (N.cm)	≤ 0.2	≤ 0.5	≤ 0.2	≤ 0.5		≤ 0.2	≤ 0.5	
Torque on stops (N.cm)	50							
Weight (g)	5 ± 2	8 ± 2	13 ± 2	17 ± 2		29 ± 2	34 ± 2	
Moment of inertia (g. cm²)	≤ 0.5		≤ 1			≤ 2		

PERFORMANCE		
Life (10^6 cycles)	30 (on ES models)	20 (on CS and CB models)
Temperature range	– 55°C, + 125°C	
Climatic category	55 / 125 / 04	
Speed rotation (RPM)	600 (on ES models)	150 (on CS and CB models)
Sine vibration on 3 axes	1.5 mm or 20g from 10Hz to 2000Hz	
Mechanical shocks on 3 axes	50g - 11ms - half sine	

DIMENSIONS in millimeters, general tolerance ± 0.5mm

SIZE 05/09/13

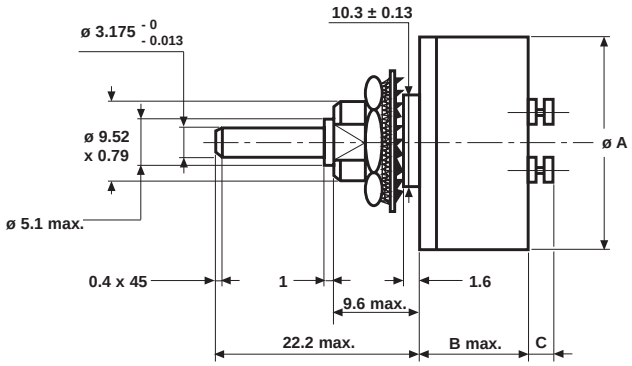
50 ES
78 ES
78 CS
156 ES
156 CS



DIMENSIONS	DESIGNATION	SIZE 05	SIZE 09		SIZE 13	
		50 ES	78 ES	78 CS	156 ES	156 CS
Ø A	Ø housing	12.7	22.2		33.3	
B	length	13.0	13.5		18.0	
Ø C	Ø pilot	9.525	19.05		30.16	
Ø D max.	Ø groove	11.45	19.64		30.9	
F	flange thickness	1 ± 0.1	1.6 ± 0.1			
G	shoulder	1.2 ± 0.1	1.6 ± 0.1			
H	dia. of groove	1.2 ± 0.2	1.5 min.			
I max.	height of the turret	2.5	2.5		3.6	

SIZE 05/09/13

50 CB
78 CB
156 CB



DIMENSIONS	DESIGNATION	SIZE 05	SIZE 09	SIZE 13
		50 CB	78 CB	156 CB
Ø A	Ø housing	12.7	22.2	33.3
B max.	length	11	11,5	16
C max.	height of the turret	2.5	2.5	3.6

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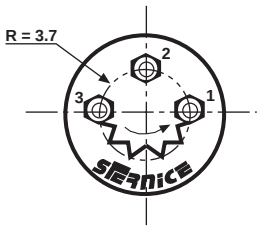
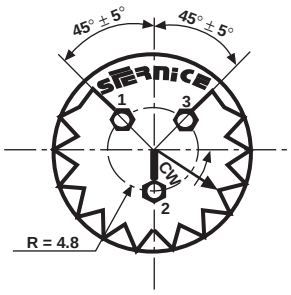
REAR VIEW DIMENSIONS in millimeters, general tolerance ± 0.5mm

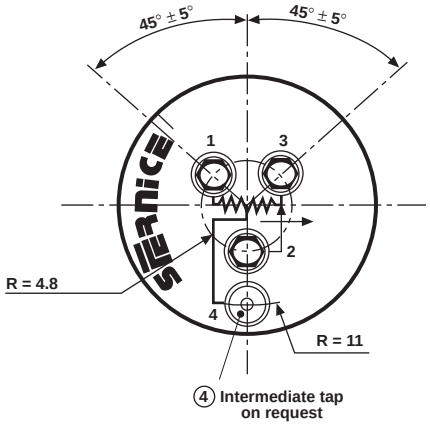
SIZE 05

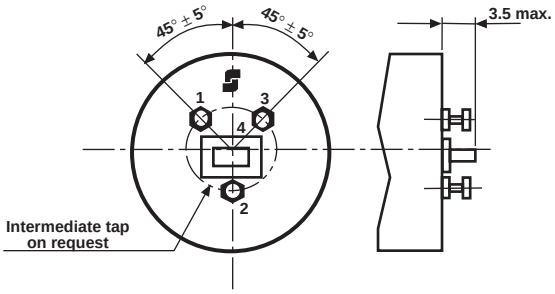


SIZE 09



SIZE 13





ORDERING INFORMATION

ECO	78	E	S	A	T	103	W...
SERIES	MODEL	TYPE	FIXATION	LINEARITY	TAP	OHMIC VALUE	MODIFICATION
		E = Ball bearings C = Sleeve bearings	S: Servo B: Bushing	Code A: ± 1% B: ± 0,5% C: ± 0.25%	on request T: voltage U: current position to be specified	First 2 digits are significant numbers 3rd digit indicates number of zeros	Special feature code number

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