Precision Linear Transducers, Conductive Plastic, up to 300 mm

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

QUICK REFERENCE DATA	
Sensor type	LINEAR, conductive plastic
Output type	Wires
Market appliance	Professional
Dimensions	L x 12.7 mm dia. (with L = TET + 41 mm)

FEATURES

- Measurement range 25 mm to 300 mm
- High accuracy ± 1 % down to ± 0.025 %
- Essentially infinite resolution
- Long life
- Sealed on request
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912

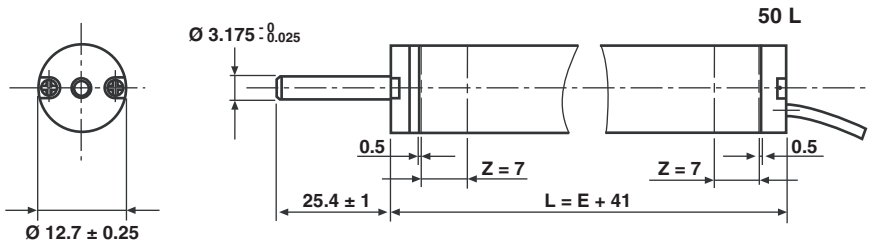
RoHS COMPLIANT

ELECTRICAL SPECIFICATIONS	
Theoretical electrical travel (TET = E) in increments of 25 mm	25 mm 300 mm
Independent linearity (over TET) on request	≤ ± 1 % - ≤ ± 0.1 % ≤ ± 0.05 % for E ≥ 100 mm ≤ ± 0.025 % for E ≥ 200 mm
Actual electrical travel (AET)	AET = E + 1 mm ± 0.5 mm
Ohmic values (R_T)	400 Ω/cm to 2 kΩ/cm
Resistance tolerance at 20 °C	± 20 %
Repeatability	≤ 0.01 %
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
Number of tracks	1; on request 2
Insulation resistance	≥ 1000 MΩ, 500 V_{DC}
Dielectric strength	≥ 500 V_{RMS}, 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	

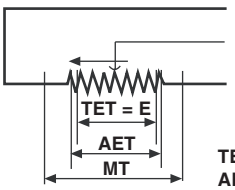
PERFORMANCE	
Operating life	25 million cycles typical/1 Hz/T° = 20 °C ± 5 °C/80 % TET
Temperature range	- 55 °C to + 125 °C
Sine vibration on 3 axes	1.5 mm peak to peak or 15 *g* - 10 Hz - 2000 Hz
Mechanical shocks on 3 axes	50 *g* -11 ms - half sine

STANDARD MODEL DIMENSIONS in millimeters, general tolerance ± 1 mm



Z = TIGHTENING ZONE

ELECTRICAL CONNECTIONS

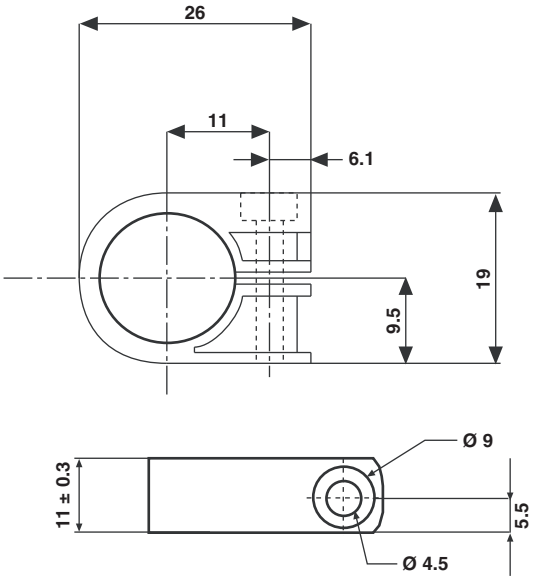


TERMINALS	WIRE	CABLE
3 ALIM. (+):	GREEN	BLUE
2 WIPER:	RED	RED
1 ALIM. (-):	YELLOW	WHITE

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

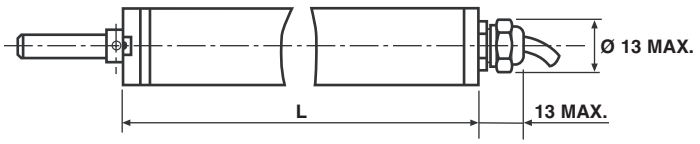
ACCESSORIES ON REQUEST - DIMENSIONS in millimeters, general tolerance ± 3 mm

Clamp for 50L
Vishay Reference: CQ00050



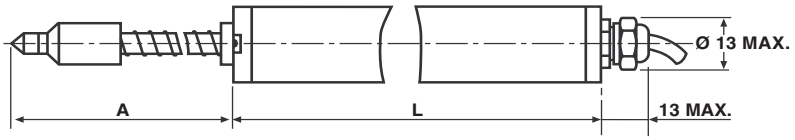
OPTIONS - DIMENSIONS in millimeters

OPTION 1: SEALED (IP65): W03242



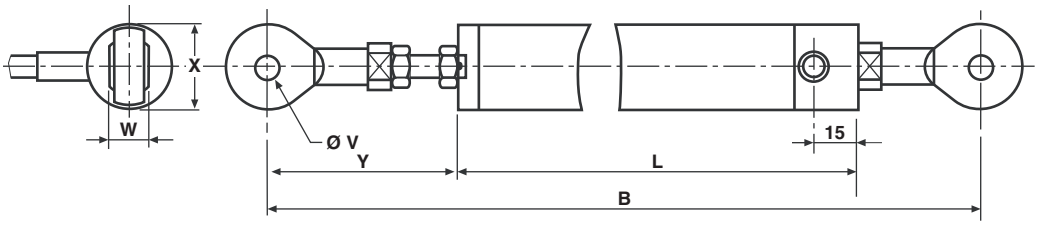
MODEL	CODE	L
50 L ...	W03242	TET + 70.5

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 TRAVEL	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

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