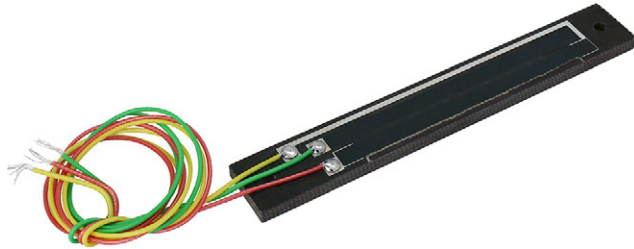


# Kit Potentiometer Linear Analog Displacement Sensor



## 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](http://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 <sub>n</sub> )	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 <sub>n</sub>	+ 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 <sub>n</sub>								
Insulation resistance	1 GΩ at 50 V <sub>CC</sub>	≥ 10 GΩ at 500 V <sub>DC</sub>							
Dielectric strength	750 V <sub>RMS</sub> , 50 Hz, 1 min	500 V <sub>RMS</sub> , 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								

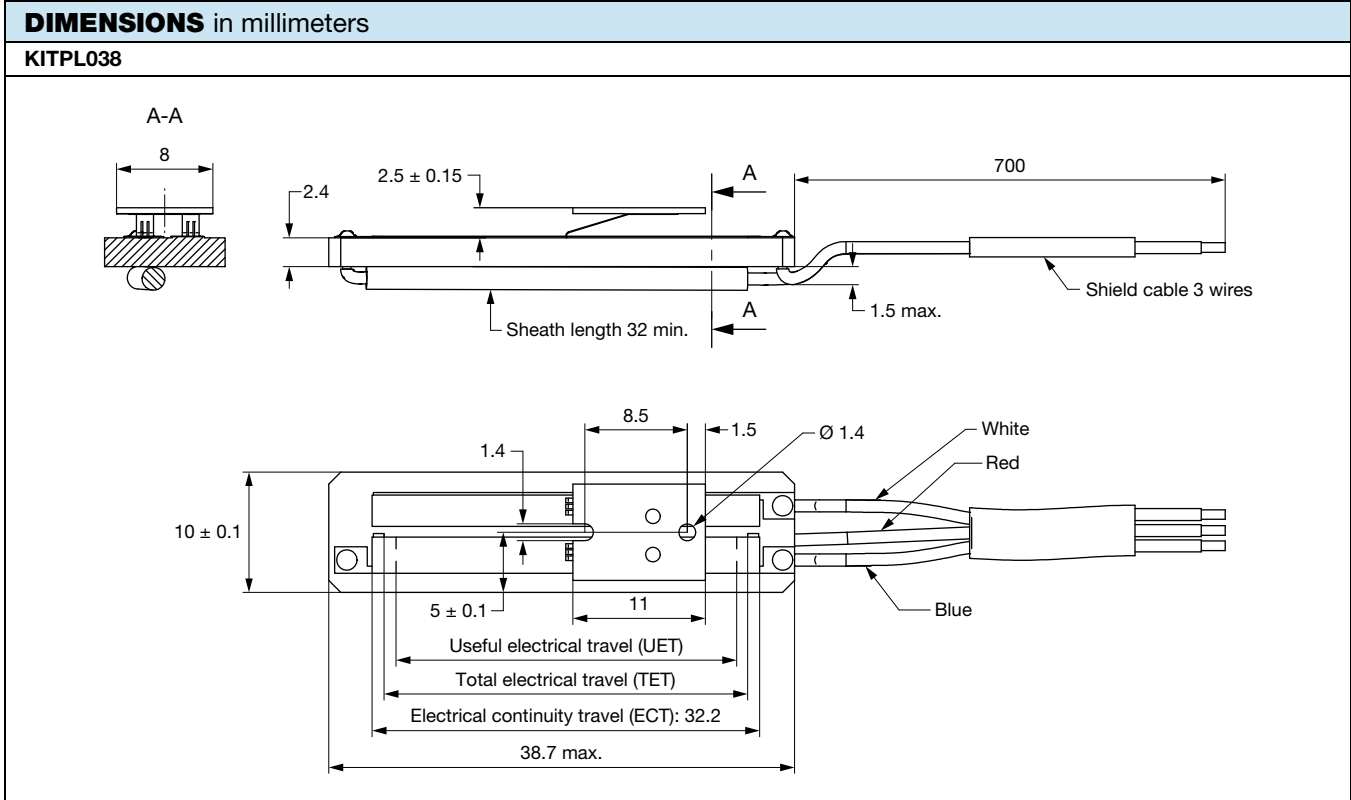
**Note**

- 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					
		106		103 = 10K	B = 0.5 %		
141	103 = 10K	D = 0.1 %					
345							-

