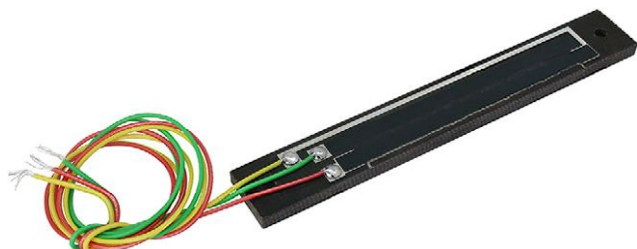


Kit Potentiometer Linear Analog Displacement Sensor



FEATURES

- Conductive plastic potentiometer technology, infinite resolution
- Analog
- Low height
- Substrate: stratified, insulated, rigid, high temperature
- Wiper: multicontacts, precious metals
- Applicable standards: NFC 93255, MIL R39023
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



QUICK REFERENCE DATA

Sensor type	LINEAR, conductive plastic
Output type	Output by wires
Market appliance	Industrial, avionics
Dimensions	38 mm, 41 mm, 61 mm, 85 mm, 93 mm, 106 mm, 141 mm, 345 mm

ELECTRICAL SPECIFICATIONS

PARAMETER	KITPL038	KITPL041	KITPL061	KITPL085	KITPL085 (RX13-75)	KITPL093	KITPL106	KITPL141	KITPL345 (RX13-300)
Total electrical travel	29.8 mm	18 mm	38 mm	50 mm	75 mm	58 mm	19 mm	92 mm	300 mm
Useful electrical travel	28 mm	8 mm	28 mm	47 mm	70 mm	55 mm	18.7 mm	86 mm	300 mm
Independent linearity	± 0.2 %	± 0.14 %	± 0.07 %	± 0.1 %	± 0.1 %	± 0.1 %	± 5 %	± 0.5 %	± 0.1 %
Total resistance range (R _n)	4.7 kΩ	4.7 kΩ	4.7 kΩ	4.7 kΩ	4.7 kΩ	4.7 kΩ	1.13 kΩ	10 kΩ	10 kΩ
Tolerance on R _n	+ 10 % - 2 %	± 20 %	± 20 %	± 20 %	± 20 %	± 20 %	± 11 %	± 20 %	± 20 %
Output smoothness	< 0.1 %	< 0.3 %	< 0.2 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %	< 0.1 %
Power rating at 70 °C	0.15 W	0.27 W	0.57 W	0.15 W/cm	0.15 W/cm	0.15 W/cm	0.15 W/cm	0.25 W/cm	0.15 W/cm
Temperature coefficient	-300 ± 300 ppm/°C								
Wiper current	≤ 1 mA								
Recommended load impedance	≥ 1000 R _n								
Insulation resistance	1 GΩ at 50 V _{CC}	≥ 10 GΩ at 500 V _{DC}							
Dielectric strength	750 V _{RMS} , 50 Hz, 1 min	500 V _{RMS} , 50 Hz, 1 min							

MECHANICAL SPECIFICATIONS

PARAMETER	
Maximum displacement speed	1.5 m/s
Displacement force	≤ 0.08 N

PERFORMANCE									
PARAMETER	KITPL038	KITPL041	KITPL061	KITPL085	KITPL085 (RX13-75)	KITPL093	KITPL106	KITPL141	KITPL345 (RX13-300)
Operating temperature range	-35 °C to +120 °C	-40 °C to +105 °C							
Storage temperature range	-46 °C to +71 °C	-40 °C to +105 °C							
Rotation humidity (max.)	5 % to 95 %								
Life	10M cycles								

