

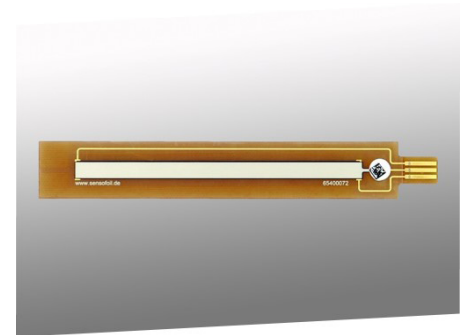
DATASHEET

Sensofoil® FR4-PET

Resistive track printed on circuit board

Features:

- Linear design
- Flat, durable and fully sealed
- Operating temperature -25 °C to +55 °C
- Various connector options



How does it work? Sensofoil® FR4-PET

A Sensofoil® membrane potentiometer FR4-PET consists of a resistive track printed onto a circuit board and a collector track printed onto the top PET foil layer. These layers are separated by a so-called spacer. Only when the layers connect through mechanical pressure using a wiper a signal is produced.

Ideally, a low DC voltage is connected to the resistive track and tapped at the collector track in the form of a voltage divider. A linear relation exists between the length of the resistive track, or the angle of the resistive track for rotary sensors, and the applied voltage. At 50% of distance traveled, 50% of the applied voltage is measured.

Quality characteristics of the Sensofoil® membrane potentiometers are resistance values, their corresponding tolerances and the non-linearity. The non-linearity represents the actual deviation of the output signal to an ideal reference line and is expressed as a percentage of the applied supply voltage.

DATASHEET
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Part Numbers (standard portfolio)

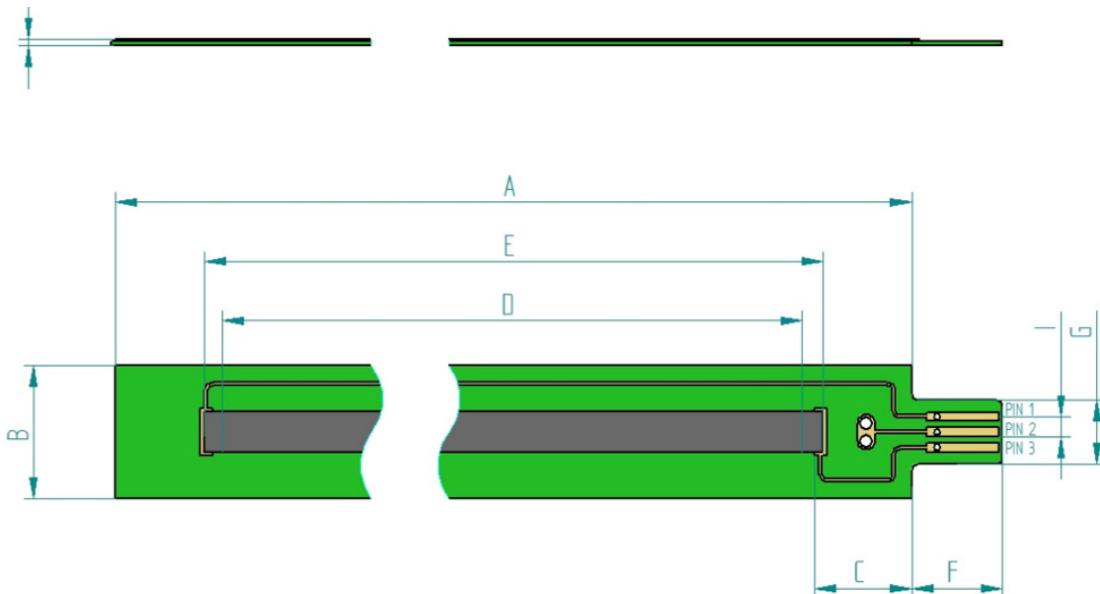
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Mechanical Data (at room temperature) ⁽¹⁾

Total length	A	137 mm			
Total width	B		22 mm		
Active width	C		16 mm		
Effective electrical length ⁽²⁾	D	95 mm			
Active length	E	105 mm			
Length connector tail	F		15 mm		
Width connector tail	G		10.5 mm		
Height	H		0.9 mm		
Contact Spacing	I		2.54 mm		
Travel speed			≤ 3 m/s		
Life cycles (tested to date)			3 Million cycles		
Mounting type			self-adhesive foil		

Above values are based on internal tests and inspections and represent typical values.
Hoffmann + Krippner does not guarantee completeness or absolute accuracy based on varying conditions.
Test set up information and conditions can be obtained.

- (1) Tolerances based on DIN ISO 2768
- (2) Area in which the specified linearity is guaranteed. Approx. 90% of the total active length.



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Environmental Conditions

Operating temperature	-25°C to +55°C
Storage temperature	-25°C to +85°C
Protection Class ⁽³⁾	IP 54

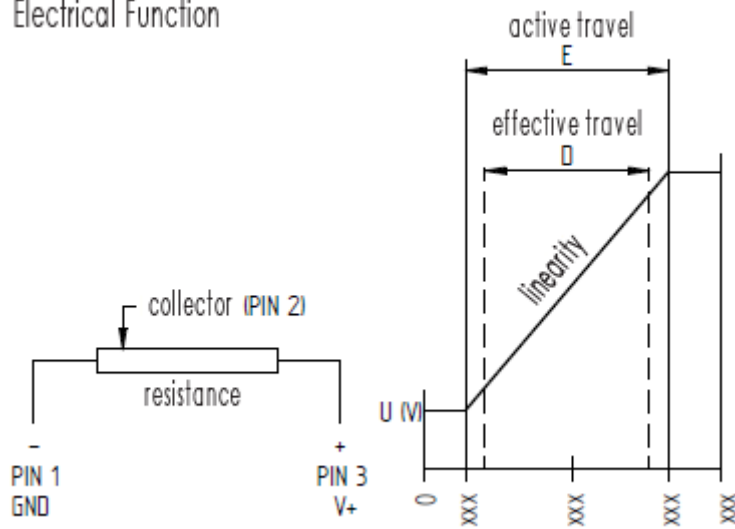
Electrical Data (at room temperature)

Resistance	10.0 kOhm
Tolerance	+/- 30%
Independent linearity	2%
max. wiper current in case of failure	0.1A
suggested wiper current during operation	0.1µA
Operating voltage	1-42 VDC

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(3) Protection class for sensor ONLY.

Electrical Function



DATASHEET**Sensofoil® FR4-PET****Sensofoil® FR4-PET Accessories**

Wiper for membrane potentiometers with PET surface
(datasheet available upon request)



Wiper H+K part number 60300001 (M6x1 thread)



Wiper H+K part number 60300009 (for mounting)

Contacts for membrane potentiometers with circuit board
(datasheets available upon request)

- All common contacts solderable
- SMD contacts
- Cables or stranded wire soldered directly

Other connector and soldering options available upon request.