



DSP 210U

Piezoresistive Silicon Pressure Sensor for lowest pressure

- ▶ Not compensated
- ▶ Without media separation
- ▶ Vacuum resistant
- ▶ For o-ring mounting
- ▶ Nominal pressure ranges from 0 ... 20 mbar to 0 ... 7 bar and -1 ... 0 bar gauge

Applications

- Medical
- Pneumatic
- Vacuum technology

Media

Clean, non corrosive gases

Specifications according DIN 16086

All parameters are measured at supply current of 1 mA at reference conditions unless otherwise specified

Input/Output signal									
Nominal pressure range	gauge	Output signal (Offset) [mV]			Output signal (Span) [mV]			Overload / negativ pressure [bar]	Burst pressure [bar]
		min.	typ.	max.	min.	typ.	max.		
	20 mbar							0,2	≥ 0,3
	50 mbar	- 60	0	20	14	33	60	0,5	≥ 0,75
	100 mbar							1	≥ 1,5
	200 mbar							2	≥ 3
	350 mbar	- 40	0	40	50	75	100	2	≥ 3
	1 bar	- 40	0	40	80	130	180	5	≥ 7,5
	2 bar							10	≥ 15
	3.5 bar							17,5	≥ 25
	7 bar							35	≥ 50
Supply / Performance									
		min.		typ.		max.			
Supply current	[mA]	-		1		3			
Supply voltage	[V]	-		-		10			
Linearity	[% FSO BFS]	- 0,25		± 0,1		0,25			
Hysteresis	[%FSO]								
	≤ 200 mbar	- 0,1		± 0,05		0,1			
	> 200 mbar	- 0,05		± 0,02		0,05			
Input impedance	[kΩ]	p _n ≤ 200 mbar : 2,7 ... 4,0			p _n > 200 mbar: 4,0 ... 6,0				
Output impedance	[kΩ]	p _n ≤ 200 mbar : 2,7 ... 4,0			p _n > 200 mbar: 4,0 ... 6,0				
Insulation resistance	[MΩ]	50 (between housing and sensor chip) @ 50 VDC							

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Thermal errors			
TC offset ¹⁾	[% FS0/10K]	-1,0	1,0
TC span ¹⁾	[% FS0/10K]	- 2,5	-1,6
TC resistance ¹⁾	[%/10K]	2,4	3,9

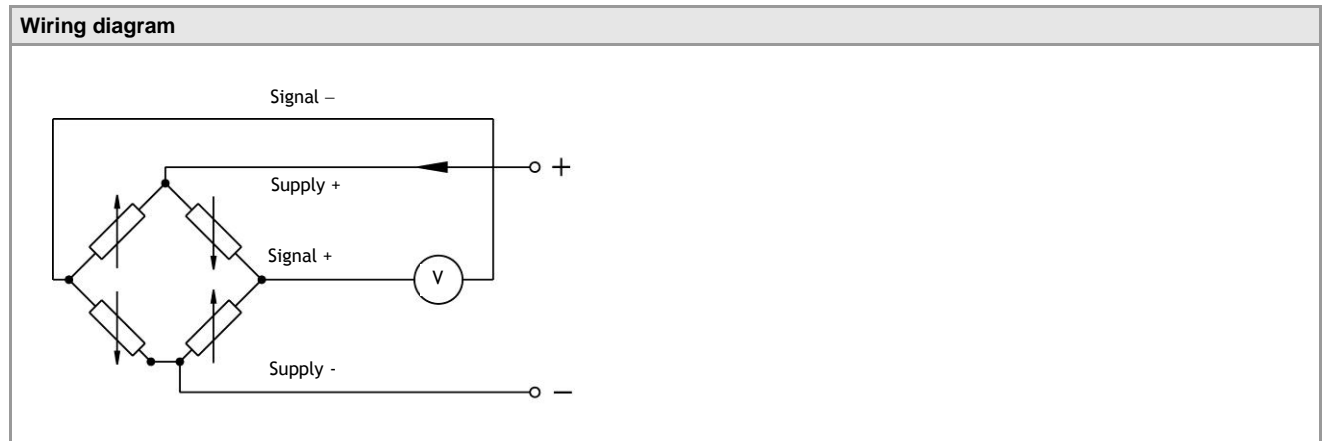
¹⁾ all thermal errors measured in the temperature range of 0 ... 70 °C

