A ceramic base plate working as a flush diaphragm following the piezoresistive principle composes Metallux differential pressure sensors.
The Wheatstone bridge is screen printed on one side of the basic plate, which then is glued to a ceramic ring to allow proper diaphragm flexing.
A special coating protects the bridge, which can therefore be exposed directly to the medium to be measured. Because of the Al_2O_3 ceramic excellent chemical resistance, the other side of the sensor does not need additional protection.
Metallux differential pressure sensors feature an optional screen-printed PTC in order to measure the fluid temperature. The measurement can also be used to compensate the temperature drift of the Wheatstone bridge to achieve very high accuracy.

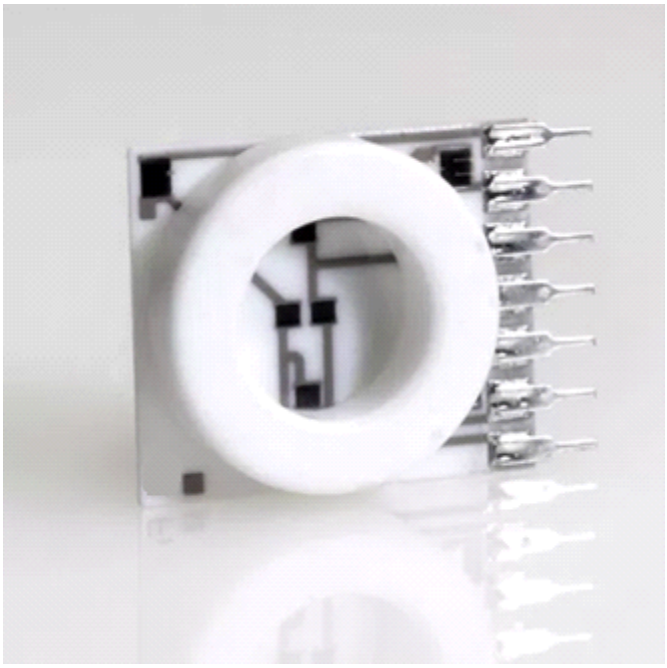
FEATURES

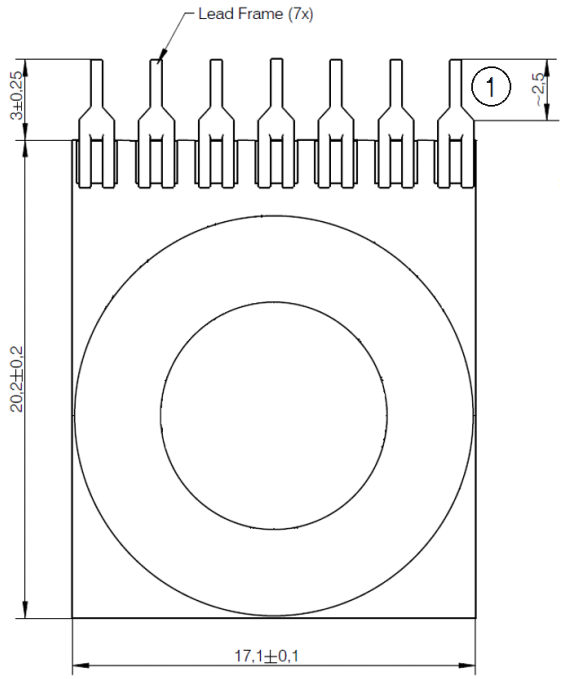
Wet-wet application

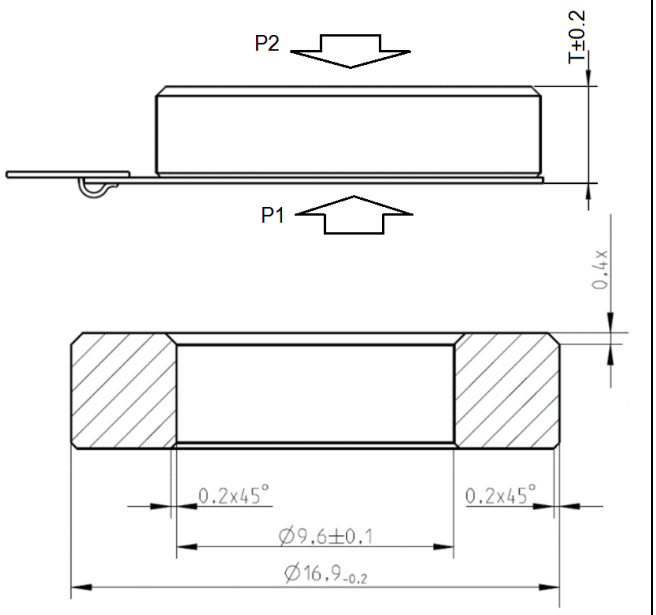
Easy mounting

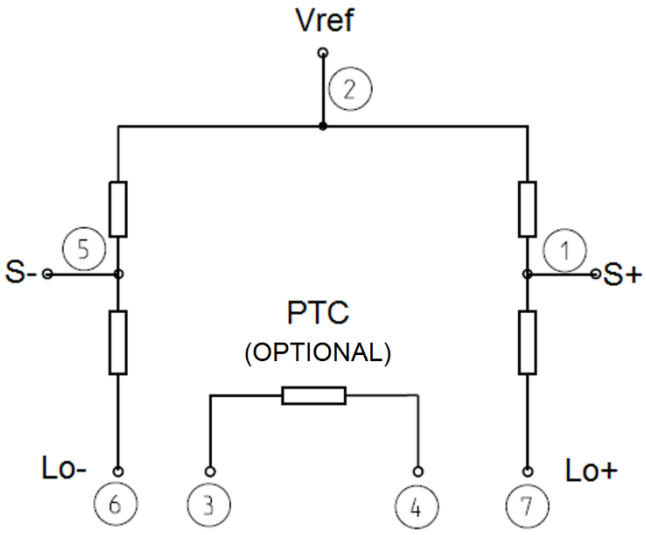
Optional PTC for medium temperature measurement

Customizable









All quotes are in mm –

Technical fetatures

Parameters	Units	Description
Sensor type	-	Flush diaphragm, differential
Technology	-	Piezoresistive
Diaphragm material	-	Ceramic Al_2O_3 96% (standard).
Weight	g	≤ 10 (ceramic cell only)
Response time	ms	≤ 1
Supply voltage	VDC	2...30
Offset	mV/V	- 0.1 ± 0.2 (Other nominal values available on request)