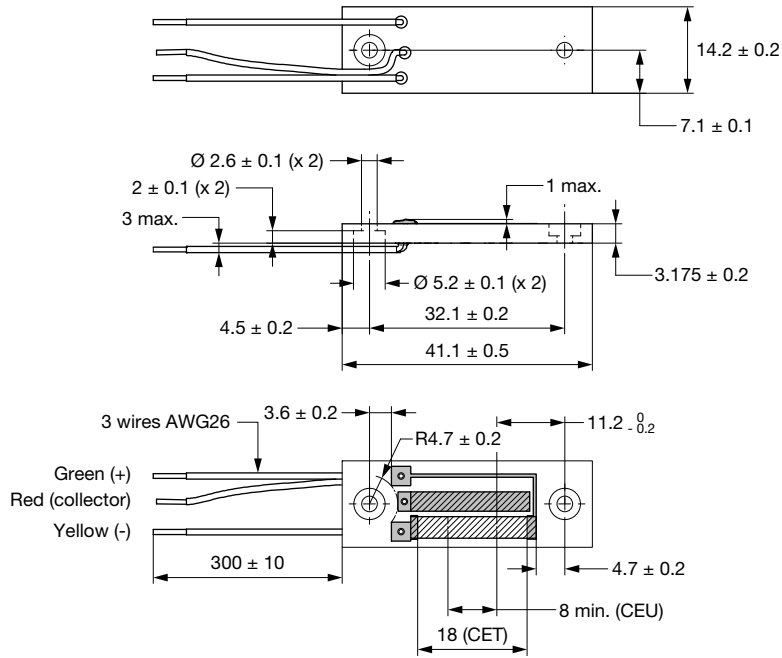
**Note**

- Standard = analog output

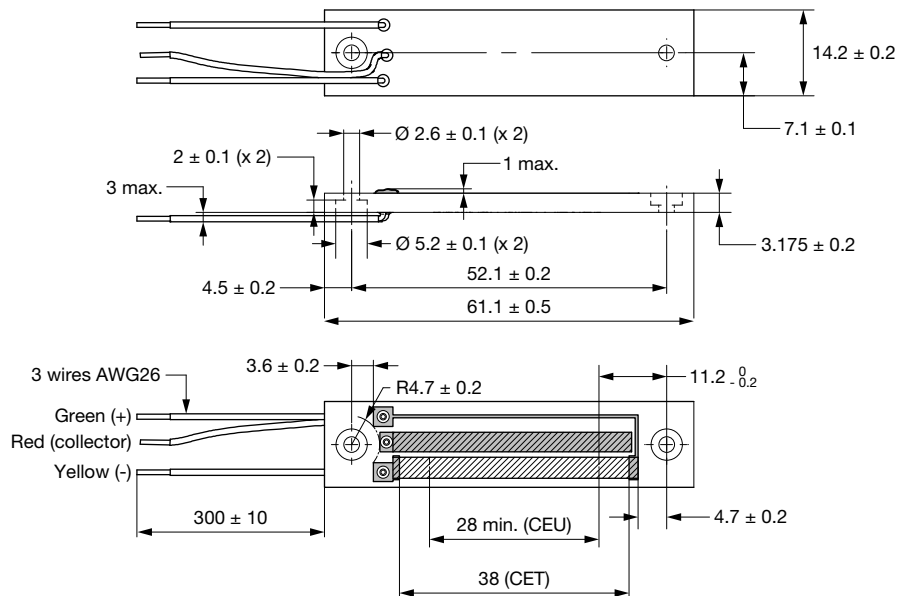


**DIMENSIONS** in millimeters

**KITPL041**

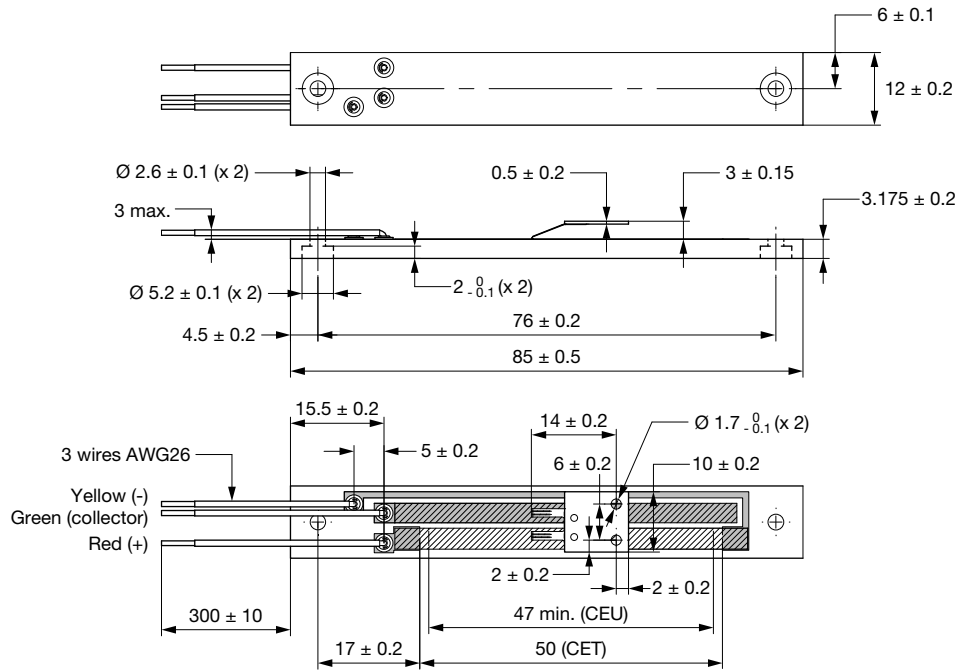


**KITPL061**

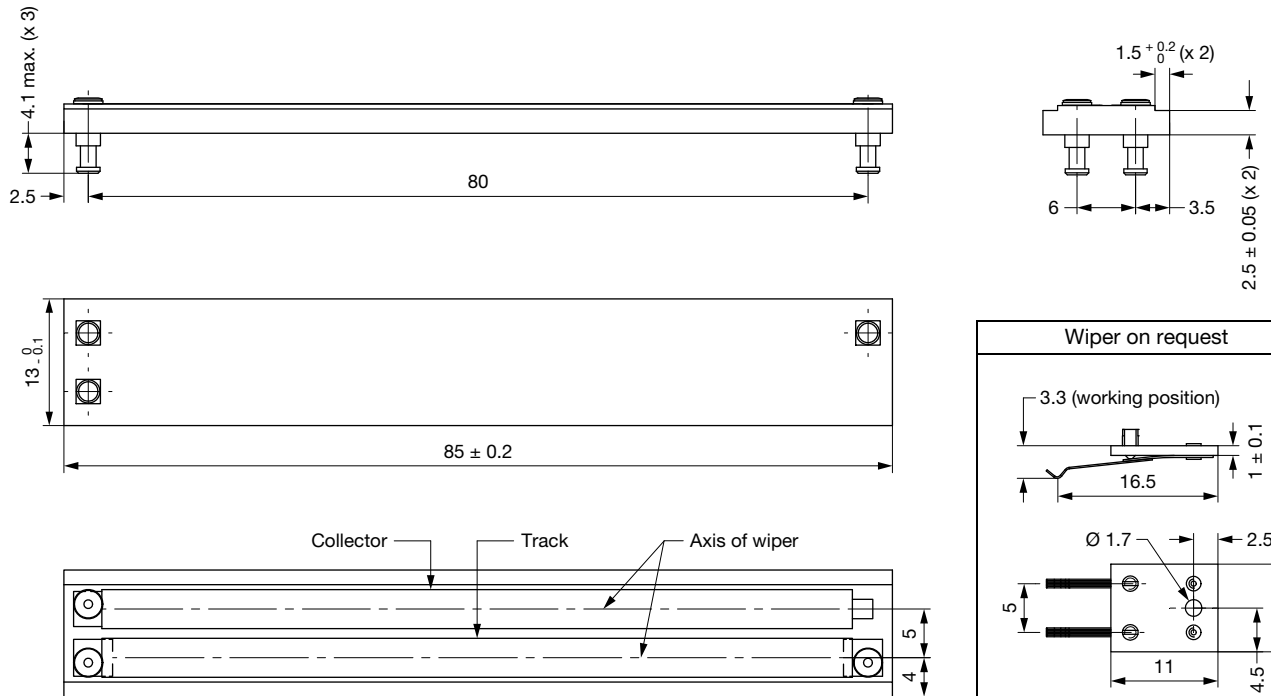