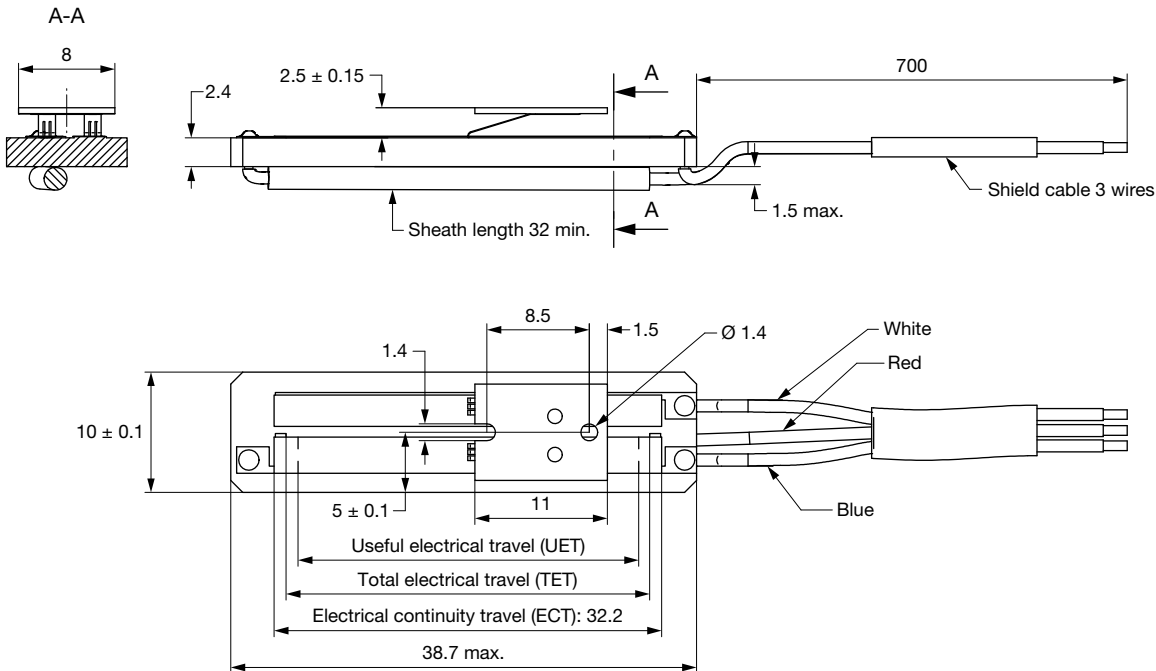
Note

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

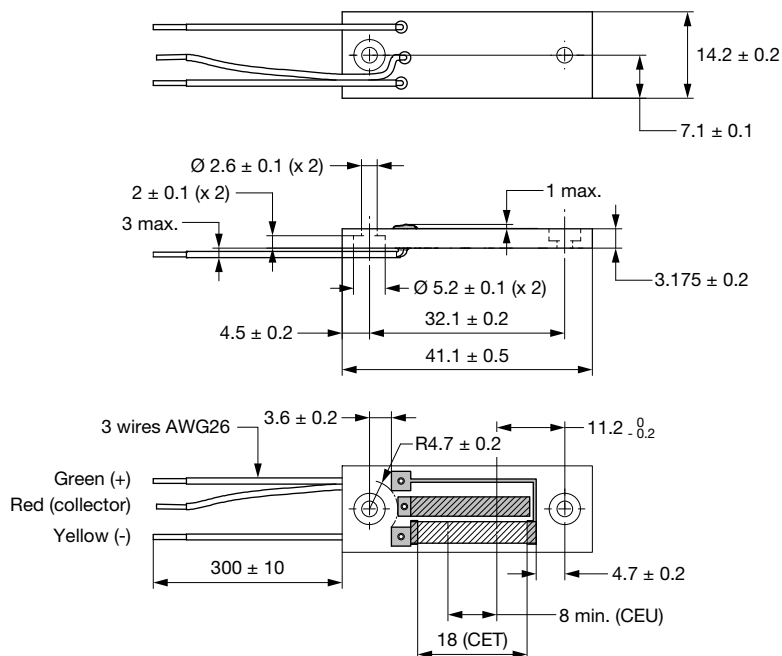
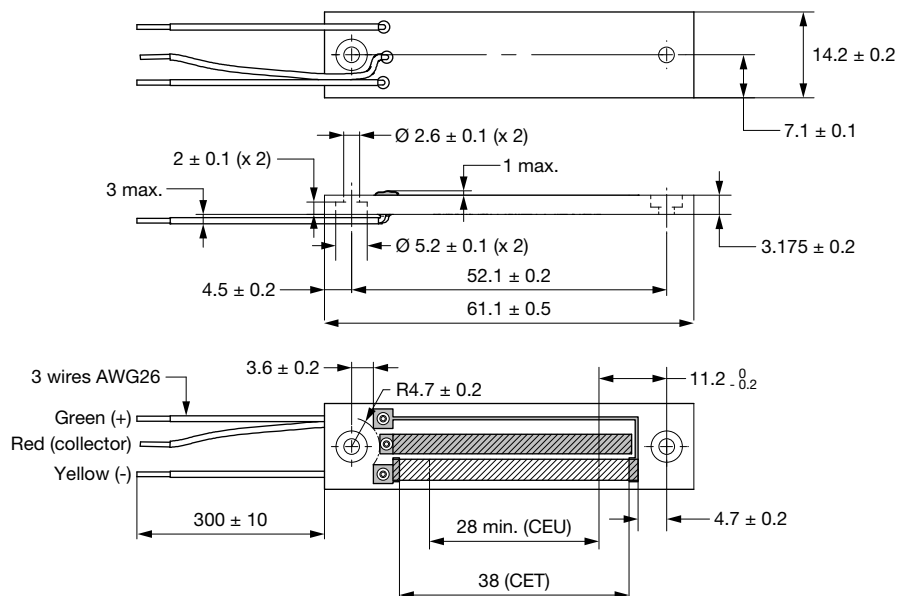
SAP PART NUMBERING GUIDELINES							
MODEL	TYPE	SIZE	FUNCTION	VALUE	LINEARITY	PACKAGING	3 DIGITS
KITP	L = linear	038	1	472 = 4K7	L = 0.2 %	B = box (1 piece)	To consult Vishay for dedicated 3 digits
		041			U = see Electrical Specifications		
		061			D = 0.1 %		
		085		112 = 1K1	U = see Electrical Specifications		
		093			B = 0.5 %		
		106			D = 0.1 %		
		141		103 = 10K			
		345		103 = 10K			-

