

DSP 410K

Piezoresistive Silicon Pressure Sensor for low pressure



- ▶ Passive calibrated (offset) 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) [mV]			Outputsignal (Span) [mV]			Overload / negativ pressure	Burst pressure
	min.	typ.	max.	min.	typ.	max.		
100 mbar	-2	0	2	21	45	70	10 x	15 x
350 mbar	-2	0	2	50	65	80	3 x	5 x
1 bar	-2	0	52	50	110	160	3 x	5 x
2 bar								
3.5 bar (on request)								
7 bar								
Supply / Performance								
		min.		typ.		max.		
Supply current [mA]		-		1		3		
Supply voltage [V]		-		5		10		
Linearity [% FSO BFSL]								
20 mbar		- 0,5		± 0,25		0,5		
20 mbar < p _N ≤ 200 mbar		- 0,3		± 0,1		0,3		
p _N > 200 mbar		- 0,2		± 0,05		0,2		
Hysteresis [%FSO]		- 0,1		± 0,05		0,1		
Input impedance [kΩ]		p _N ≤ 200 mbar : 2,7 ... 3,3		p _N > 200 mbar: 4,0 ... 6,0				
Output impedance [kΩ]		p _N ≤ 200 mbar : 2,7 ... 3,3		p _N > 200 mbar: 4,0 ... 6,0				
Insulation resistance [MΩ]		50 (between housing and sensor chip) @ 50 VDC						

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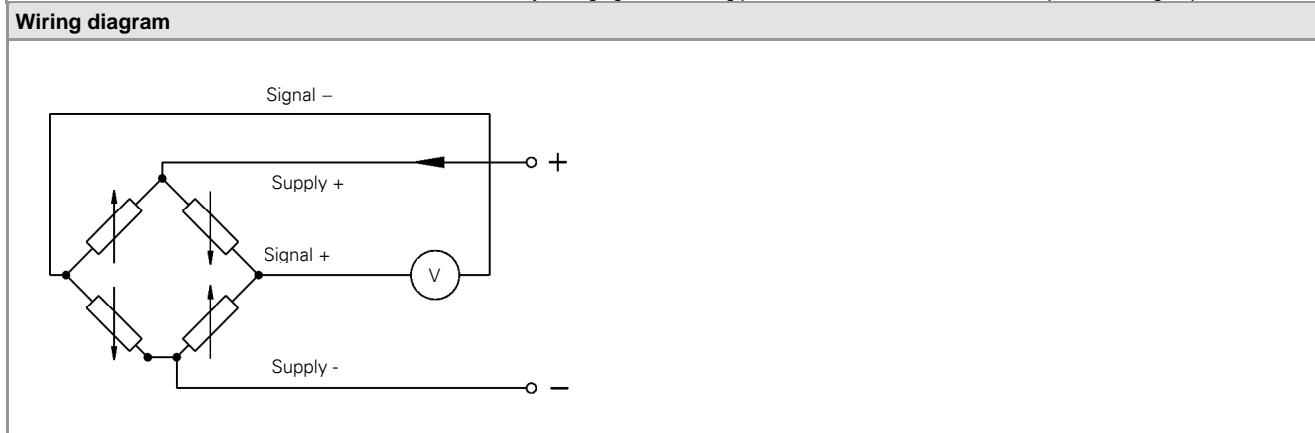
Piezoresistive silicon pressure sensor

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 ¹⁾	[% FSO]	$\leq \pm 1,0$	$\leq \pm 0,50$
Compensated temperature range		0 ... 50 °	-20 ... 85 °
¹⁾ within the compensated temperature range related to 25°C			
Permissible temperature ranges			
Medium	-40 ... 125 °C		
Storage	-40 ... 100 °C		
All parameters are measured at supply current of 1 mA reference conditions unless otherwise specified			
Mechanical stability			
Vibration	10 g RMS (20 ... 2000 Hz)		
Schock	100 g / 11 ms		
Electrical connections			
Standard	4 Solder pads		

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 membrane. By changing the mounting position the offset can shift a little for pressure ranges $p_n \leq 1 \text{ bar}$.



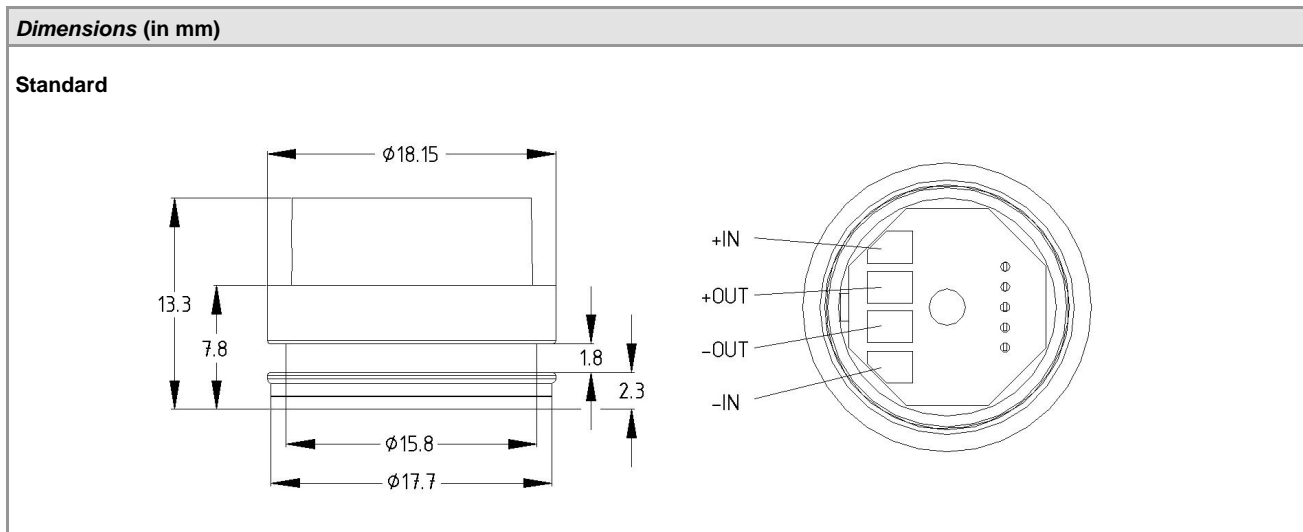
Visit the website: www.impress-sensors.co.uk

Company Reg. No.: 4346738, VAT No.:786 6596 54, Reg Address: Impress Sensors & Systems Ltd, Unit 6 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN

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Specifications



Ordering code

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Type of pressure	Pressure ranges	Electrical connection	Options
gauge	100 mbar	Tinned solder pads	O-Ring-version
	350 mbar	Silicone wires 50,8 mm	Others on request
	1 bar	Others on request	
	2 bar		
	(3,5 bar)		
	7 bar		

Subject to change without advance notice

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