**DIMENSIONS** in millimeters

**KITPL085**

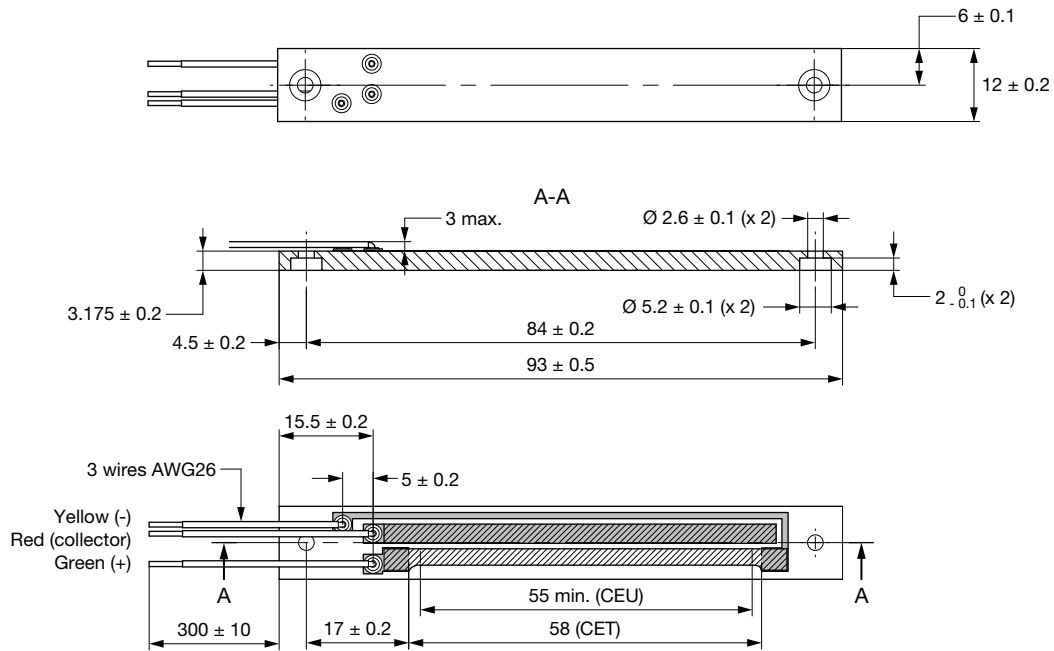


**KITPL085 (RX13-75)**

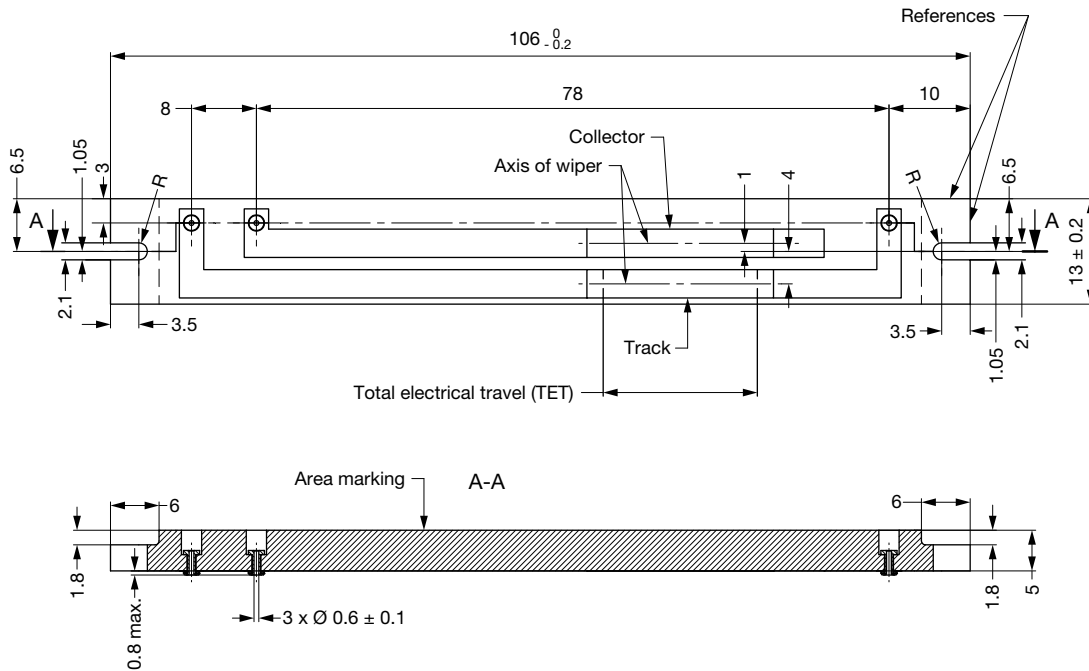


**DIMENSIONS** in millimeters

**KITPL093**

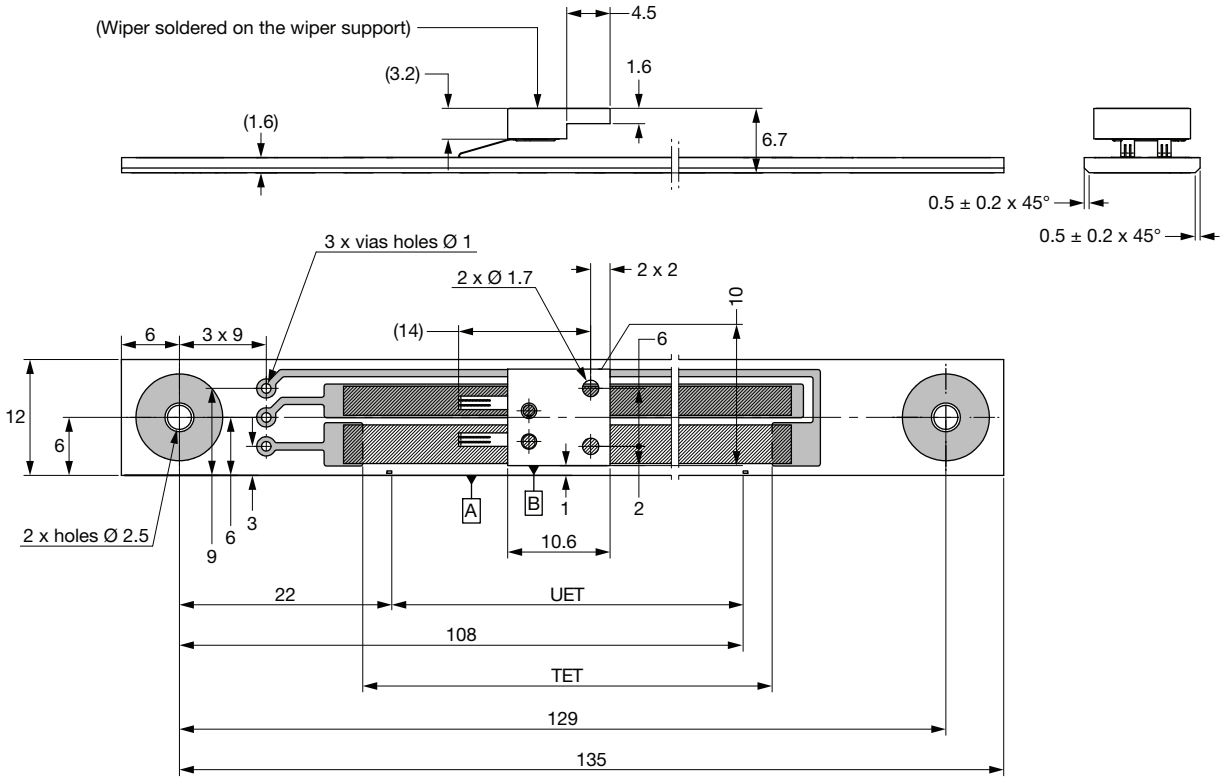