Current cons.	mA	≤ 1.3 @ 10V
Operating temperature	°C	-20...+125 (-4 °F...+257 °F)
Storage temperature	°C	-20...+125 (-4 °F...+257 °F)
Bridge Impedance	kΩ	11 ± 30%
Optional PTC impedance	Ω	300± 3%
Optional PTC coefficient	ppm	2200 ±400
Compliant with	-	REACH, RoHS, Conflict Minerals Free

		ME800			
Nominal differential pressure FSO	bar	2	6	10	16
	psi[1]	*29*	*87*	*145*	*232*
Overload differential pressure	bar	5	12	22	28
	psi[1]	*72*	*174*	*319*	*406*
Burst differential pressure	bar	8	18	35	38.5
	psi[1]	*115*	*261*	*507*	*558*
Total Thickness (T)	mm	4.27	4.38	4.55	4.80
	in	*0.168*	*0.172*	*0.179*	*0.189*
Sensitivity [2]	mV/V	> 0.6	> 0.6	> 0.6	> 0.6
Accuracy [3] (typical/max)	%FS	0.4/1.0	0.4/1.0	0.4/1.0	0.4/1.0
Thermal offset shift (typical/max)	%FS/K	± 0.03 / ± 0.07	25 °C...85 °C	(77 °F...185 °F)	
Thermal span shift	%FS/K	≤ ± 0.010 ≤ ± 0.012 ≤ ± 0.014	0 °C...70 °C -20 °C...0 °C / 70 °C...85 °C 85 °C...125 °C	(32 °F...158 °F) (-4 °F...32 °F / 158 °F...185 °F) (185 °F...257 °F)	

Tests performed at 25°C in Metallux housings, unless otherwise specified. Different housings may affect performances.

1. Psi values for reference only.
2. The sensitivity of each production batch is constant, with minimal dispersion.
3. Accuracy = $\sqrt{\text{NonLinearity}^2 + \text{Hysteresis}^2 + \text{NonRepeatability}^2}$, terminal based.

Conversion tools