

## Precision Linear Transducers, Conductive Plastic, up to 450 mm



### FEATURES

- Large measurement range
- High accuracy  $\pm 1\%$  down to  $\pm 0.05\%$
- Essentially infinite resolution
- Easy mounting



**RoHS**  
COMPLIANT

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

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	$\leq 0.01\%$
Ohmic Values ( $R_T$ )	From 400 $\Omega$ /cm to 2 k $\Omega$ /cm
Resistance Tolerance at 20 °C	$\pm 20\%$
Maximum Power Rating	0.05 W/cm at 70 °C, 0 W at 125 °C
Wiper Current	Recommended: a few $\mu$ A - 1 mA max. (continuous)
Load Resistance	Minimum $10^3 \times R_T$
Insulation Resistance	$\geq 1000$ M $\Omega$ , 500 V <sub>DC</sub>
Dielectric Strength	$\geq 750$ V <sub>RMS</sub> , 50 Hz

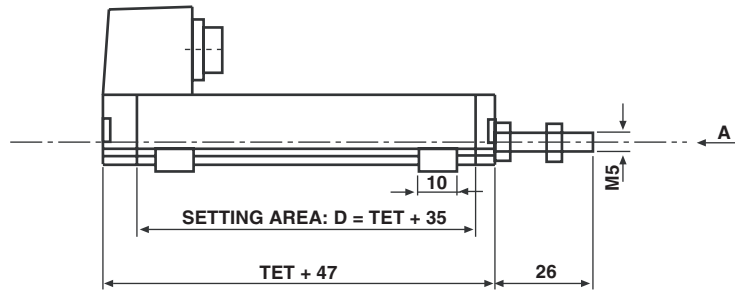
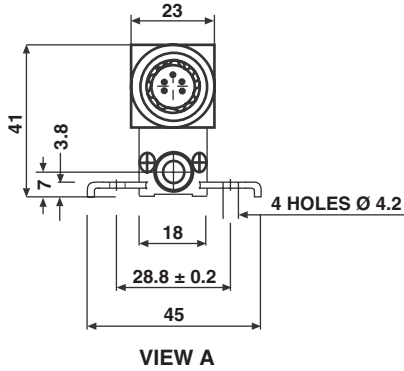
MECHANICAL SPECIFICATIONS	
Mechanical Travel	TET + 6 mm min.
Housing	Anodized aluminum
Operating Force	5 N typical
Shaft (Free Rotation)	Stainless steel
Termination On Request	Connector: 723 series by cable
Wiper	Precious metal multifinger
Mounting	Movable brackets

PERFORMANCE	
Operating Life	40 million cycles typical/1 Hz/T° = 20 °C $\pm$ 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

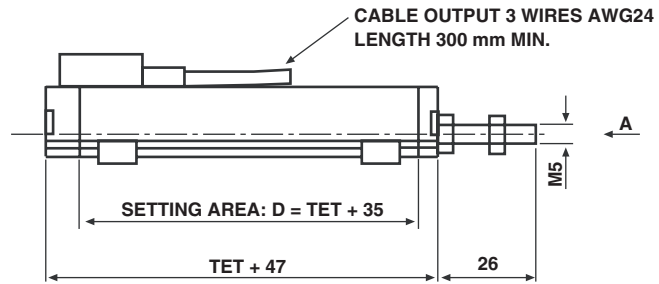
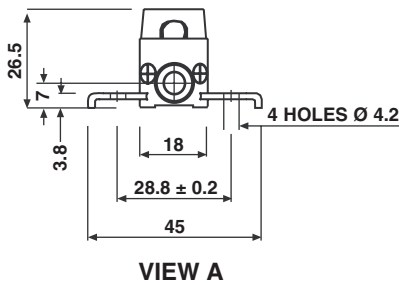


**DIMENSIONS** in millimeters, general tolerance  $\pm 1$  mm

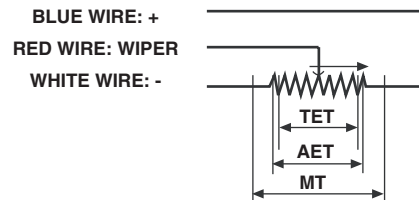
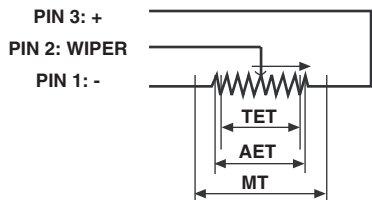
**STANDARD MODEL**



