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Vishay Sfernice

Precision Linear Transducers, Conductive Plastic, up to 450 mm



The 110 L is a compact, robust, easily mounted precision industrial motion transducer.

FEATURES

- Large measurement range
- High accuracy ± 1 % down to ± 0.05 %



- Essentially infinite resolution
- · Easy mounting
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

QUICK REFERENCE DATA				
Sensor type LINEAR, conductive plastic				
Output type Connector				
Market appliance	Industrial			
Dimensions	$L \times 18 \text{ mm} \times 41 \text{ mm} \text{ (with } L = TET + 47 \text{ mm)}$			

ELECTRICAL SPECIFICATIONS					
Theoretical electrical travel (TET) = E	25 mm to 450 mm in increments of 25 mm				
Independent linearity (over TET) on request	\leq \pm 1 % \leq \pm 0.1 % \leq \pm 0.05 % for E \geq 100 mm				
Actual electrical travel (AET)	See electrical connections table 1				
Repeatability	≤ 0.01 %				
Ohmic values (R _T)	From 400 Ω/cm to 2 kΩ/cm				
Resistance tolerance at 20 °C	± 20 %				
Maximum power rating	0.05 W/cm at 70 °C, 0 W at 125 °C				
Wiper current	Recommended: a few µA - 1 mA max. (continuous)				
Load resistance	Minimum 10 ³ x R _T				
Insulation resistance	\geq 1000 M Ω , 500 V $_{DC}$				
Dielectric strength	≥ 750 V _{RMS} , 50 Hz				

MECHANICAL SPECIFICATIONS				
Mechanical travel	TET + 6 mm min.			
Housing	Anodized aluminum			
Operating force	5 N typical			
Shaft (free rotation)	Stainless steel			
Termination on request	Connector: 723 series by cable			
Wiper	Precious metal multifinger			
Mounting	Movable brackets			

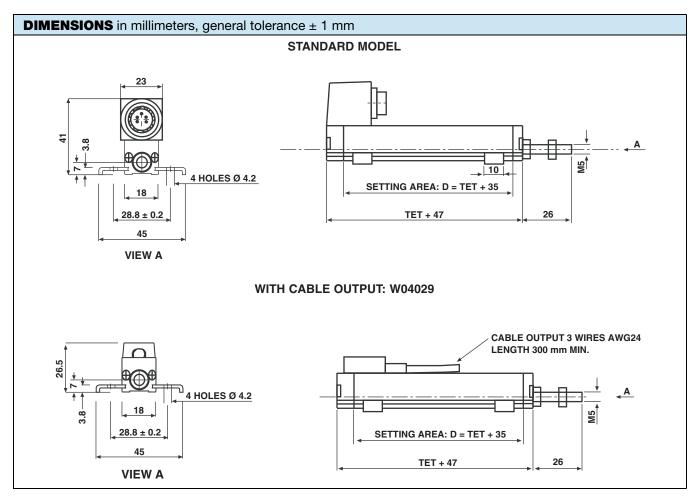
PERFORMANCE				
Operating life	40 million cycles typical/1 Hz/T° = 20 °C ± 5 °C/80 % TET			
Temperature range	-55 °C to +125 °C			
Mechanical shocks on 3 axes	50 g - 11 ms - half sine			
Sine vibration on 3 axes	1.5 mm peak to peak or 15 g - 10 Hz - 2000 Hz			
Speed (max.)	8 m/s for f < 2 Hz; 3 m/s for f < 5 Hz			

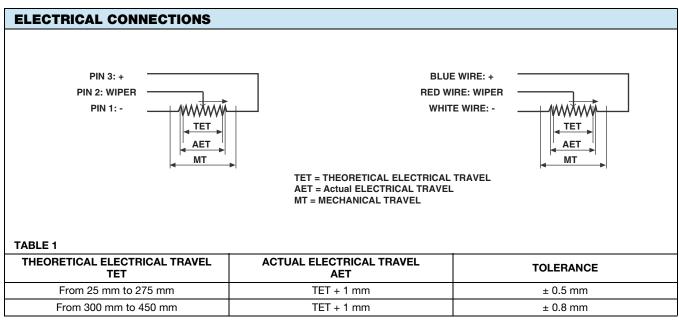
Note

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









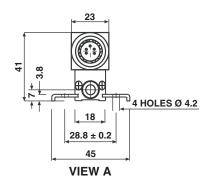


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OPTION: SPRING LOADED SHAFT DIMENSIONS in millimeters, general tolerance ± 1 mm

110L WITH SPRING LOADED SHAFT: W04030



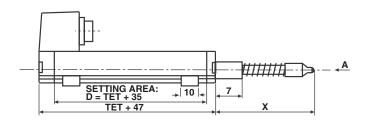
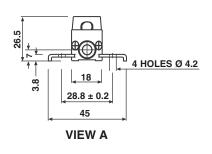
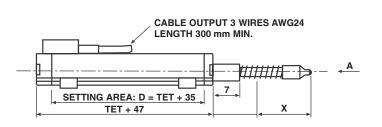


TABLE 2

MODEL	Х
110 L1	75
110 L2	112
110 L3	150
110 L4	188

110L WITH CABLE OUTPUT AND SPRING LOADED SHAFT: W04031





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2) SPECIAL BALL JOINT Vishay's reference: 323654 RADIAL CLEARANCE IN X AND Y ± 1.2 mm ANGULAR CLEARANCE ± 15° ANGULAR CLEARANCE ± 15° CLEARANCE 3

ORDERING INFORMATION/DESCRIPTION							
REC	110	L	3	D	103	W	e.
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		L = 1 track	Times 25 mm	A: ± 1 % D: ± 0.1 % E: ± 0.05 %	First 2 digits are significant numbers 3 rd digit indicates number of zeros	Special feature code number	

SAP PART NUMBERING GUIDELINES							
RE	110 L	3	D	103	W		
SERIES	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES		



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