

Precision Linear Transducers, Conductive Plastic, up to 1000 mm



FEATURES

- Measurement range 25 mm to 1000 mm
- High accuracy $\pm 1\%$ down to $\pm 0.025\%$
- Excellent repeatability
- Essentially infinite resolution
- Non sensitive to temperature variations



The 115 L is a simply mounted, robust, high precision industrial linear motion transducer.

ELECTRICAL SPECIFICATIONS

| | |
|--|---|
| Theoretical Electrical Travel (TET) = E | From 25 mm to 1000 mm in increments of 25 mm |
| Independent Linearity (over TET) On Request | $\leq \pm 1\% \leq \pm 0.1\%$ $\leq \pm 0.05\%$ for $E \geq 100\text{ mm}$ $\leq \pm 0.025\%$ for $E \geq 200\text{ mm}$ |
| Actual Electrical Travel (AET) | $AET = TET + 1.5\text{ mm min.}$ |
| Ohmic Values (R_T) | 400 Ω/cm to 2 $\text{k}\Omega/\text{cm}$ |
| Resistance Tolerance at 20 °C | $\pm 20\%$ |
| Repeatability | $\leq \pm 0.01\%$ |
| Maximum Power Rating | 0.05 W/cm at 70 °C, 0 W at 125 °C |
| 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 V_{DC} |
| Dielectric Strength | $\geq 1000\text{ V}_{RMS}$, 50 Hz |
| Protection Resistor | Integrated inside the transducer to protect against errors when setting up (short circuit) |

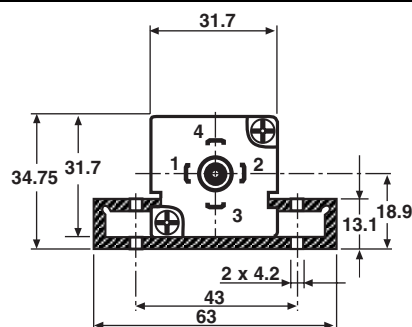
MECHANICAL SPECIFICATIONS

| | |
|-----------------------|---------------------------------------|
| Mechanical Travel | $E + 8 \pm 2\text{ mm}$ |
| Housing | Anodized aluminum |
| Operating Force | 7.5 N typical |
| Shaft (Free Rotation) | Stainless steel |
| Termination | Hydraulic type connector DIN 43650 |
| Wiper | Precious metal multifinger |
| Mounting | Movable brackets |

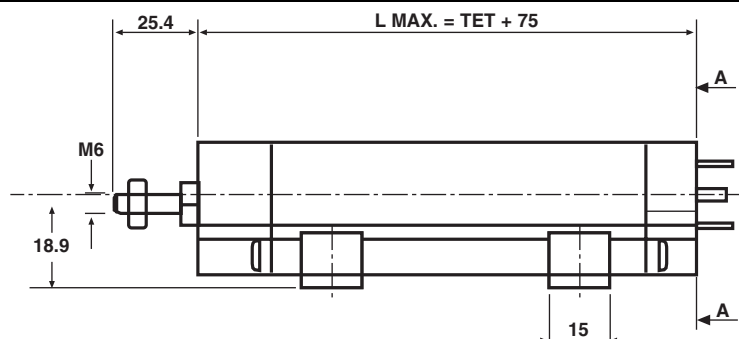
PERFORMANCE

| | |
|-----------------------------|---|
| Operating Life | 40 million cycles typical/1 Hz/ $T^\circ = 20\text{ }^\circ\text{C} \pm 5\text{ }^\circ\text{C}/80\% \text{ TET}$ |
| Temperature Range | - 55 °C to + 125 °C |
| Sine Vibration on 3 Axes | 1.5 mm peak to peak 0 - 10 Hz 15 g - 10 Hz - 2000 Hz |
| Mechanical Shocks on 3 Axes | 50 g - 11 ms - half sine |
| Speed (max.) | 8 m/s for $f < 2\text{ Hz}$; 3 m/s for $f < 5\text{ Hz}$ |

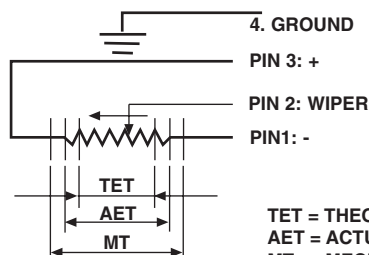
DIMENSIONS in millimeters, general tolerance ± 1 mm



VIEW A-A



ELECTRICAL CONNECTIONS

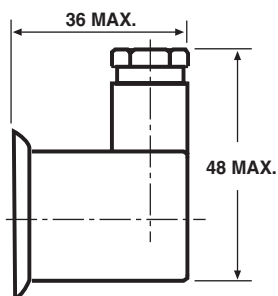


TET = THEORETICAL ELECTRICAL TRAVEL
AET = ACTUAL ELECTRICAL TRAVEL
MT = MECHANICAL TRAVEL

ACCESSORIES ON REQUEST DIMENSIONS in millimeters, general tolerance ± 1 mm

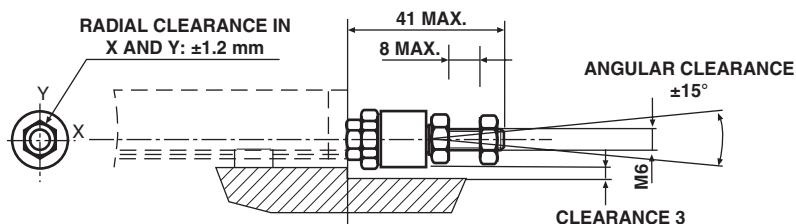
1) FEMALE CONNECTOR

Vishay's Reference: 3248610



2) SPECIAL BALL JOINT ON SHAFT

Vishay's reference: 323655



ORDERING INFORMATION/DESCRIPTION

| REC | 115 | L | 23 | D | 103 | W... | e. |
|--------|-------|------------------|-------------------------------|---|---|-----------------------------|-------------|
| SERIES | MODEL | NUMBER OF TRACKS | THEORETICAL ELECTRICAL TRAVEL | 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 | |

SAP PART NUMBERING GUIDELINES

| RE | 115 L | 23 | D | 103 | W.... |
|--------|-------|-----|-----------|-------------|------------------|
| SERIES | MODEL | TET | LINEARITY | OHMIC VALUE | SPECIAL FEATURES |



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