Note

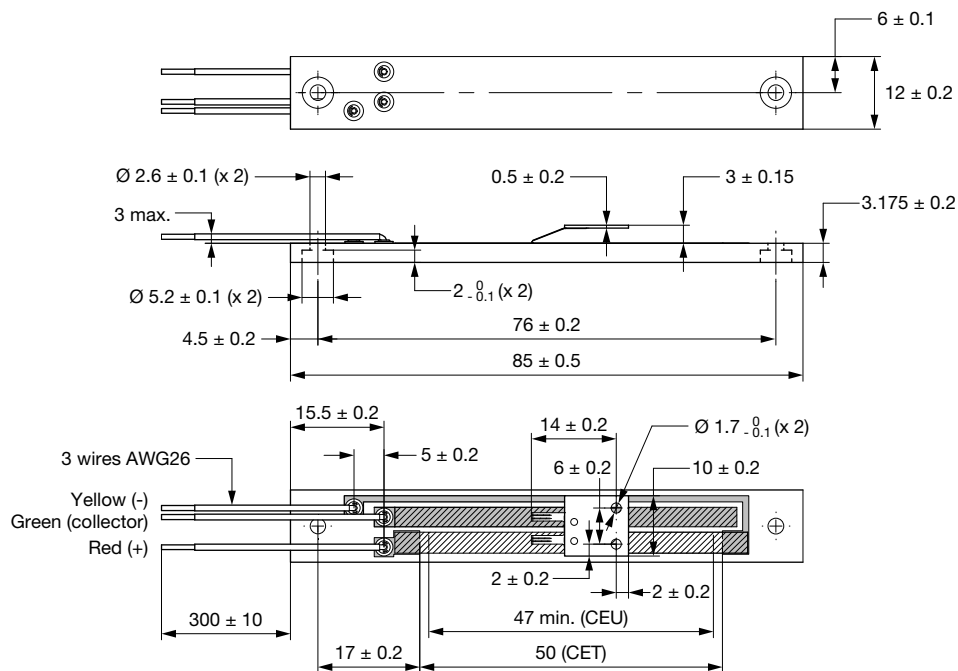
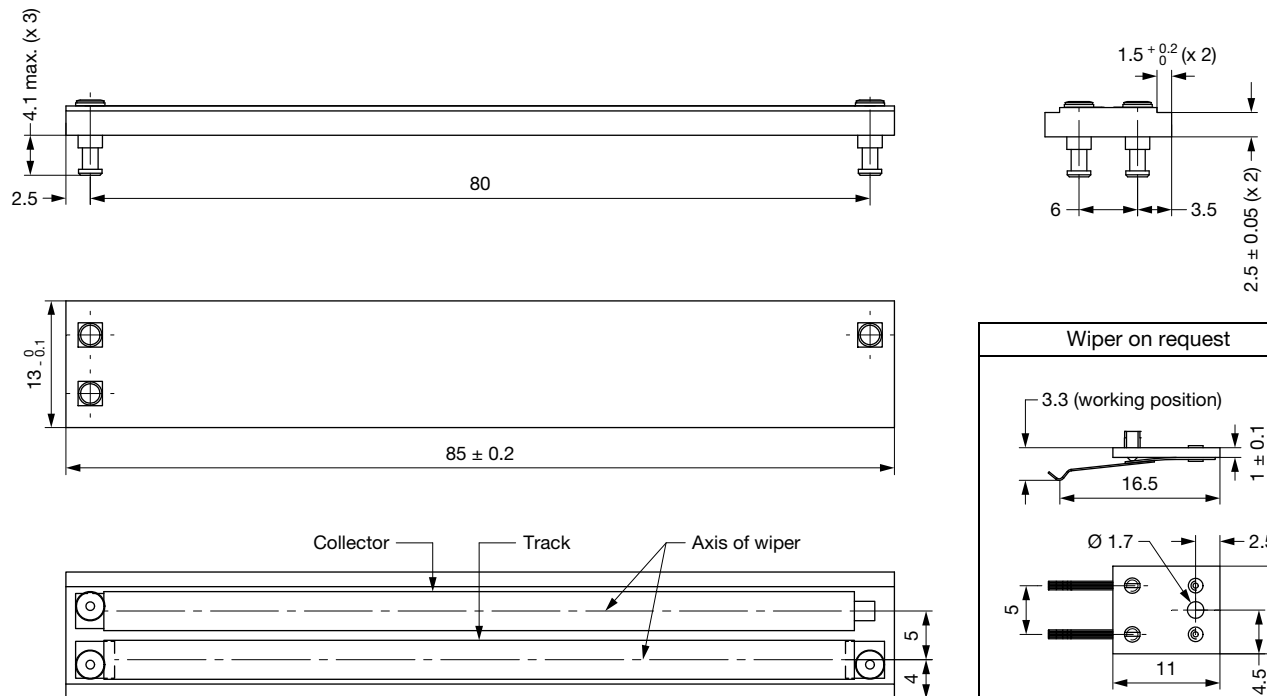
- Standard = analog output

DIMENSIONS in millimeters	
KITPL038	
 The drawing includes a cross-section A-A showing a width of 8 mm. The main side view shows a total length of 700 mm, with a sheath length of at least 32 mm. Key dimensions include a 2.4 mm offset, a 2.5 ± 0.15 mm feature, and a 1.5 mm max. bend radius. The bottom view shows a 10 ± 0.1 mm height, an 8.5 mm width, and a 1.4 mm offset. It also details electrical travel: Useful electrical travel (UET) of 5 ± 0.1 mm, Total electrical travel (TET) of 11 mm, and Electrical continuity travel (ECT) of 32.2 mm, with a maximum of 38.7 mm. The cable has three wires: White, Red, and Blue, with a diameter of Ø 1.4 mm.	

