Conductive Plastic Motion Transducer Elements (KIT), up to 1000 mm

The LMF is a reduced bulk, precision motion transducer, designed for easy integration into equipment.

FEATURES
- Measurement range 25 mm to 1000 mm
- High accuracy ± 1 % down to ± 0.025 %
- Good repeatability
- Simple and flexible mounting
- Essentially infinite resolution

Made in two separate parts:
- the sensing element
- the wiper

Special designs available on request

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

QUICK REFERENCE DATA

<table>
<thead>
<tr>
<th>Sensor type</th>
<th>LINEAR, conductive plastic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output type</td>
<td>Solder pads</td>
</tr>
<tr>
<td>Market appliance</td>
<td>Industrial</td>
</tr>
<tr>
<td>Dimensions</td>
<td>L x 15 mm x 1.6 mm (with L = TET + 18 mm)</td>
</tr>
</tbody>
</table>

ELECTRICAL SPECIFICATIONS

- Theoretical electrical angle (TEA = E)
- From 25 mm to 1000 mm in increments of 25 mm
- Independent linearity (over TET)
- ≤ ± 1 %; ≤ ± 0.1 %
- ≤ ± 0.05 % for E ≥ 100 mm
- ≤ ± 0.025 % for E ≥ 200 mm
- Actual electrical travel (AET)
- AET = TET + 2 mm
- Ohmic value
- From 400 Ω/cm to 2 kΩ/cm
- Resistance tolerance at 20 °C
- ± 20 %
- Repeatability
- ≤ 0.01 %
- Maximum power rating
- 0.05 W/cm at 40 °C
- 0 W at 85 °C
- Wiper current
- Recommended: a few μA - 1 mA max. (continuous)
- Load resistance
- Minimum 10³ x Rₜ
- Insulation resistance
- ≥ 1000 MΩ, 500 VDC
- Dielectric strength
- ≥ 750 V_RMS, 50 Hz

MECHANICAL SPECIFICATIONS

- Support of element
- Fiberglass epoxy
- Plastic moulding
- Wiper (non insulated)
- Precious metal multifinger
- Insulated
- Terminals
- Soldering pads
- By wires
- Fixing
- Glued: Double face Isotac
- Screwed: Holes in the support

PERFORMANCE

- Operating life
- 25 million cycles typical/1 Hz/T° = 20 °C ± 5 °C/80 % TET
- Temperature range
- -55 °C to +125 °C

Note
- Nothing stated herein shall be construed as a guarantee of quality or durability
### ORDERING INFORMATION/DESCRIPTION

<table>
<thead>
<tr>
<th>KIT SERIES</th>
<th>LM MODEL</th>
<th>F CONDUCTOR</th>
<th>3 THEORETICAL ELECTRICAL TRAVEL</th>
<th>D LINEARITY</th>
<th>103 OHMIC VALUE</th>
<th>W... MODIFICATIONS</th>
<th>e. LEAD FINISH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>F: plastic</td>
<td>Times 25 mm</td>
<td>A: ± 1 %</td>
<td>First 2 digits are significant numbers</td>
<td>Special feature code number</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>S: serigraphy</td>
<td></td>
<td>D: ± 0.1 %</td>
<td>3rd digit indicates number of zeros</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>E: ± 0.05 %</td>
<td>F: ± 0.025 %</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### SAP PART NUMBERING GUIDELINES

<table>
<thead>
<tr>
<th>LMF MODEL</th>
<th>3 TET</th>
<th>D LINEARITY</th>
<th>103 OHMIC VALUE</th>
<th>W.... SPECIAL FEATURES</th>
</tr>
</thead>
</table>

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For technical questions, contact: sferprecisionpot@vishay.com

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