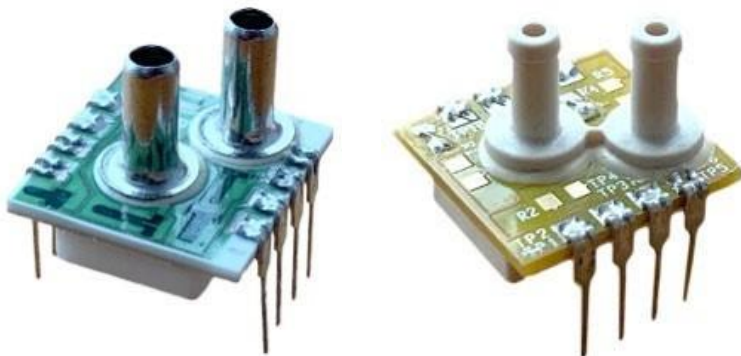


SSPS-TCA50

Piezoresistive sensor differential pressure



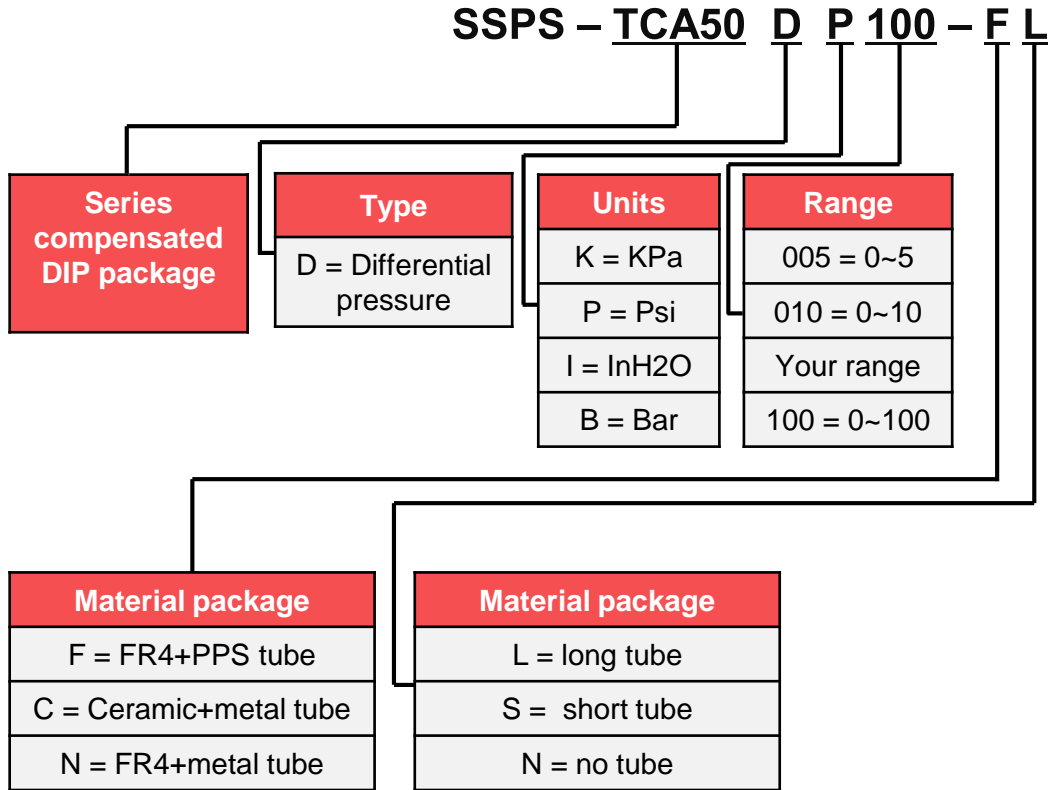
PRODUCTS FEATURES

- 100% Field Interchangeability
- Constant current/voltage
- Wide selection of port
- Differential (Absolute or Gage pressures optional)
- Temperature compensated
- 0.2% pressure non linearity

SSPS-TCA50

Piezoresistive sensor differential pressure

1. Product model code table



SSPS-TCA50

Piezoresistive sensor differential pressure

2. Technical specifications

Performance characteristics	MIN.	TYP.	MAX.	Unit	Note
Supply voltage	1	10	20	Volts	
Bridge resistance, I/O	2500		8500	Ω	
Zero Pressure Offset	-2.0	± 0.5	+2.0	mV	
Pressure Non Linearity	-0.2	0.1	+0.2	%FSS	2
Hysteresis & Repeatability		0.15		%FSS	
Full Scale Span (Constant Voltage)	39	40	40	mV	3
Temperature Hysteresis, Offset & Span	-0.20		+0.20	%FSS	4
Thermal Error of Span	-0.5		+0.5	%FSS	
Thermal Error of Offset	-0.5		+0.5	%FSS	
Response Time		100		μ S	
Insulation Resistance	50			M Ω	
Long Term Stability, Offset & Span		± 0.4		%FSS	5
Weight			0.3	grams	
Compensated Temperature	0 to 50			$^{\circ}$ C	
Operating Temperatures	-40 to 125			$^{\circ}$ C	

Absolute maximum conditions

Performance characteristics	MIN.	TYP.	MAX.	Unit
Supply voltage			20	Volts
Storage temperature	-50		150	$^{\circ}$ C
Overage pressure				
Burst, differential pressure	3X			Range
Burst, gauge&absolute pressure	10X			Range
Media compatibility	CDA, Non Ionic, Non Corrosive Gases			
Wetted materials	Ceramic, Epoxy, RTV, Silicon, Gold, Aluminum, Palladium Silver			

