

High Precision Pressure Sensors

Thin Film Technology on stainless steel

Type C8

Features:

- Designed for static and dynamic measurement
- Strain gauge processed in thin film technology on stainless steel
- High precision resistors are connected to a full Wheatstone Bridge
- Basic sensor without any active amplification or compensation
- No bond creeping effects
- Best protection against environmental influences



8mm Cup Type:

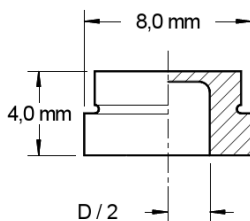
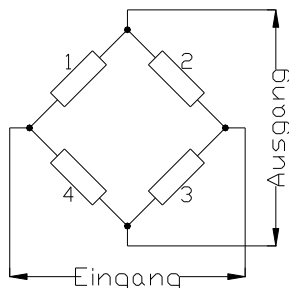
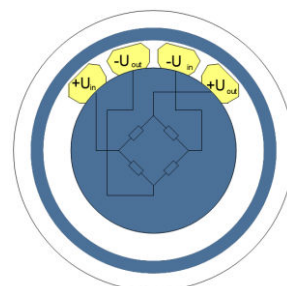


Diagram:

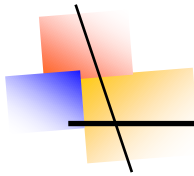


- Value of resistors: 5 k Ω , 10 k Ω

Contact layout (example)



- Pads for soldering technology



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Feature	Unit	Temperature range				
Type		S1	S2	S3	S4	S5
Nominal Working Temperature Range	°C	-65 ... +70	-65 ... +125	-65 ... +175	-65 ... +200	-65 ... +260
Membrane diameter	mm	4 (3)	4 (3)	4 (3)	4 (3)	4 (3)
Cup diameter	mm	8	8	8	8	8
Measurement range FS	bar	25, 40, 60, 100, 160, 250, 400, 600, 800	25, 40, 60, 100, 160, 250, 400, 600, 800	25, 40, 60, 100, 160, 250, 400, 600, 800	25, 40, 60, 100, 160, 250, 400, 600, 800	25, 40, 60, 100, 160, 250, 400, 600, 800
Cup height	mm	4 (5)	4 (5)	4 (5)	4 (5)	4 (5)
Bridge resistance	Ω	5k ± 20%,	5k ± 20%,	5k ± 20%,	5k ± 20%,	5k ± 20%,
TCR (resistors)	ppm/K	< ± 25	< ± 25	< ± 25	< ± 25	< ± 25
Zero point	mV/V	< ± 0.2	< ± 0.2	< ± 0.2	< ± 0.2	< ± 0.2
TC of zero @ 2mV/V FS	%FS / K	< ± 0.035	< ± 0.035	< ± 0.035	< ± 0.035	< ± 0.035
Isolating resistance (100 V DC)	Ω	> 10 ⁹	> 10 ⁹	> 10 ⁹	> 10 ⁹	> 10 ⁹
Nominal span	mV/V	2	2	2	2	2
Range of span	mV/V	1.5 ... 2.5	1.5 ... 2.5	1.5 ... 2.5	1.5 ... 2.5	1.5 ... 2.5
TC of span	%/ K	0.01 ... 0.03	0.01 ... 0.03	0.01 ... 0.03	0.01 ... 0.03	0.01 ... 0.03
Linearity 25 ... 40 bar 60 ... 600 bar	% FS	< 1 <0.5	< 1 <0.5	< 1 <0.5	< 1 <0.5	< 1 <0.5
Hysteresis	% FS	< ± 0.2	< ± 0.2	< ± 0.2	< ± 0.2	< ± 0.2
Repeatability	% FS	< ± 0.05	< ± 0.05	< ± 0.05	< ± 0.05	< ± 0.05
Long term stability 125°C, 1000 h 150 °C, 1000 h 175 °C, 1000 h 200 °C, 1000h 260 °C, 1000h 100% overload	μV/V	< 3.0 < ±2	 < ±2	 < ±2	 < ±2	 < ±40 < ±2
Supply voltage range	(UB) V	5 (0.5 ... 10)	5 (0.5 ... 10)	5 (0.5 ... 10)	5 (0.5 ... 10)	5 (0.5 ... 10)
Overload (non destructive)		2 x FS	2 x FS	2 x FS	2 x FS	2 x FS
Burst pressure		> 5 x FS	> 5 x FS	> 5 x FS	> 5 x FS	> 5 x FS
Connection		Standard: Flex jumper 50 mm, or 60 mm Customizing on request				

Technical data (standard parts):



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Available Isolating Voltages:

Voltage	Ordering Code
125 VAC	V1
250 VAC	V2
500 VAC	V3
750VAC	V4

Other specifications on request

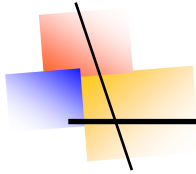
Ordering Information:

	Ordering Code				
Type	C8				
Pressure range					
25 bar		P25			
40 bar		P40			
60 bar		P60			
100 bar		P100			
250 bar		P250			
400 bar		P400			
600 bar		P600			
1000bar		P1000			
Temperature range °C *					
-20 ... +70			S1		
-40 ... +125			S2		
-40 ... +175			S3		
-40 ... +200			S4		
-40 (-55) ... +260			S5		
Isolating Voltage					
125 VAC				V1	
250 VAC				V2	
500 VAC				V3	
750VAC				V4	
Connection					
Pre soldered pads					J0
Flex jumper*					
0.5"					J1
0.75"					J2
1"					J3
1.5"					J4
2"					J5



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Single Wires (PTFE)					J6
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* -40°C units on request for -65°C available

* Flex jumper material will be selected by ICS-NH according to the required temperature range. Standard materials are:

Temperature Range	Recommended Jumper Material	
S1	NOMEX	
S2	NOMEX	
S3	PTFE	
S4	PTFE	
S5	Silicone single wires	

Other Options: (examples)

- Temperature Sensor on diaphragm
- Bare wires for electrical connection
- Single wires for electrical connection
- Open Bridge configuration
- Additional TC Span compensation

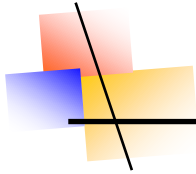
The data sheet above is for the bare sensor. Pressure ports will be manufactured according to client's specification. There are many pressure ports designed by ICS-NH in use. Drawings are available on request.

Selection of Pressure Ports:



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