

Precision Linear Transducers, Conductive Plastic, up to 3000 mm



FEATURES

- Measurement range 25 mm to 3000 mm
- High accuracy $\pm 1\%$ down to $\pm 0.025\%$
- Excellent repeatability
- Essentially infinite resolution
- Simple mounting
- Actuation tolerant to some misalignment
- Reduced bulk



The 139 L is a robust industrial linear motion transducer with a side actuation, ideally suited for applications with very long travels.

ELECTRICAL SPECIFICATIONS	
Theoretical Electrical Travel (TET) = E	From 25 mm to 3000 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 $\leq \pm 0.025\%$ for $E \geq 200$ mm
Actual Electrical Travel (AET)	AET = E + 1.5 mm min.
Ohmic Value (R_T)	400 Ω /cm to 2 k Ω /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 μ A - 1 mA max. (continuous)
Load Resistance	Minimum $10^3 \times R_T$
Insulation Resistance	≥ 1000 M Ω , 500 V _{DC}
Dielectric Strength	≥ 1000 V _{RMS} , 50 Hz

MECHANICAL SPECIFICATIONS	
Mechanical Travel (MT)	See dimensions table 1
Housing	Anodized aluminum
Operating Force	2.5 N typical
Coupling	Self alignment
Termination	Hydraulic type connector DIN 43650
Wiper	Precious metal multifinger
Sealed to	IP53
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
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
Speed (max.)	8 m/s for $f < 2$ Hz; 3 m/s for $f < 5$ Hz

Series REC 139 L

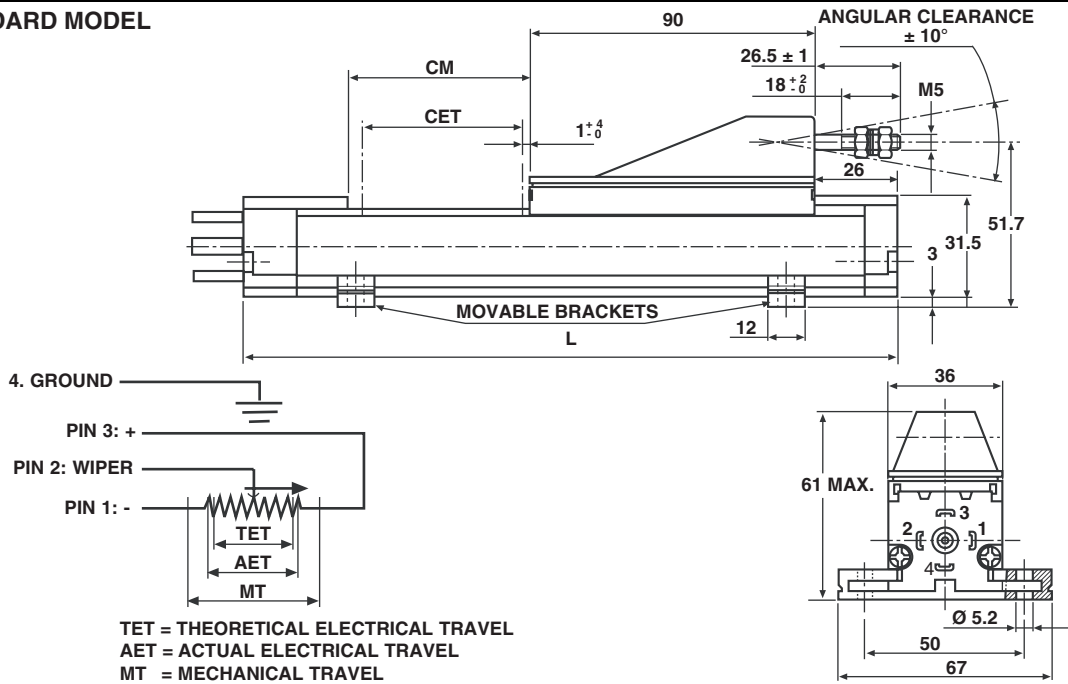
Vishay Sfernice

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DIMENSIONS in millimeters, general tolerance ± 1 mm

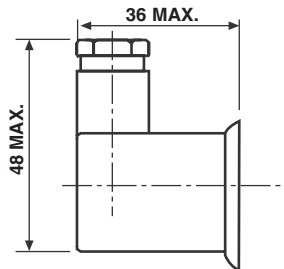
STANDARD MODEL



LENGTH	AET	MT	L
L1 to L20	TET + 1.5 min.	TET + 7 min.	TET + 158 max.
L21 to L40	TET + 1.5 min.	TET + 11 min.	TET + 163 max.
L41 to L120	TET + 1.5 min.	TET + 15 min.	TET + 169 max.

ELECTRICAL CONNECTIONS

FEMALE CONNECTOR
Vishay's Reference: 3248610



ORDERING INFORMATION/DESCRIPTION

REC	139	L	43	D	103	W...	e3
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		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	Pure tin

SAP PART NUMBERING GUIDELINES

RE	139 L	43	D	103	W....
SERIES	MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES



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