

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



FEATURES

- Measurement range 25 mm to 1000 mm
- High accuracy $\pm 1\%$ down to $\pm 0.025\%$
- 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


RoHS
COMPLIANT

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

QUICK REFERENCE DATA

Sensor type	LINEAR, conductive plastic
Output type	Solder pads
Market appliance	Industrial
Dimensions	L x 15 mm x 1.6 mm (with L = TET + 18 mm)

ELECTRICAL SPECIFICATIONS

Theoretical electrical angle (TEA = E)	From 25 mm to 1000 mm in increments of 25 mm	
Independent linearity (over TET)	$\leq \pm 1\%$; $\leq \pm 0.1\%$	
On request	$\leq \pm 0.05\%$ for $E \geq 100$ mm	$\leq \pm 0.025\%$ for $E \geq 200$ mm
Actual electrical travel (AET)	AET = TET + 2 mm	
Ohmic value	From 400 Ω /cm to 2 k Ω /cm	
Resistance tolerance at 20 °C	$\pm 20\%$	
Repeatability	$\leq 0.01\%$	
Maximum power rating	0.05 W/cm at 40 °C	0 W at 85 °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	≥ 750 V _{RMS} , 50 Hz	

MECHANICAL SPECIFICATIONS

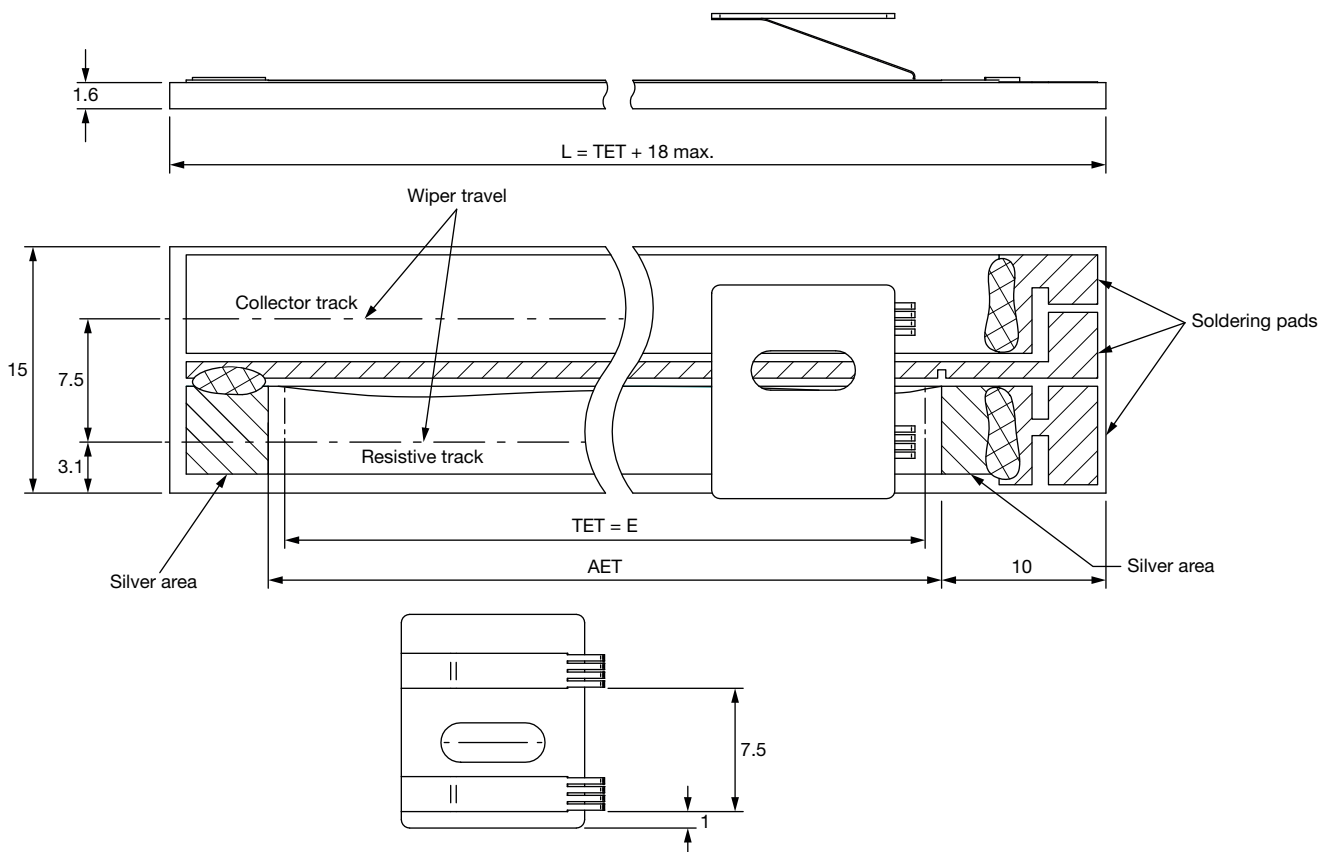
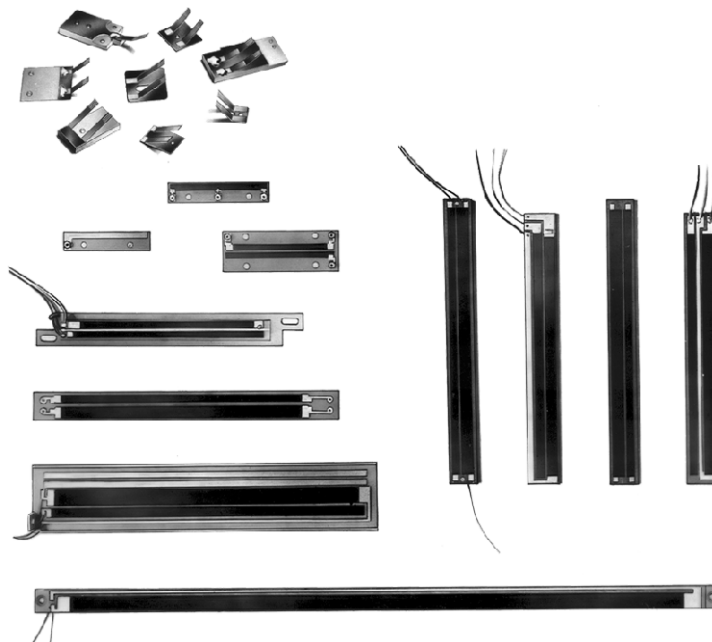
Support of element	Fiberglass epoxy
On request	Plastic molding
Wiper (non insulated)	Precious metal multifinger
On request	Insulated
Terminals	Soldering pads
On request	By wires
Fixing	Glued: double face Isotac
On request	Screwed: holes in the support

PERFORMANCE

Operating life	25 million cycles typical/1 Hz/T° = 20 °C $\pm$ 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

DIMENSIONS in millimeters, general tolerance ± 0.5 mm

EXAMPLES OF SPECIAL DESIGNS




ORDERING INFORMATION / DESCRIPTION

KIT	LM	F	3	D	103	W2851	e.
SERIES	MODEL	CONDUCTOR	THEORETICAL ELECTRICAL TRAVEL	LINEARITY	OHMIC VALUE	MODIFICATIONS	LEAD FINISH
		F: plastic S: serigraphy	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	W2851 : up to 575 mm max. length Wxxxx : special feature code number for length > 575 mm	

SAP PART NUMBERING GUIDELINES

LMF	3	D	103	W2851
MODEL	TET	LINEARITY	OHMIC VALUE	SPECIAL FEATURES



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