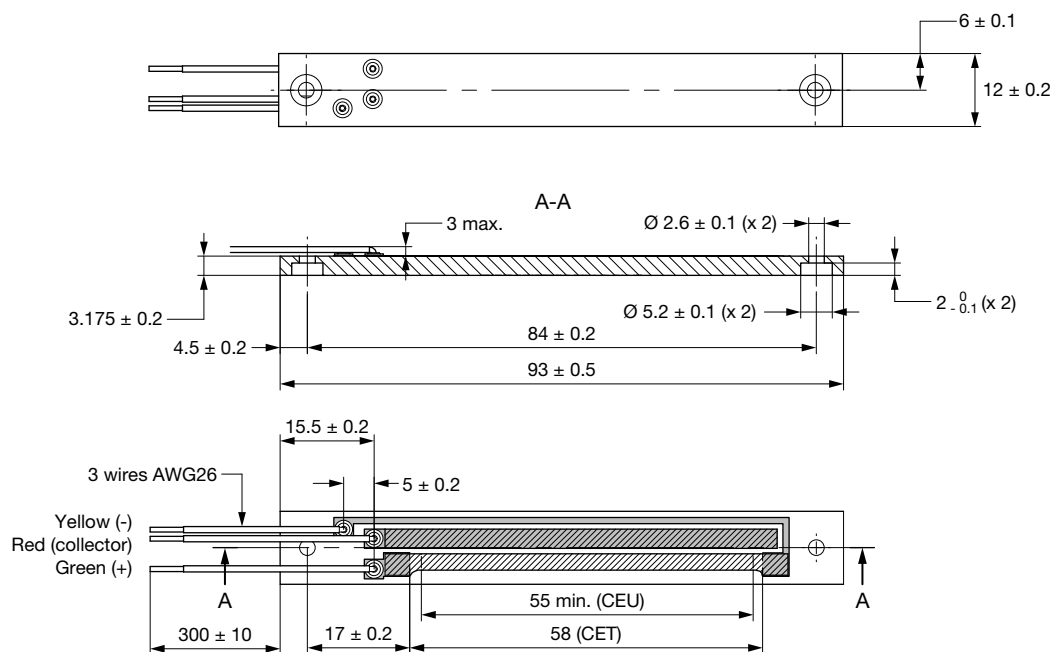
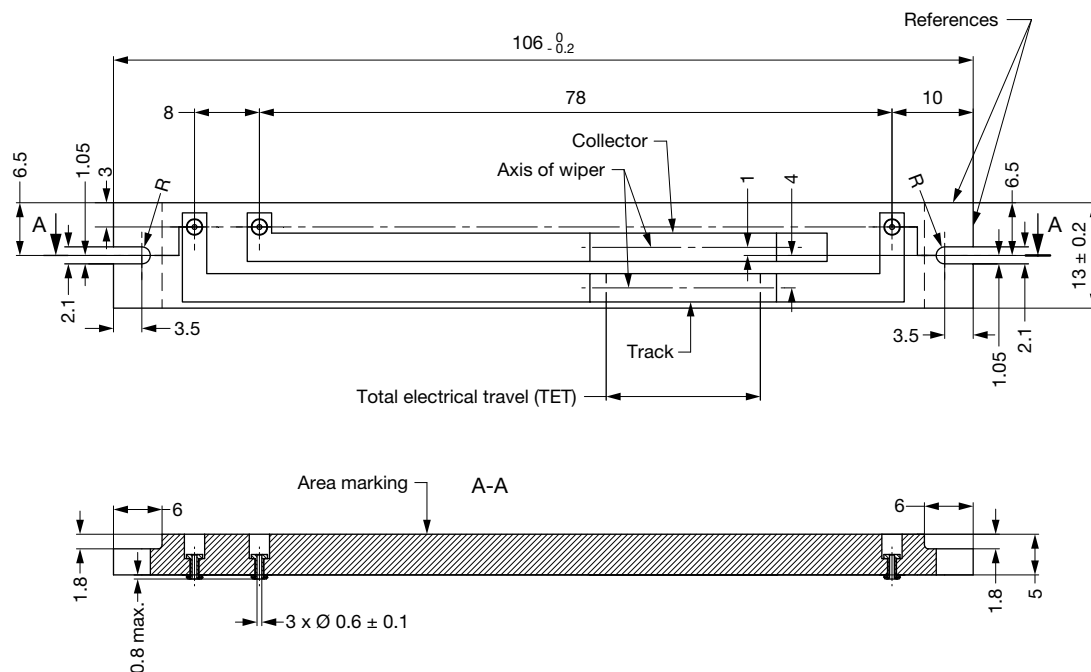
DIMENSIONS in millimeters

