

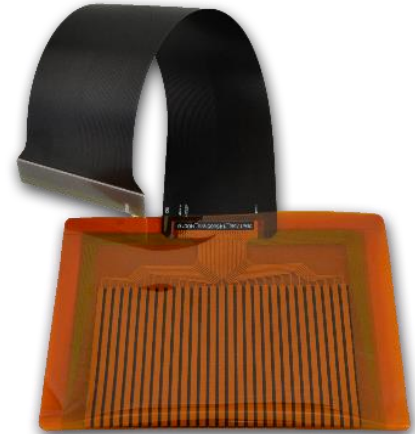
FSR-Matrix TM29x17 (Type 1) - PI

Product Brief

InnovationLab GmbH
Speyerer Straße 4
69115 Heidelberg
www.innovationlab.de
info@innovationlab.de

Key Features

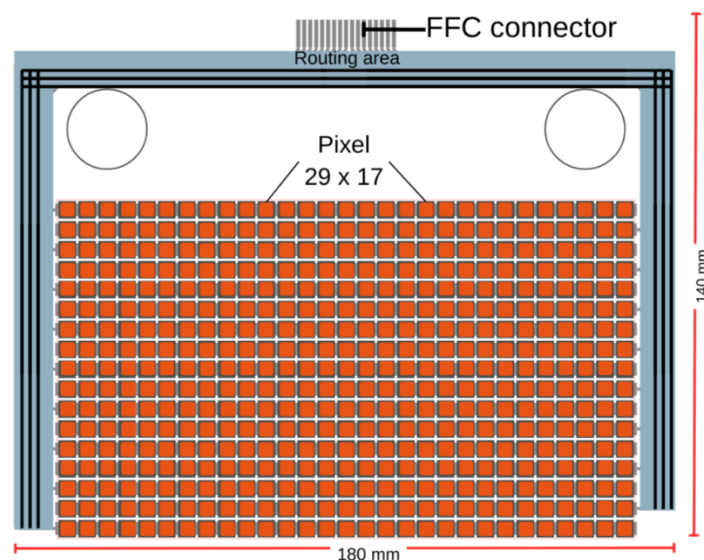
- Piezoresistive sensor foil
- Compact design
- High spatial resolution to detect small differences in pressure distributions
- Compatible with iL-readout electronics, Plug & Play
- Temperature stable PI-substrate
- Large pressure range
- Cost-efficient roll-to-roll manufacturing
- Available for:
 - DevKit electronics
 - Universal electronics



Mechanical data

Foil thickness & material	50 µm Polyimide	Spatial resolution (# of pixels)	29 x 17
Foil dimensions (L x W x H)	18 x 14 x 0.12 cm ³	Pixel size	0.32 x 0.32 cm ²
Active area	8.5 x 14.5 cm ²	Pixel pitch	0.5 cm
Approved temperature range*	-20 °C to 100 °C	Sensitive matrix part (w/o concentrator)	41 %

*in non-condensing solvents



Sensor characteristics

The following data was obtained without preconditioning of the sensor. Preconditioning, i.e. loading the sensor with a high pressure for a certain time prior to the measurement, can improve the specs.

	@ 1 Ncm ⁻² / 10 kPa	@ 10 Ncm ⁻² / 100 kPa	@ 100 Ncm ⁻² / 1 000 kPa
Repeatability Error (1 σ) (20 repetitions)	16.5 %	3.5 %	2.7 %
Drift (average) (% / log ₁₀ time scale)	10.2 %	10.3 %	9.2 %
Hysteresis (at 50% of maximal actuation)	20.5 %		
Recommended max. actuation	2 000 Ncm ⁻²	20 000 kPa	
Dynamic range	0.1 – 2 000 Ncm ⁻²		1 – 20 000 kPa
Temperature coefficient	~ 0.9 %/K		
Pixel-to-Pixel variation	~ 5% (w/o compensation)		

