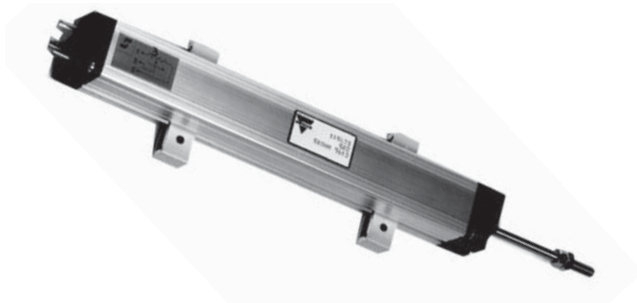


Precision Linear Transducers, Conductive Plastic, up to 1000 mm



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

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
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT

QUICK REFERENCE DATA

| | |
|------------------|--|
| Sensor type | LINEAR, conductive plastic |
| Output type | Connector |
| Market appliance | Industrial |
| Dimensions | L x 31.7 mm x 34.8 mm (with L = TET + 75 mm) |

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 $E \geq 100$ mm $\leq \pm 0.025\%$ for $E \geq 200$ mm |
| Actual electrical travel (AET) | AET = TET + 1.5 mm min. |
| Ohmic values (R_T) | 400 Ω /cm to 2 k Ω /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 μ A - 1 mA max. (continuous) |
| Load resistance | minimum $10^3 \times R_T$ |
| Insulation resistance | ≥ 1000 M Ω , 500 V _{DC} |
| Dielectric strength | ≥ 1000 V _{RMS} , 50 Hz |
| Protection resistor | Integrated inside the transducer to protect against errors when setting up (short circuit) |

MECHANICAL SPECIFICATIONS

| | |
|-----------------------|---------------------------------------|
| Mechanical travel | $E + 8 \pm 2$ 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° = 20 °C \pm 5 °C/80 % TET |
| Temperature range | -55 °C to +125 °C |
| Sine vibration on 3 axes | 1.5 mm peak to peak 0 Hz to 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 $f < 2$ Hz; 3 m/s for $f < 5$ Hz |

Note

- Nothing stated herein shall be construed as a guarantee of quality or durability.

DIMENSIONS in millimeters, general tolerance ± 1 mm

VIEW A-A

ELECTRICAL CONNECTIONS

4. GROUND
PIN 3: +
PIN 2: WIPER
PIN 1: -

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

RADIAL CLEARANCE IN X AND Y: ± 1.2 mm

ANGULAR CLEARANCE $\pm 15^\circ$

CLEARANCE 3

| 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: ± 1 % D: ± 0.1 % E: ± 0.05 % F: ± 0.025 % | First 2 digits are significant numbers 3 rd 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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