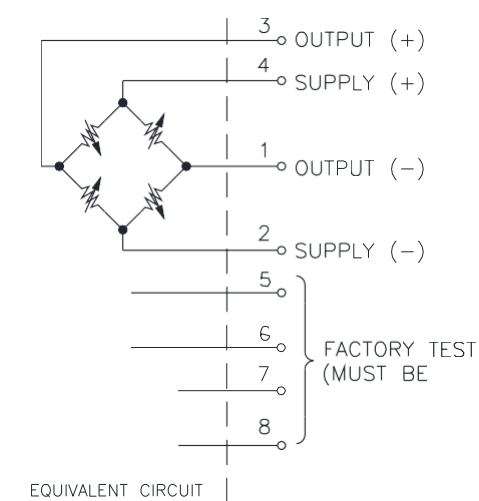
SSPS-TCA50

Piezoresistive sensor differential pressure

Reverence conditions ($V_s = 1.5\text{mA}$, $T_a = 25^\circ\text{C}$)

Conditions	Definition
1	All specification at reference conditions unless otherwise noted. Output is ratio metric to supply voltage.
2	½ Terminal Base Non Linearity (Measured at 0, 50% and 100% FS). 0.1% for pressure above 1psi, 0.5% for pressure below 1psi, the PNL is tested from the top side of the MEMS.
3	Full Scale Span output with sensor only. Field Interchangeability of 1% is guaranteed. Span is 40mV+ for products over 1psi pressure range (include 1psi). Span is 25mV for 1psi below pressure range.
4	Deviation between 50°C and 0°C expressed as percentage of reading at 25°C.
5	Deviation after 1 year period measured at reference conditions.
6	Exceeding Absolute Maximum Specification may damage the device. Extended exposure beyond the operating conditions may affect device reliability.

3. Equivalent circuit & Pin definition

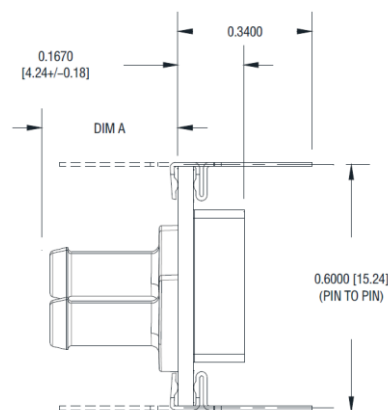
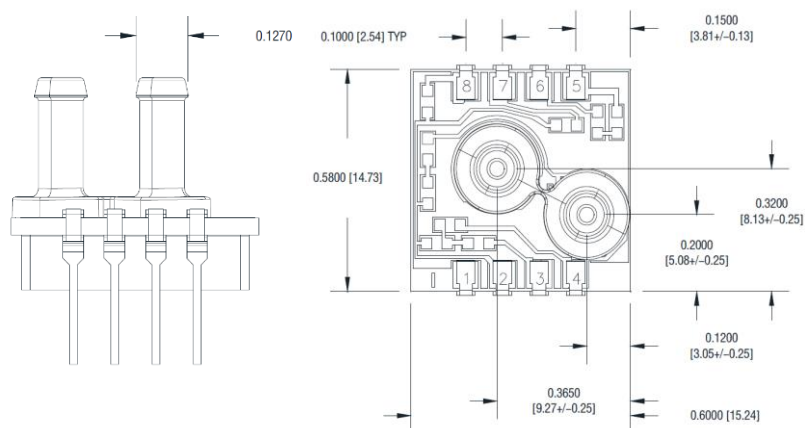
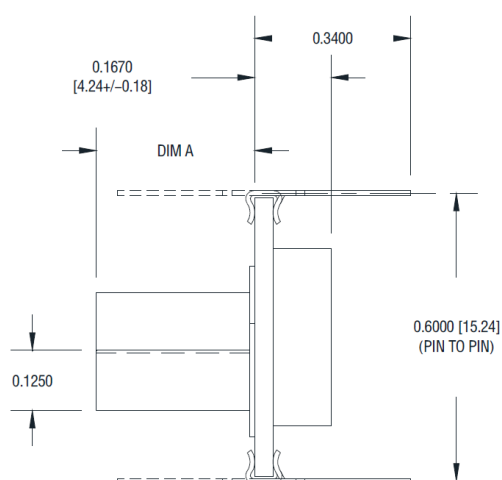
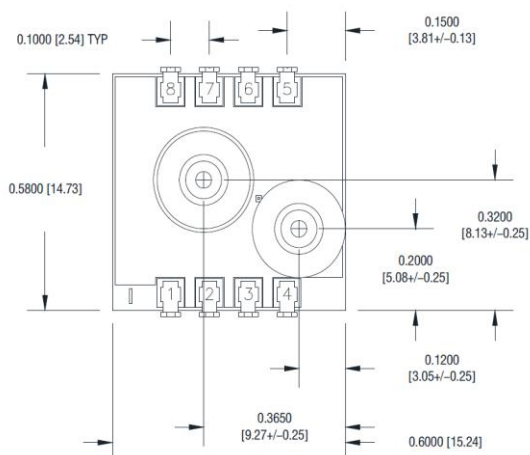


Pin	Definition
1	O-
2	E-
3	O+
4	E+

SSPS-TCA50

Piezoresistive sensor differential pressure

4. Mechanical dimensions (mm)



SSPS-TCA50

Piezoresistive sensor differential pressure

Plastic tube/Plastic Lid/ High Temp Substrate

