

DSP 410Z

Piezoresistive Silicon Pressure Sensor Module for low pressure



- ▶ Active calibrated and compensated
- ▶ With media separation
- ▶ Vacuum resistant
- ▶ For o-ring mounting
- ▶ Nominal pressure ranges from
 0 ... 100 mbar to 0 ... 7 bar
 and -1 ... 0 bar gauge

Applications

- Industrial
- Vacuum technology
- Pneumatic and hydraulic components (e.g. valves, pumps)
- Level measuring (e.g. environmental technology)

Specifications according DIN 16086

Input / Output signal							
Nominal pressure range	gauge	Outputsignal (Offset) [V]		Outputsignal (Span) [V]		Overload / negative pressure	Burst pressure
		min. / max.	typ.	min. / max.	typ.		
	100 mbar	10 % V _{DD}	0,5	80 % V _{DD}	4,0	10 x	15 x
	350 mbar	10 % V _{DD}	0,5	80 % V _{DD}	4,0	3 x	5 x
	1 bar						
	2 bar						
	3.5 bar (on request)						
	7 bar						
Supply / Performance							
		min.	typ.			max.	
Supply voltage	[V]	2,7	5,0			5,5	
Current consumption	[mA]	2,5 max.					
Linearity	[% FSO BFSL]						
	20 mbar < P _N ≤ 200 mbar	- 0,3 (optional: - 0.1)		± 0,1 (optional: ± 0.05)		0,3 (optional: 0.1)	
	P _N > 200 mbar	- 0,2 (optional: - 0.1)		± 0,05 (optional: ± 0.03)		0,2 (optional: 0.1)	
Hysteresis	[%FSO]	- 0,1		± 0.05		0,1	
Output load resistance	[kΩ]	≥ 5					
Insulation resistance	[MΩ]	50 (between housing and sensor chip) @ 50 VDC					

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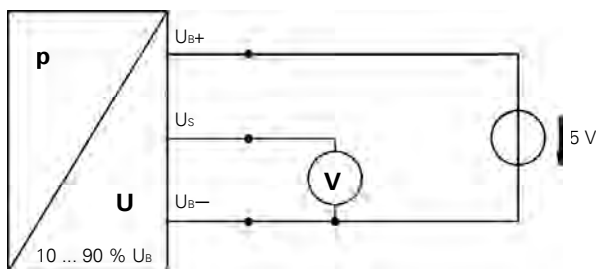
Piezoresistive silicon pressure sensor

Specifications

Thermal errors			
		$P_N \leq 350 \text{ mbar}$	$P_N > 350 \text{ mbar}$
TC offset	[% FSO]	$\leq \pm 1,0$	$\leq \pm 0,75$
TC span	[% FSO]	$\leq \pm 1,0$	$\leq \pm 0,50$
Compensated temperature range		0 ... 50 °	-20 ... 85 °
Permissible temperature ranges			
Medium	-40 ... 125 °C		
Storage	-40 ... 100 °C		
All parameters are measured at supply voltage 5V reference conditions unless otherwise specified			
Mechanical stability			
Vibration	10 g RMS (20 ... 2000 Hz)		
Schock	100 g / 11 ms		
Electrical connections			
Standard	JST-socket 3 terminals		

Materials / Filling fluids	
Housing	Stainless steel 1.4404
Diaphragm	Stainless steel 1.4435
Media wetted parts	Housing, diaphragm
Filling liquid	Standard: Silicone oil (others on request)
Miscellaneous	
Installation position	any ¹⁾
Protection class	IP 00
Weight	Standard: approx. 10 g
available accessories	O-Ring 15,6 x 1,78 (material: FKM; others on request)
¹⁾ The sensors are calibrated with the face down diaphragm. By changing the mounting position the offset can shift a little for pressure ranges $p_{r, \leq 1 \text{ bar}}$.	

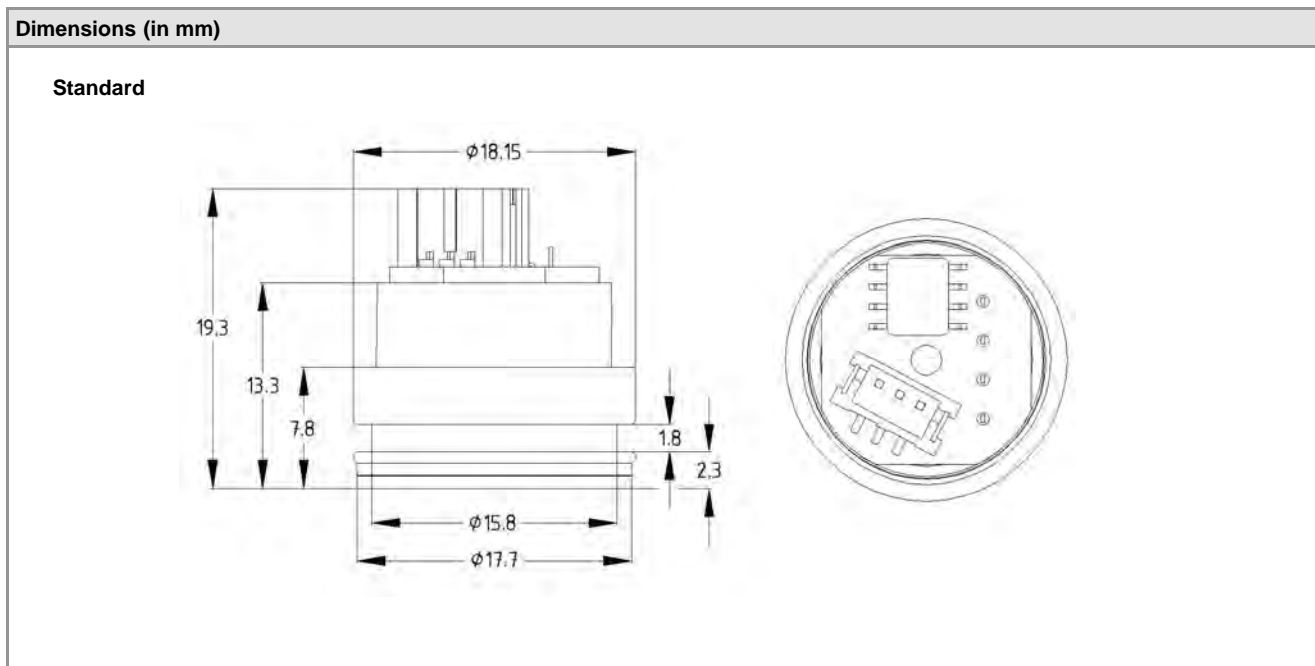
Wiring diagram



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Specifications



Ordering code

DSP 410Z □ - □□□ - □□ - □□

Type of pressure				
	gauge	G		
Pressure ranges				
	100 mbar	1 0 0		
	350 mbar	3 5 0		
	1 bar	1 0 1		
	2 bar	2 0 1		
	(3,5 bar)	3 5 1		
	7 bar	7 0 1		
Electrical connection				
	JST-socket 3 terminals		3 1	
	others on request		9 9	
Optionen				
	O-Ring-version		0 1	
	others on request		9 9	

Subject to change without advance notice

Visit the website: www.impress-sensors.co.uk