**KITPL106**



**DIMENSIONS** in millimeters

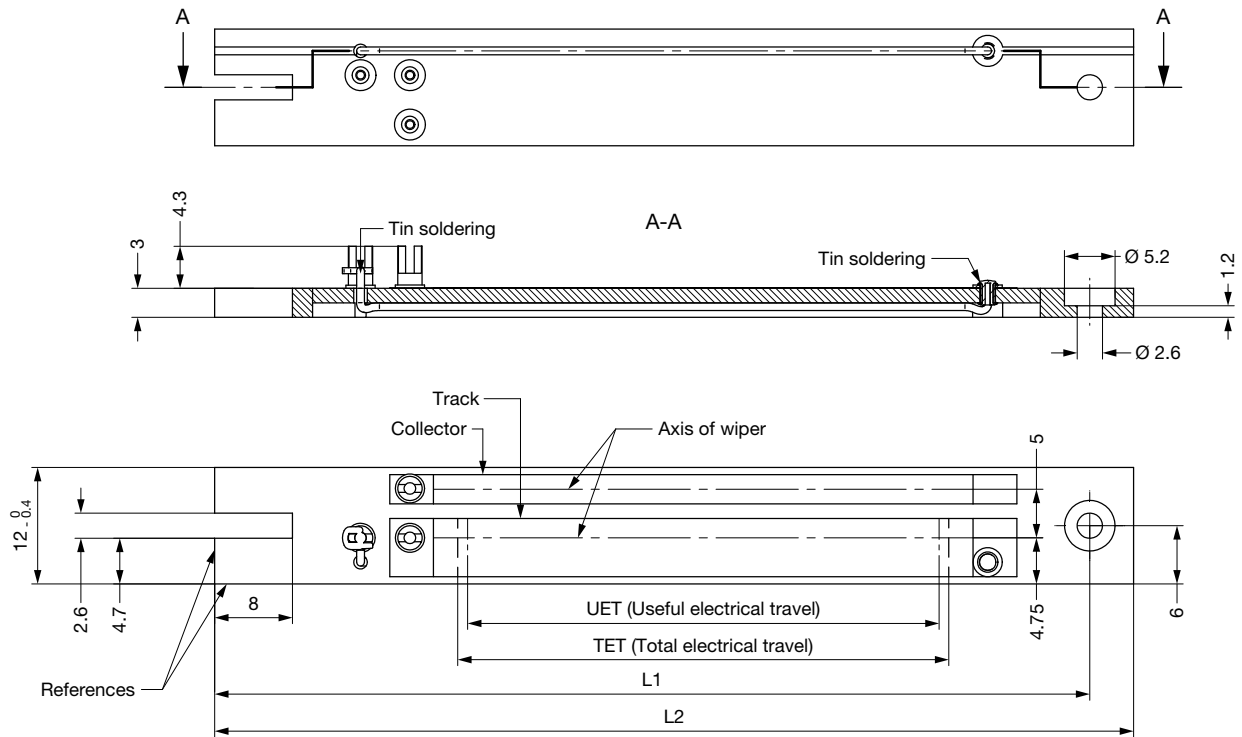
KITPL141



**Note**

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

**DIMENSIONS** in millimeters

**KITPL345 AND OTHER ON REQUEST**