KITPL041

KITPL061


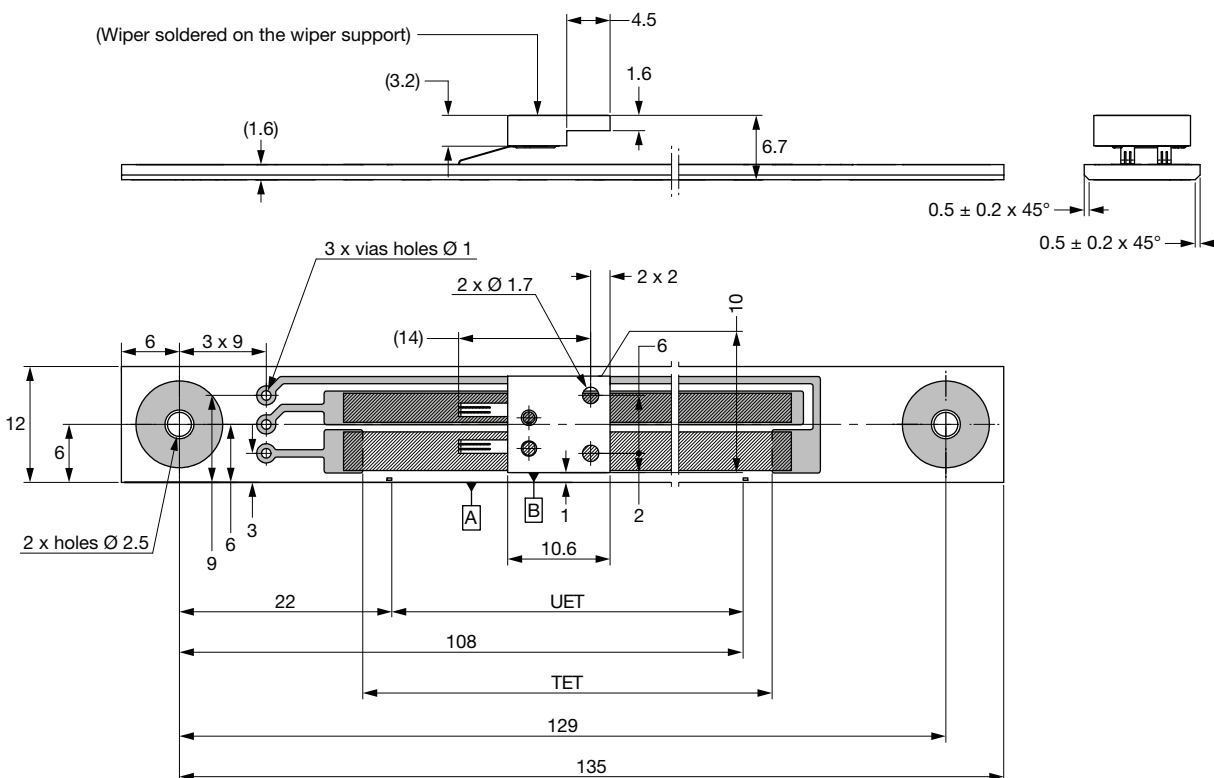
DIMENSIONS in millimeters

KITPL085

KITPL085 (RX13-75)


