

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 g - 10 Hz - 2000 Hz |
| Mechanical Shocks on 3 Axes | 50 g - 11 ms - half sine |

DIMENSIONS in millimeters, general tolerance ± 1 mm

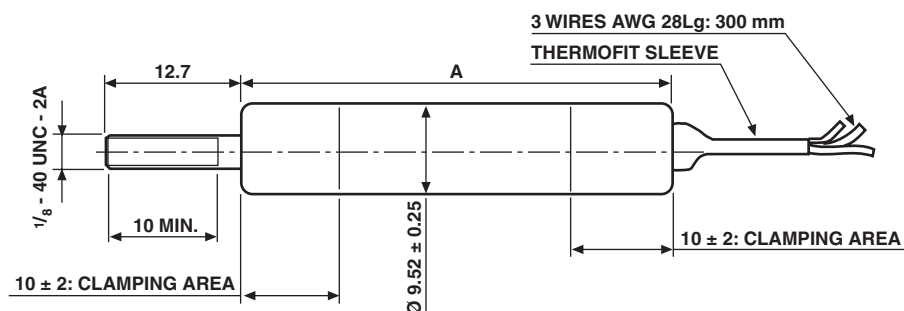
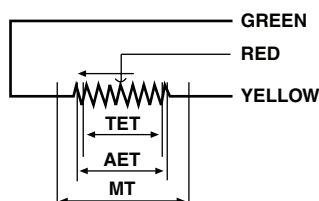


TABLE 1

| 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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