Permissible temperature ranges	
Medium	-40 ... 125 °C
Storage	-40 ... 125 °C

Mechanical stability	
Vibration	10 g RMS (20 ... 2000 Hz)
Schock	100 g / 11 ms

Electrical connections	
Standard	4 Solder pads

Miscellaneous	
Media wetted materials	Stainless steel 1.4404, Silicon, Glass, Epoxy or RTV
Installation position	any
Protection class	IP 00
Weight	Standard: approx. 10 g
Available accessories	O-Ring 15,5 x 1,5 (material: FKM; others on request)

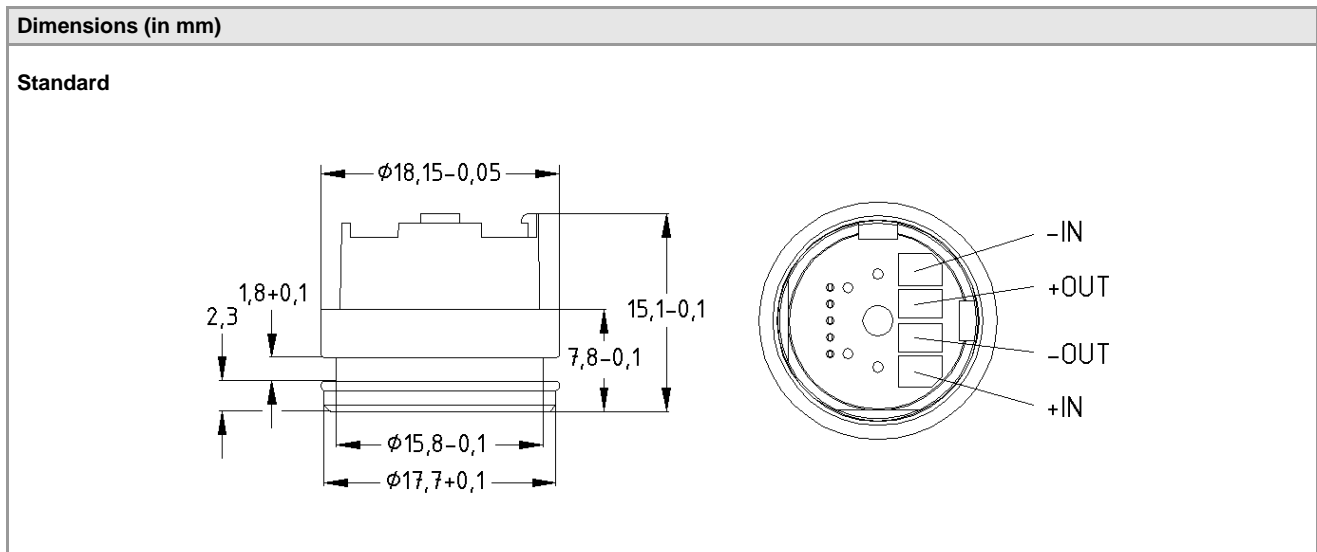


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Specifications



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Type of pressure					
	gauge	G			
Pressure range					
	20 mbar	0	2	0	0
	50 mbar	0	5	0	0
	100 mbar	1	0	0	0
	200 mbar	2	0	0	0
	350 mbar	3	5	0	0
	1 bar	1	0	0	1
	2 bar	2	0	0	1
	3,5 bar	3	5	0	1
	7 bar	7	0	0	1
	Special pressure ranges	9	9	9	9
Electrical connection					
	Solder pads		0	P	0
	Wires 60 mm		0	1	5
	others		9	9	9
Housing material					
	Stainless steel 1.4404			8	
	others			9	
Sealing					
Standard:	without sealing			0	
Option:	FKM			1	
	EPDM			3	
	FFKM			7	
	others			9	
Design					
	Standard			0	1
	Standard with venting tube			0	5
	others			9	9
Specail versions					
	Standard			0	0
	others			9	9

Subject to change without advance notice

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

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