

## Precision Linear Transducers, Conductive Plastic, up to 300 mm



### FEATURES

- Measurement range 25 mm to 300 mm
- High accuracy  $\pm 1\%$  down to  $\pm 0.025\%$
- Essentially infinite resolution
- Long life
- Sealed on request



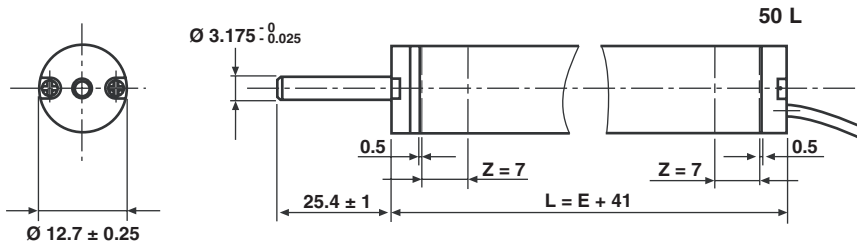
The 50 L is a compact, accurate and adaptable motion transducer for both industrial and military markets.

ELECTRICAL SPECIFICATIONS	
Theoretical Electrical Travel (TET = E) in Increments of 25 mm	25 mm 300 mm
Independent Linearity (over TET) On Request	$\leq \pm 1\%$ - $\leq \pm 0.1\%$ $\leq \pm 0.05\%$ for $E \geq 100$ mm $\leq \pm 0.025\%$ for $E \geq 200$ mm
Actual Electrical Travel (AET)	AET = E + 1 mm $\pm$ 0.5 mm
Ohmic Values ( $R_T$ )	400 $\Omega$ /cm to 2 k $\Omega$ /cm
Resistance Tolerance at 20 °C	$\pm 20\%$
Repeatability	$\leq 0.01\%$
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 $10^3 \times R_T$
Number of Tracks	1; on request 2
Insulation Resistance	$\geq 1000$ M $\Omega$ , 500 V <sub>DC</sub>
Dielectric Strength	$\geq 500$ V <sub>RMS</sub> , 50 Hz

MECHANICAL SPECIFICATIONS	
Mechanical Travel	TET + 2 mm min.
Housing	Anodized aluminum
Operating Force On Request	0.35 N typical (standard model)      2.50 N typical (sealed model)
Shaft (Free Rotation)	Stainless steel
Termination On Request	3 wires PTFE AWG-30 L = 300 mm cable or connector
Wiper	Precious metal multifinger
Sealing	IP65 on request

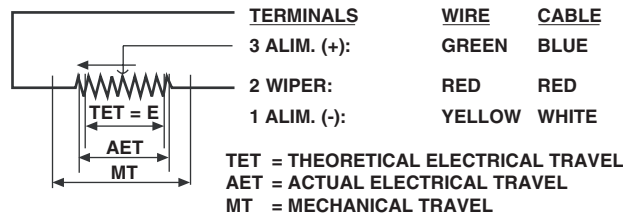
PERFORMANCE	
Operating Life	25 million cycles typical/1 Hz/T° = 20 °C $\pm$ 5 °C/80 % TET
Temperature Range	- 55 °C to + 125 °C
Sine Vibration on 3 Axes	1.5 mm peak to peak or 15 g - 10 Hz - 2000 Hz
Mechanical Shocks on 3 Axes	50 g - 11 ms - half sine

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



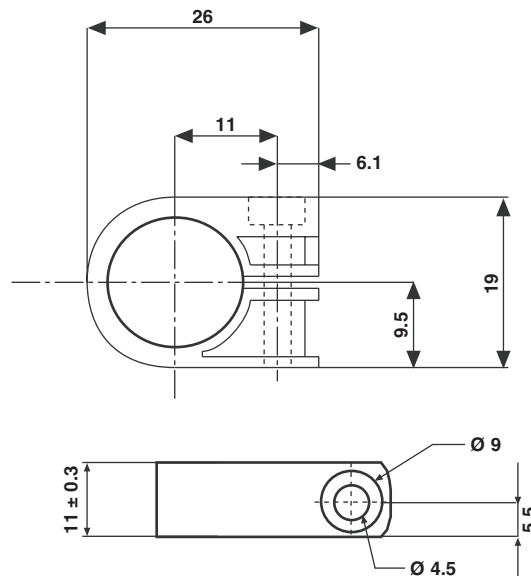
Z = TIGHTENING ZONE

**ELECTRICAL CONNECTIONS**



**ACCESSORIES ON REQUEST - DIMENSIONS** in millimeters, general tolerance  $\pm 3$  mm

Clamp for 50L  
 Vishay Reference: CQ00050



# Series REC 50 L

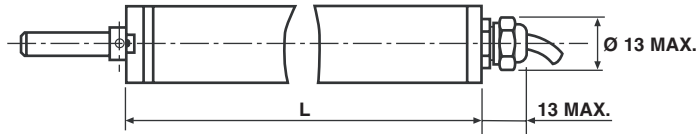


Vishay Precision  
50 L Series

Precision Linear Transducers, Conductive Plastic,  
up to 300 mm

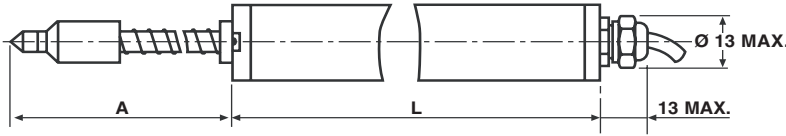
## OPTIONS - DIMENSIONS in millimeters

### OPTION 1: SEALED (IP65): W03242



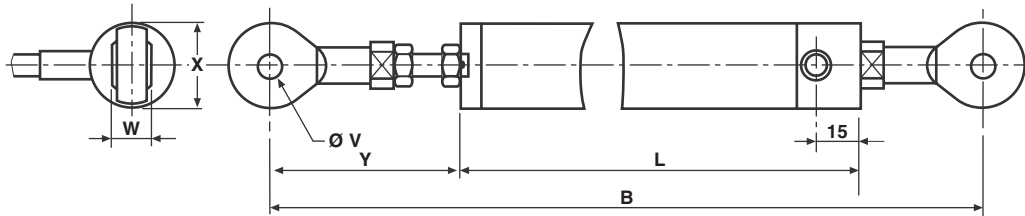
MODEL	CODE	L
50 L ...	W03242	TET + 70.5

### OPTION 2: SPRING LOADED SHAFT; OUTPUT BY SHIELDED CABLE: W01743



MODEL	CODE	A	L
50 L1	W01743	70	TET + 97.8
50 L2	W01743	116	
50 L3	W01743	162	
50 L4	W01743	208	

### OPTION 3: DOUBLE BALL JOINT: W01565



MODEL CODE	B	L	Ø V	W	X	Y	TET
50 L W01565 L1 to L3	TET + 108.5	TET + 57.5	3	6	12	30 ± 2	25 to 75
L4 to L6	TET + 133.5	TET + 82.5	3	6	12	30 ± 2	100 to 150

## ORDERING INFORMATION/DESCRIPTION

REC	50	L	3	D	103	W...	e1
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		L = 1 track LL = 2 tracks	Times 25 mm	A: ± 1 % D: ± 0.1 % E: ± 0.05 % F: ± 0.025 %	First 2 digits are significant numbers 3rd digit indicates number of zeros	Special feature code number	Sn Ag Cu

## SAP PART NUMBERING GUIDELINES

RE	50 L	3	D	103	W...
SERIES	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES

## Disclaimer

All product specifications and data are subject to change without notice.

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