**WITH CABLE OUTPUT: W04029**



**ELECTRICAL CONNECTIONS**



TET = THEORETICAL ELECTRICAL TRAVEL  
AET = Actual ELECTRICAL TRAVEL  
MT = MECHANICAL TRAVEL

Table 1

THEORETICAL ELECTRICAL TRAVEL TET	ACTUAL ELECTRICAL TRAVEL AET	TOLERANCE
From 25 mm to 275 mm	TET + 1 mm	$\pm 0.5$ mm
From 300 mm to 450 mm	TET + 1 mm	$\pm 0.8$ mm

**OPTION: SPRING LOADED SHAFT DIMENSIONS** in millimeters, general tolerance  $\pm 1$  mm

**110L WITH SPRING LOADED SHAFT: W04030**

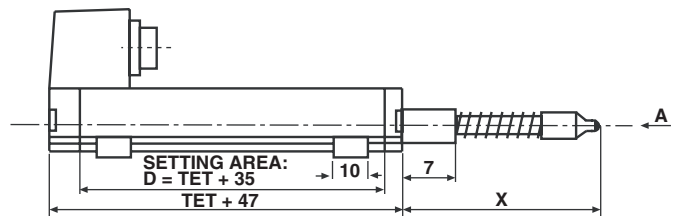
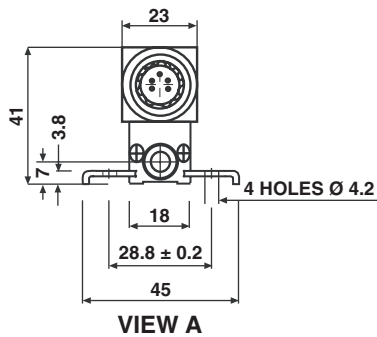
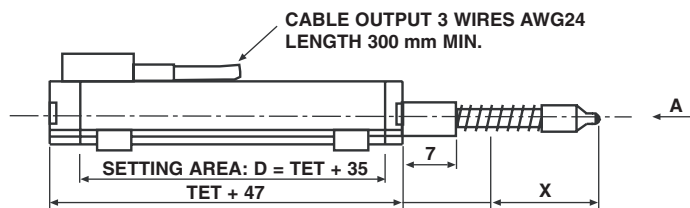
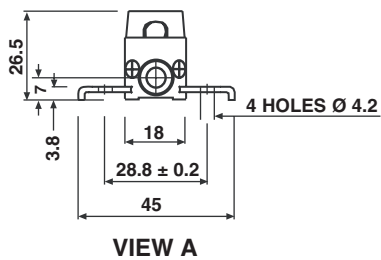


Table 2

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

**110L WITH CABLE OUTPUT AND SPRING LOADED SHAFT: W04031**



# Series REC 110 L

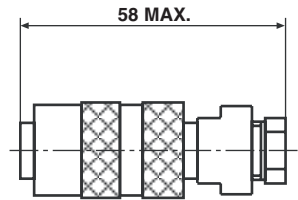


Vishay Service

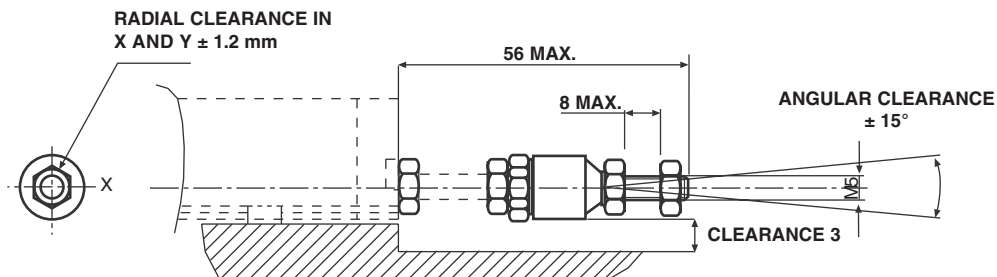
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## ACCESSORIES ON REQUEST DIMENSIONS in millimeters, general tolerance $\pm 1$ mm

- 1) FEMALE CONNECTOR  
Vishay's Reference: 328870



- 2) SPECIAL BALL JOINT  
Vishay's reference: 323654



## ORDERING INFORMATION/DESCRIPTION

REC	110	L	3	D	103	W...	e.
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		L = 1 track	Times 25 mm	A: $\pm 1\%$ D: $\pm 0.1\%$ E: $\pm 0.05\%$	First 2 digits are significant numbers 3rd 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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