DIMENSIONS in millimeters

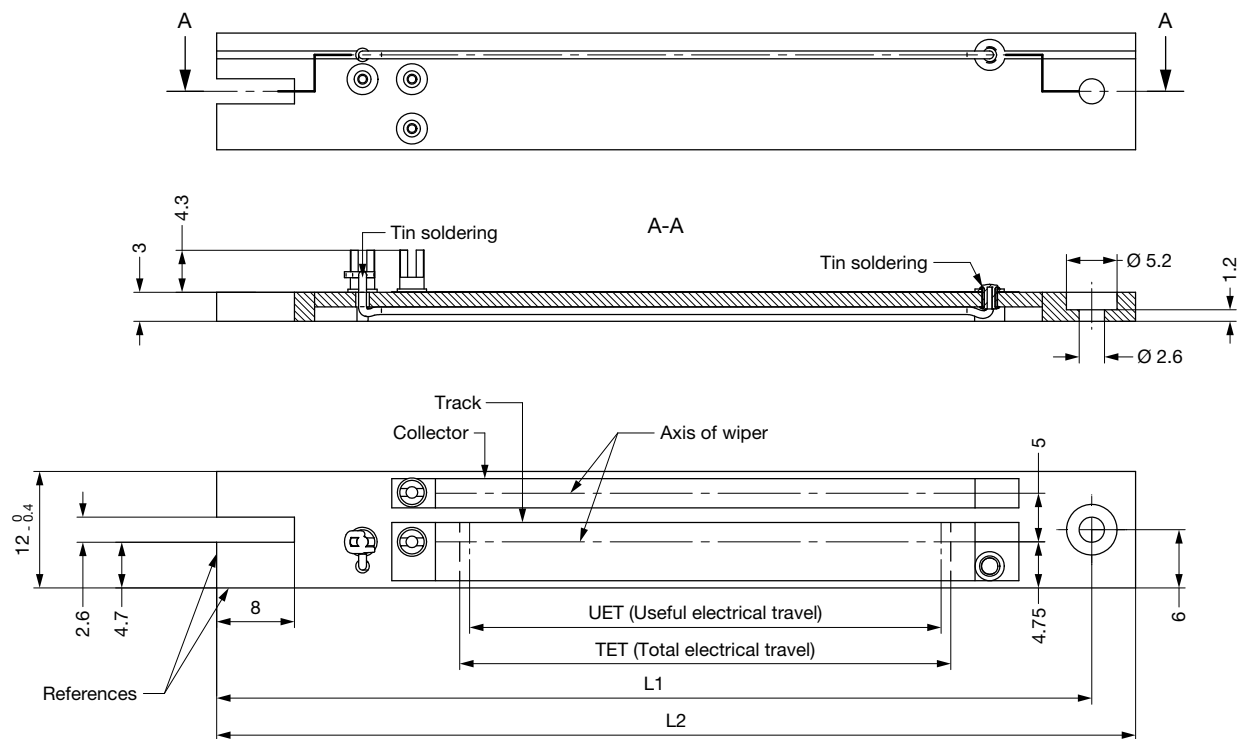
KITPL093

KITPL106


DIMENSIONS in millimeters

KITPL141

Note

- Customer mounting requirements:
 - The position of the corresponding customer interfaces of ref. B versus ref. A shall be 1 ± 0.1
 - Maximum tightening torque of the track fixing screws is 0.3 Nm

DIMENSIONS in millimeters

KITPL345 AND OTHER ON REQUEST


TYPE	TET MAX.	UET MIN.	L1 ± 0.1	L2 ± 0.5
KITPL070	26	25	65	69.5
KITPL095	51	50	90	94.5
KITPL145	102	100	140	144.5
KITPL195	152	150	190	194.5
KITPL245	202	200	240	244.5
KITPL295	252	250	290	294.5
KITPL345	302	300	340	344.5
KITPL445	402	400	440	444.5

OPTIONS (on request)

- Other ohmic values (R_n)
- Other tolerances on R_n
- Other linearities:
KITPL085 ± 0.04 % (2.5 mm to 14.5 mm) else 0.1 %
- Other theoretical electrical travels
- Other dimensions



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