

Precision Linear Transducers, Conductive Plastic, up to 150 mm



FEATURES

- Measurement range 12.5 mm to 150 mm
- High accuracy $\pm 1\%$ down to $\pm 0.1\%$
- Long life
- Essentially infinite resolution
- Very small dimension: External diameter = 9.52 mm



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

ELECTRICAL SPECIFICATIONS	
Theoretical Electrical Travel (TET)	From 12.5 mm to 150 mm see table 1
Actual Electrical Travel (AET)	$AET = TET + 1 \text{ mm}$
Independent Linearity (over TET)	$\leq \pm 1\% - \leq \pm 0.5\%$ $\leq \pm 0.25\%$ for $E \geq 25 \text{ mm}$ $\leq \pm 0.1\%$ for $E \geq 50 \text{ mm}$
Repeatability	$\leq 0.01\%$
Ohmic Values (R_T)	From $400 \Omega/\text{cm}$ to $2 \text{ k}\Omega/\text{cm}$
Resistance Tolerance at 20°C	$\pm 20\%$
Wiper Current	Recommended: a few μA - 1 mA max. (continuous)
Load Resistance	Minimum $10^3 \times R_T$
Insulation Resistance	$\geq 1000 \text{ M}\Omega$, $500 \text{ V}_{\text{DC}}$
Dielectric Strength	$\geq 500 \text{ V}_{\text{RMS}}$, 50 Hz

MECHANICAL SPECIFICATIONS	
Mechanical Travel (MT)	$MT = TET + 3 \pm 1 \text{ mm}$
Housing	Anodized aluminum
Operating Force	0.35 N typical
Termination	3 wires PTFE AWG 28 length: 300 mm
Wiper	Precious metal multifinger

PERFORMANCE	
Operating Life	25 million cycles typical/ $1 \text{ Hz}/T^\circ = 20^\circ\text{C} \pm 5^\circ\text{C}/80\% \text{ TET}$
Temperature Range	-55°C to $+125^\circ\text{C}$
Sine Vibration on 3 Axes	1.5 mm peak to peak or $15 \text{ g} - 10 \text{ Hz} - 2000 \text{ Hz}$
Mechanical Shocks on 3 Axes	$50 \text{ g} - 11 \text{ ms} - \text{half sine}$

DIMENSIONS in millimeters, general tolerance ± 1 mm

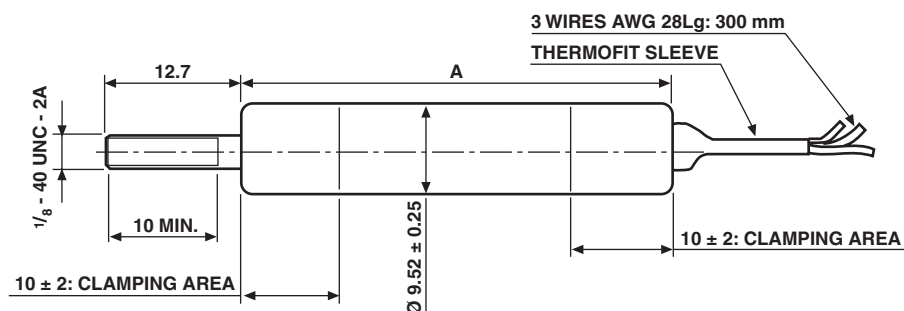
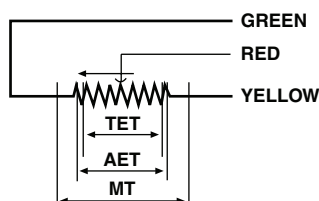


TABLE 1

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/DESCRIPTION

REC SERIES	38 MODEL	L NUMBER OF TRACKS	0.5 ELECTRICAL TRAVEL	C LINEARITY	102 OHMIC VALUE	W... MODIFICATIONS	e1 LEAD FINISH
		L = 1 track	0.5 = 12.5 mm 1 = 25 mm 2 = 50 mm 3 = 75 mm 4 = 100 mm 5 = 125 mm 6 = 150 mm	A: ± 1 % B: ± 0.5 % C: ± 0.25 % D: ± 0.1 %	First 2 digits are significant numbers 3rd digit indicates number of zeros	Special feature code number	Sn Ag Cu

SAP PART NUMBERING GUIDELINES

RE SERIES	38 L MODEL	0.5 TET	C LINEARITY	102 OHMIC VALUE	W... SPECIAL FEATURES
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