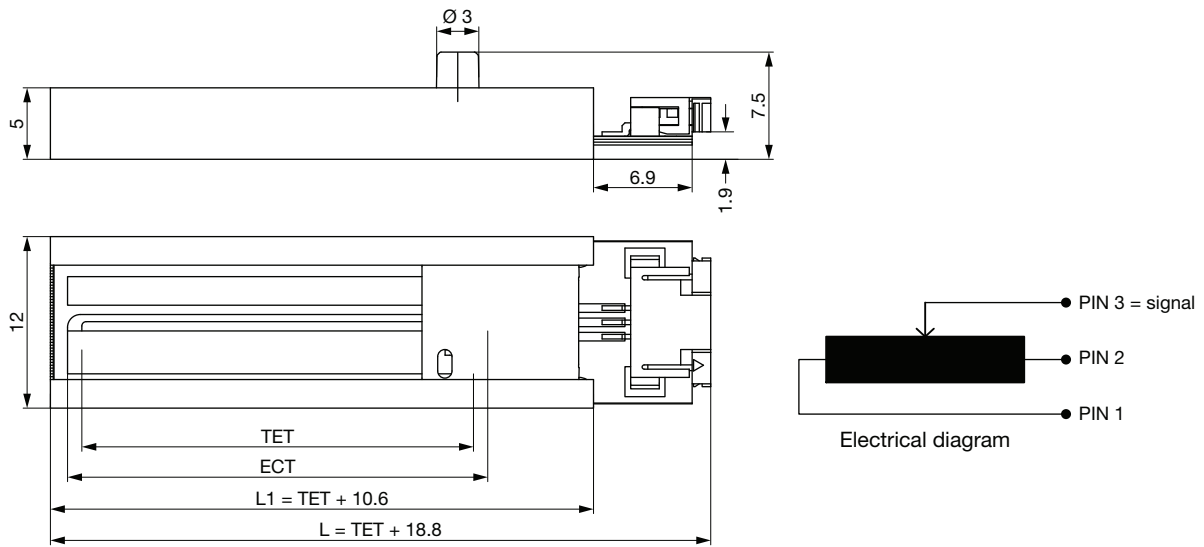
TYPE	TET MAX.	UET MIN.	L1 ± 0.1	L2 ± 0.5
KITPL070	26	25	65	69.5
KITPL095	51	50	90	94.5
KITPL145	102	100	140	144.5
KITPL195	152	150	190	194.5
KITPL245	202	200	240	244.5
KITPL295	252	250	290	294.5
KITPL345	302	300	340	344.5
KITPL445	402	400	440	444.5

**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
- KITPLA: **KIT** Potentiometer **L**inear **A**ssembled): faisability to deliver wiper assembled with the track! (active track and wiper mounted inside a metal profile for easier assembling inside customer equipment: no need to manage the distance between wiper and track)

**DIMENSIONS** in millimeters

KITPLA ON REQUEST







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