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

Low cost industrial motion transducers, conductive plastic track.

SIZE	09			
MODEL	78 RS	78 RB	78 PS	78 PB

FEATURES

- Size 09: ($^7/_8$") 22.2 mm
- Long life: 5 million cycles
- Bush or servo mounting types available
- Rear comolded terminals
- Cost effective solution for any industrial applications
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

QUICK REFERENCE DATA	
Sensor type	ROTATIONAL, conductive plastic
Output type	Output by turrets
Market appliance	Industrial
Dimensions	22.2 mm ($^7/_8$ ") dia.

ELECTRICAL SPECIFICATIONS		
MODEL	78RS / 78RB	78PS / 78PB
Theoretical electrical angle (TEA)	(AEA) - 3°	
Independent linearity (over TEA)	A ≤ ± 1 %, on request: B ≤ ± 0.5 % C ≤ ± 0.35 %	A ≤ ± 2 %
Actual electrical angle (AEA)	340° ± 5°	
Ohmic values (R_T)	1 kΩ - 2 kΩ - 5 kΩ - 10 kΩ (on request other values)	1 kΩ - 2 kΩ - 5 kΩ - 10 kΩ
Ohmic value tolerances at 20 °C	Standard: ± 20 %/special: ± 10 %	± 20 %
Output smoothness	0.1 %	
Maximum power rating at 70 °C	0.3 W	
Wiper current	Recommended: a few µA - 1 mA max. (continuous)	
Tap (current or voltage)	1: On request	n/a
Resistance load on wiper	≥ 1000 x R_T	
End voltage	≤ 0.5 % DC	
Insulation resistance	≥ 1000 MΩ, 500 V_{DC}	
Dielectric strength	≥ 500 V_{RMS}, 50 Hz	

MECHANICAL SPECIFICATIONS				
MODEL	78RS / 78RB		78PS / 78PB	
Mechanical angle (MA)	360° continuous			
On request: stops	342° ± 5°			
Mounting type	Servo	Bushing	Servo	Bushing
Shaft guiding	Sleeve bearings On request: ball bearings for servo mounting type			
Shaft	Stainless steel			
Option: flat or screw driver slot on shaft	On request		n/a	
Termination	Turrets			
Wiper	Precious metal multi-finger contact			
Starting torque (N.cm)	≤ 0.5			
Torque on stops (N.cm)	≥ 20			
Weight (g)	Bushing 17 ± 3		Servo 12 ± 3	

PERFORMANCE	
Life (10^6 cycles)	5
Storage temperature range	-55 °C to +125 °C
Operating temperature range	-30 °C to +85 °C
Speed rotation (RPM)	150
Sine vibration on 3 axes	15 *g* from 10 Hz to 2000 Hz
Mechanical shocks on 3 axes	50 *g* - 11 ms - half sine

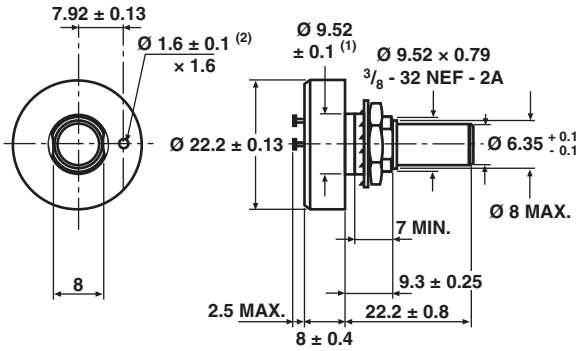
Note

- Nothing stated herein shall be construed as a guarantee of quality or durability

DIMENSIONS in millimeters, general tolerance ± 0.5 mm

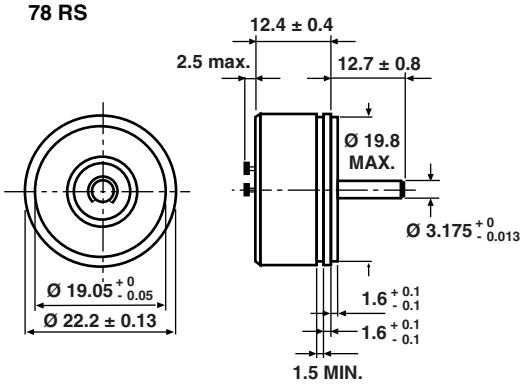
SIZE 09

78 PB
78 RB



SIZE 09

78 PS
78 RS



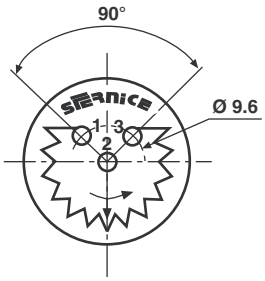
Notes

(1) On request: Ø 10.3 mm or 12.3 mm
(2) On request: Without antirotation pin

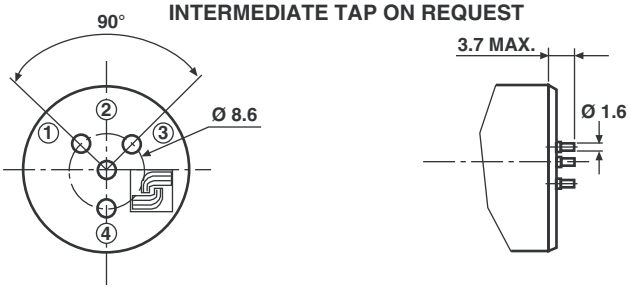
REAR VIEW DIMENSIONS in millimeters, general tolerance 0.5 mm

SIZE 09

STANDARD
3 TURRETS



SPECIAL
(4 TURRETS)
INTERMEDIATE TAP ON REQUEST



General Tolerance ± 0.5 mm

ORDERING INFORMATION / DESCRIPTION

ECS	78	P	S	M	A	T	103	e4
SERIES	MODEL	TYPE	FIXATION	MECHANICAL STOPS	LINEARITY	TAP	OHMIC VALUE	LEAD FINISH
		P R	S: servo B: bushing	On request M	A: ± 1 % or ± 2 % B: ± 0.5 % C: ± 0.35 %	On request T: voltage U: current position to be specified	102: 1 kΩ 202: 2 kΩ 502: 5 kΩ 103: 10 kΩ	

SAP PART NUMBERING GUIDELINES

ECS	78RB	B	102
SERIES	MODEL	LINEARITY	OHMIC VALUE

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