

## Precision Linear Transducers, Conductive Plastic (REC)



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

### FEATURES

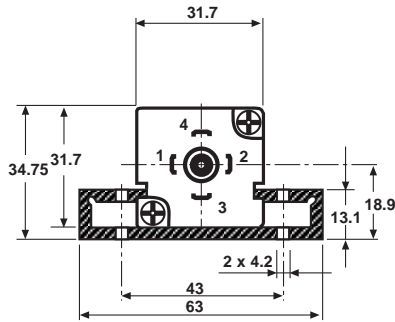
- Measurement Range 25mm to 1000mm
- High Accuracy  $\pm 1\%$  down to  $\pm 0.025\%$
- Excellent Repeatability
- Long Life
- Essentially Infinite Resolution
- Not Sensitive to Temperature Variations

<b>ELECTRICAL SPECIFICATIONS</b>	
Theoretical electrical travel (TET = E)	From 25mm to 1000mm in increments of 25mm
Independent linearity (over TET) on request	$\leq \pm 1\%$ - $\leq \pm 0.1\%$ $\leq \pm 0.05\%$ for $E \geq 100\text{mm}$ , $\leq \pm 0.025\%$ for $E \geq 200\text{mm}$
Actual electrical travel (AET)	AET = TET + 1.5mm min.
Ohmic values (R <sub>T</sub> )	400Ω/cm to 2kΩ/cm
Resistance tolerance at 20°C	$\pm 20\%$
Repeatability	$\leq \pm 0.01\%$
Maximum power rating	0.05W/cm at 70°C, 0W at 125°C
Wiper current	recommended: a few $\mu\text{A}$ - 1mA max. continuous
Load resistance	minimum $10^3 \times R_T$
Insulation resistance	$\geq 1000\text{M}\Omega$ 500VDC
Dielectric strength	$\geq 1000\text{VRMS}$ 50Hz
Protection resistor	Integrated inside the transducer to protect against errors when setting up (short circuit)

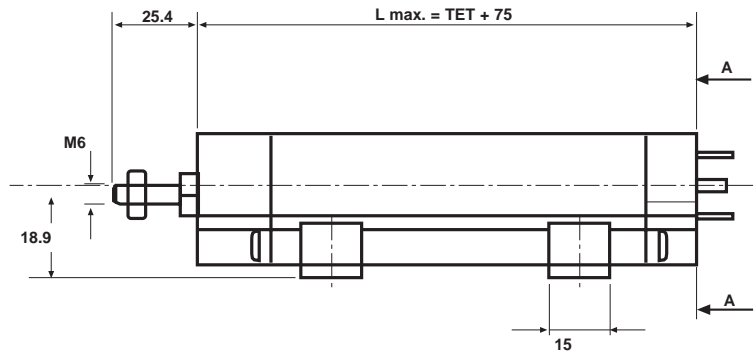
<b>MECHANICAL SPECIFICATIONS</b>	
Mechanical travel	$E + 8 \pm 2\text{mm}$
Housing	anodized aluminum
Operating force	7.5N typical
Shaft (free rotation)	stainless steel
Termination	hydraulic type connector DIN 43650
Wiper	precious metal multifinger
Mounting	movable brackets

<b>PERFORMANCE</b>	
Operating life	40 million cycles typical
Temperature range	- 55°C +125°C
Sine vibration on 3 axes	1.5mm peak to peak 0 - 10Hz 15g - 10Hz - 2000Hz
Mechanical shocks on 3 axes	50g - 11ms - half sine

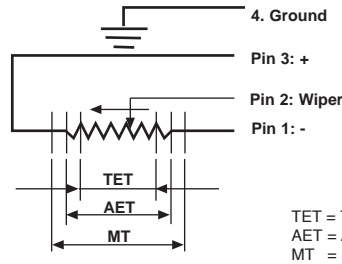
**DIMENSIONS** in millimeters, general tolerance  $\pm 1$ mm



VIEW A-A



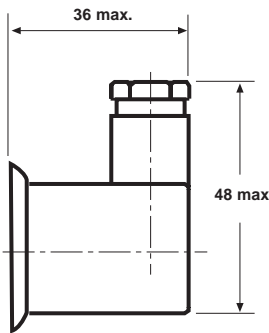
**ELECTRICAL CONNECTIONS**



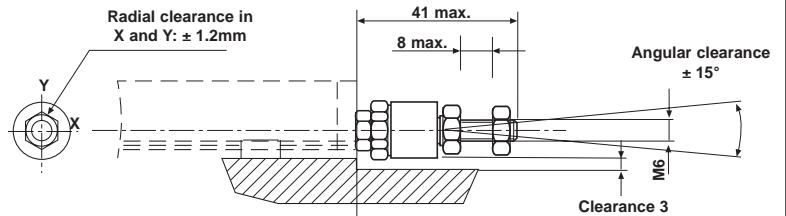
TET = Theoretical electrical travel  
 AET = Actual electrical travel  
 MT = Mechanical travel

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

1) FEMALE CONNECTOR  
 Vishay's Reference: 3248610



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



**ORDERING INFORMATION**

REC	115	L	23	D	103	W...
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS
		L = 1	Times 25 mm	A : $\pm 1\%$ D : $\pm 0.1\%$ E : $\pm 0.05\%$ F : $\pm 0.025\%$	First 2 digits are significant numbers 3rd digit indicates number of zeros	Special feature code number