

Heavy-Duty Pressure Transmitter

Principle of Operation

The pressure transmitter converts the measured pressure into a linear temperature-compensated output signal proportional to the transmitter supply voltage. The output signal varies between 10 to 90% of the supply voltage.

This signal is well suited for direct connection to an A/D converter providing the transmitter and A/D converter use the same voltage reference to eliminate errors (ratiometrically coupled A/D converter).

Integrated Pulse-Snubber

The heavy-duty pressure transmitter with integrated pulse-snubber is specially suited for hydraulic applications where cavitation, liquid hammer, or pressure peaks may occur— influences that often cause a short but extreme excess of the measuring range of the transmitter.

The integrated pulse-snubber is in principle designed as a nozzle mounted in the passage between the measured medium and the pressure sensitive element of the transmitter.

Local Address:



COMPLIANT

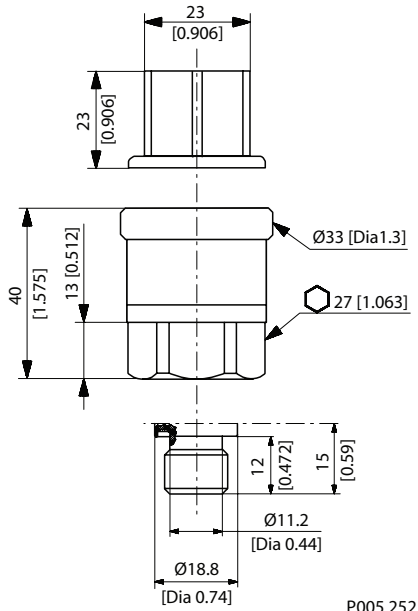
Heavy-Duty Pressure Transmitter

Features

- Resistant to cavitation, liquid hammer, and pressure peaks
- Overload pressure 10 to 20 times measuring range
- Durability: >10 million cycles
- For use in severe industrial environments:
 - High vibration stability
 - IP 67 environmental sealing
 - Wetted parts and enclosure of acid resistant steel
- CE marked: EMC protected in accordance with EU EMC directive
- Temperature compensated, linearized, and laser calibrated
- Ratiometric output signal: 10 to 90% of supply voltage

Dimensions

Mounting Dimensions in Millimeters [Inches]



Specifications

Pressure Connection

Thread
DIN 3852 - G 1/4 A, NBR O-ring 13.3 x 1.8, 630 bar [9140 psi]

Performance (IEC 770)

Accuracy (at reference conditions)	± 0.3% of full-scale (typical) ± 1% of full-scale (maximum)
Non-linearity (best fit straight line)	< ± 0.2% of full-scale
Hysteresis and repeatability	± 0.1% of full-scale
Thermal zero point shift	± 0.1% of full-scale/10k (typical) ± 0.2% of full-scale/10k (maximum)
Thermal sensitivity (span) shift	± 0.1% of full-scale/10k (typical) ± 0.2% of full-scale/10k (maximum)
Response time (liquids) 10 to 20% of full scale - depending on measuring range	< 4 ms
Overload static and burst pressure	Maximum overload: 1500 bar Maximum burst: 2000 bar
Durability, P: 10 to 90% of full-scale	> 10 million cycles

Electrical Characteristics

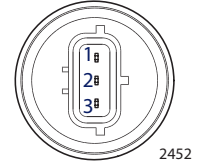
Nominal output signal	10 to 90% of V supply
Supply voltage V supply (polarity protected)	4.75 to 8 Vdc 5 Vdc (nominal)
Power consumption	< 5 mA at 5 Vdc
Output impedance	< 25Ω
Load resistance	R _L > 5 kΩ at 5 Vdc

Pinout and Wiring Information

Pin	Function
1	+ supply
2	÷ supply
3	Output

Material: Glass filled polyamid, PA 6.6

AMP® Econoseal J Series (Male)



Mechanical Characteristics

Materials	Wetted parts: DIN 17440 - 1.4404 Enclosure: (AISI 316 l)
Weight	0.2 kg [0.44 lb]

Environmental Parameters

Temperature range		
Operating	-40 to 85° C (-40 to 185° F)	
Compensated	0 to 80° C (32 to 176° F)	
Storage	-50 to 85° C (-58 to 185° F)	
EMC - Emission		
EN 50081-1		
EMC - Immunity		
Electrostatic discharge	Air mode: 8 kV Contact mode: 4 kV	EN 50082-2 (IEC 801-2)
RF	Field: 100 V/m 26 MHz to 1 GHz	EN 50082-2 (IEC 801-3)
	Conducted: 10 V rms 150 kHz to 30 MHz	EN 50082-2 (IEC 801-6)
Transient	Burst: 4 kV (CM), clamp	EN 50082-2 (IEC 801-4)
	Surge: 1 kV (CM, DM) R _g = 42Ω	EN 50082-2 (IEC 801-5)
Insulation resistance		
> 100 MΩ at 500 Vdc		
Vibration stability		
Sinusoidal	20 G 25 Hz to 2 kHz	IEC 68-2-6
Random	7.5 G rms 5 Hz to 1 kHz	IEC 68-2-34 IEC 68-2-36
Shock resistance		
Shock: 500 G / 1 ms	IEC 68-2-27	
Free fall	IEC 68-2-32	
Mains frequency test		
500 V, 50 Hz	SEN 361503	
Enclosure		
AMP 173065-2	IP 67 - IEC 529	

Product Part Numbers

Measuring range	Sauer-Danfoss part number
0 to 2.5 bar [36 psi]	162U9901
0 to 40 bar [580 psi]	162U9902
0 to 160 bar [2320 psi]	162U9903
0 to 250 bar [3626 psi]	162U9904
0 to 400 bar [5800 psi]	162U9905
0 to 500 bar [7250 psi]	162U9906
0 to 600 bar [8700 psi]	162U9907