Precision Linear Transducers, Conductive Plastic, up to 1000 mm

FEATURES

- Measurement range 25 mm to 1000 mm
- High accuracy ± 1 % down to ± 0.025 %
- Excellent repeatability
- Essentially infinite resolution
- Non sensitive to temperature variations
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

RoHS COMPLIANT

DESIGN SUPPORT TOOLS

click logo to get started

3D Models Available

The 115 L is a simply mounted, robust, high precision industrial linear motion transducer.

QUICK REFERENCE DATA	
Sensor type	LINEAR, conductive plastic
Output type	Connector
Market appliance	Industrial
Dimensions	L x 31.7 mm x 34.8 mm (with L = TET + 75 mm)

ELECTRICAL SPECIFICATIONS	
Theoretical electrical travel (TET) = E	From 25 mm to 1000 mm in increments of 25 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 = TET + 1.5 mm min.
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
Insulation resistance	≥ 1000 MΩ, 500 V_{DC}
Dielectric strength	≥ 1000 V_{RMS}, 50 Hz
Protection resistor	Integrated inside the transducer to protect against errors when setting up (short circuit)

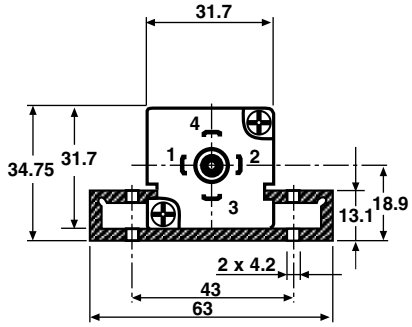
MECHANICAL SPECIFICATIONS	
Mechanical travel	E + 8 ± 2 mm
Housing	Anodized aluminum
Operating force	7.5 N typical
Shaft (free rotation)	Stainless steel
Termination	Hydraulic type connector DIN 43650
Wiper	Precious metal multifinger
Mounting	Movable brackets

PERFORMANCE	
Operating life	40 million cycles typical / 1 Hz / T° = 20 °C ± 5 °C / 80 % TET
Temperature range	-55 °C to +125 °C
Sine vibration on 3 axes	1.5 mm peak to peak 0 Hz to 10 Hz 15 *g* - 10 Hz - 2000 Hz
Mechanical shocks on 3 axes	50 *g* - 11 ms - half sine
Speed (max.)	8 m/s for f < 2 Hz; 3 m/s for f < 5 Hz

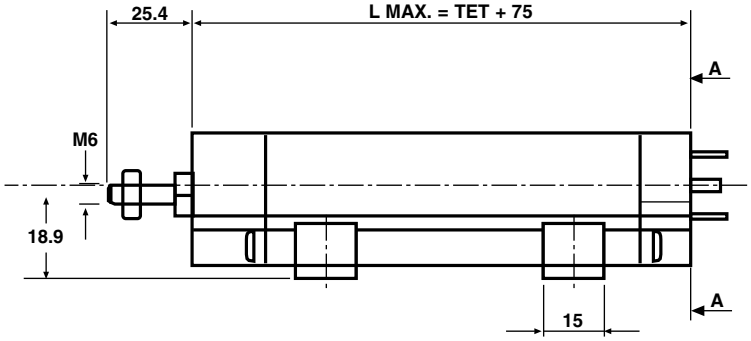
Note

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

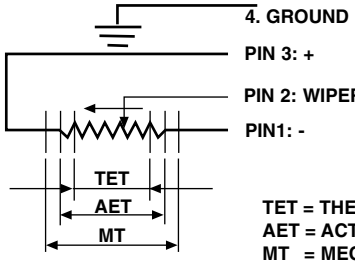
DIMENSIONS in millimeters, general tolerance ± 1 mm



VIEW A-A



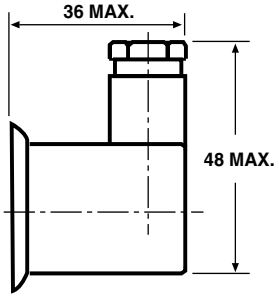
ELECTRICAL CONNECTIONS



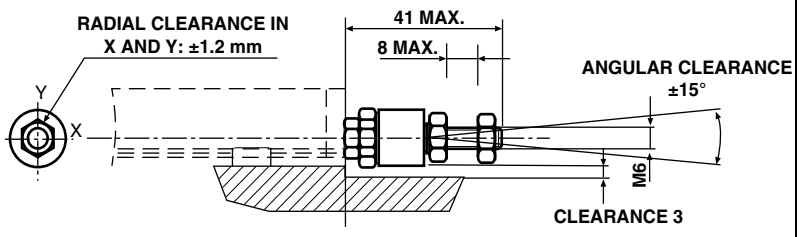
TET = THEORETICAL ELECTRICAL TRAVEL
AET = ACTUAL ELECTRICAL TRAVEL
MT = MECHANICAL TRAVEL

ACCESSORIES ON REQUEST DIMENSIONS in millimeters, general tolerance ± 1 mm

1) FEMALE CONNECTOR
Vishay's Reference: 3248610



2) SPECIAL BALL JOINT ON SHAFT
Vishay's reference: 323655



ORDERING INFORMATION/DESCRIPTION

REC	115	L	23	D	103	W...	e.
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		L = 1	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	

SAP PART NUMBERING GUIDELINES

RE	115 L	23	D	103	W...
SERIES	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES

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