Precision Linear Transducers, Conductive Plastic (REC)

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

FEATURES

- Measurement Range 25mm to 3000mm
- Long Life
- High Accuracy ± 1% down to ± 0.025%
- Excellent Repeatability
- Essentially Infinite Resolution
- Simple Mounting
- Actuation Tolerant to Some Misalignment
- Reduced Bulk

ELECTRICAL SPECIFICATIONS

Theoretical electrical travel (TET = E)	from 25mm to 3000mm in increments of 25mm
Independent linearity (over TET) on request	≤ ± 1 % - ≤ ± 0.1 % ≤ ± 0.05 % for E ≥100mm ≤ ± 0.025 % for E ≥ 200mm
Actual electrical travel (AET)	AET = E + 1.5mm min.
Ohmic value (R_T)	400Ω/cm to 2kΩ/cm
Resistance tolerance at 20°C	± 20%
Repeatability	≤ 0.01%
Maximum power rating	0.05W/cm at 70°C, 0W at 125°C
Wiper current	recommended: a few μA, 1mA max. continuous
Load resistance	minimum 10^3 x R_T
Insulation resistance	≥ 1000MΩ 500VDC
Dielectric strength	≥ 1000VRMS 50Hz

MECHANICAL SPECIFICATIONS

Mechanical travel (MT)	See dimensions table 1
Housing	anodized aluminum
Operating force	2.5N 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
Temperature range	− 55°C + 125°C
Sine vibration on 3 axes	1.5mm peak to peak or 15g - 10Hz - 2000Hz
Mechanical shocks on 3 axes	50g - 11ms - half sine

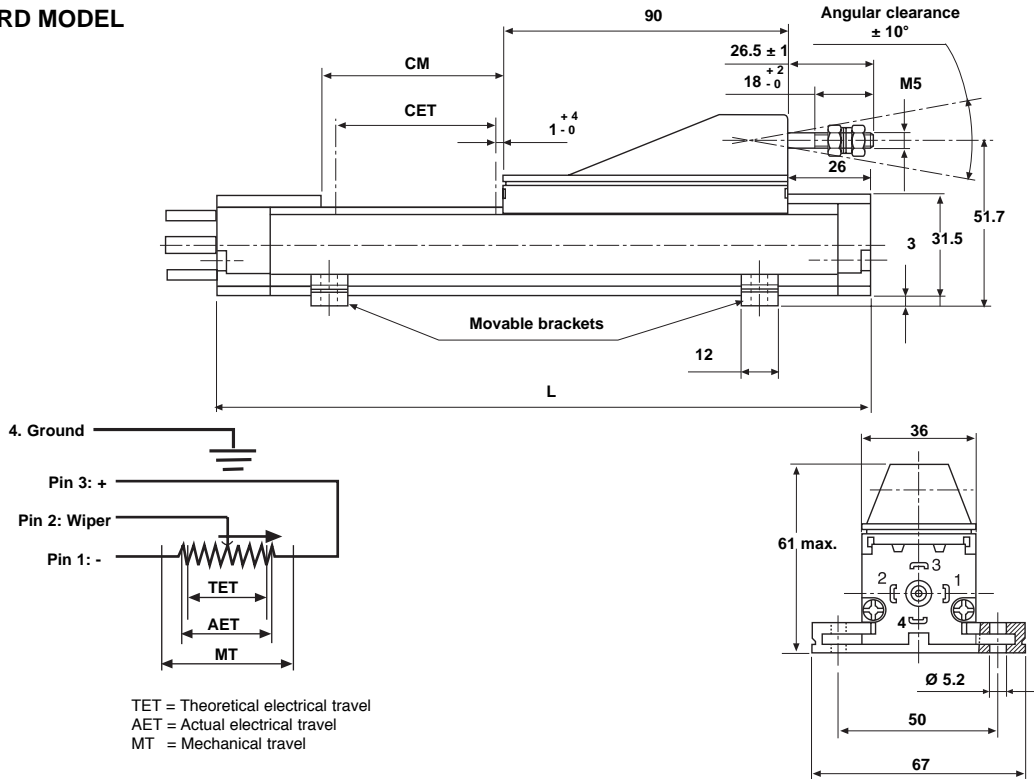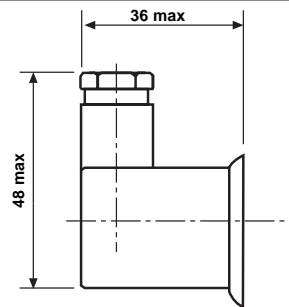## DIMENSIONS in millimeters, general tolerance ± 1mm

STANDARD MODEL

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

Table 1

LENGTH	AET	MT	L
L1 to L20	TET + 1.5 min	TET + 7 min.	TET + 158 max.
L 21 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.

ACCESSORIES ON REQUEST DIMENSIONS in millimeters

Female Connector
Vishay's Reference: 3248610

ORDERING INFORMATION

REC	139	L	43	D	103	W...
SERIES	MODEL	NUMBER OF TRACKS	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS
		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