

Precision Linear Transducers, Conductive Plastic (REC)



The 38 L is a very compact model especially designed for precise measurement of short travels.

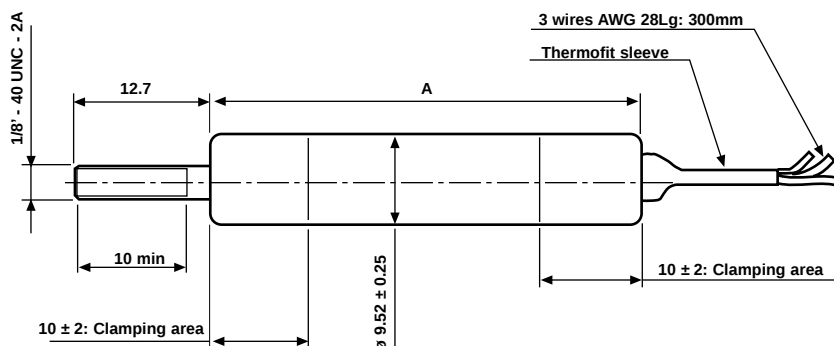
FEATURES

- Measurement Range from 12.5mm to 150mm
- High Accuracy $\pm 1\%$ down to $\pm 0.1\%$
- Long Life
- Essentially Infinite Resolution
- Very Small Dimension: External Diameter = 9.52mm

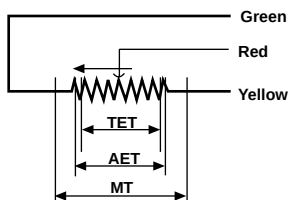
ELECTRICAL SPECIFICATIONS	
Theoretical electrical travel (TET)	From 12.5mm to 150mm see table 1
Actual electrical travel (AET)	$AET = TET + 1mm$
Independent linearity (over TET)	$\leq \pm 1\% - \leq \pm 0.5\%$ $\leq \pm 0.25\%$ for $E \geq 25mm$ $\leq \pm 0.1\%$ for $E \geq 50mm$
Repeatability	$\leq \pm 0.01\%$
Ohmic values (R_T)	from $400\Omega/cm$ to $2k\Omega/cm$
Resistance tolerance at $20^\circ C$	$\pm 20\%$
Wiper current	recommended: a few μA , 1mA max. continuous
Load resistance	minimum $10^3 \times R_T$
Insulation resistance	$\geq 1000M\Omega$ 500VDC
Dielectric strength	$\geq 500VRMS$ 50Hz

MECHANICAL SPECIFICATIONS	
Mechanical travel (MT)	$MT = TET + 3 \pm 1mm$
Housing	anodized aluminum
Operating force	0.35N typical
Termination	3 wires PTFE AWG 28 length: 300mm
Wiper	precious metal multifinger

PERFORMANCE	
Operating life	50 million cycles typical
Temperature range	$-55^\circ C + 125^\circ C$
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 $\pm 1\text{mm}$

Table 1

SIZE	TET	MT	A
38 L0.5	12.5	15.5	43.5
38 L01	25	28	56
38 L02	50	53	81
38 L03	75	78	106
38 L04	100	103	131
38 L05	125	128	156
38 L06	150	153	181

ELECTRICAL CONNECTIONS


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

ORDERING INFORMATION

REC	38	L	0.5	C	102	W...
SERIES	MODEL	NUMBER OF TRACKS	ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS
		L = 1 track	0.5 = 12.5mm 1 = 25mm 2 = 50mm 3 = 75mm 4 = 100mm 5 = 125mm 6 = 150mm	A : $\pm 1\%$ B : $\pm 0.5\%$ C : $\pm 0.25\%$ D : $\pm 0.1\%$	First 2 digits are significant numbers 3rd digit indicates number of zeros	Special feature code number