HUBA

511 Series Ceramic Pressure Transmitter

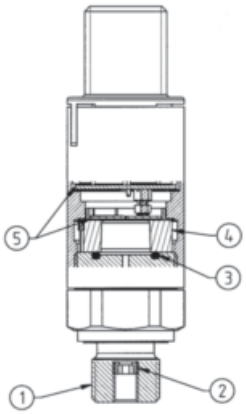
Liquids And Gases, FS Ranges 30" Hg Vacuum to 7500 PSI

DESCRIPTION

These compact pressure transmitters meet the highest specification for mechanical stress, EMC compatibility, and operational reliability.

Model 511 is particularly suitable for demanding industrial applications. The ceramic sensor design utilizes integrated (to the sensor) electronics and is highly stable. Linearity is maintained even in instances of over-pressure.Hysteresis problems and introduction of error due to cold flowing of metal diaphragms over time in competitive designs are eliminated.

The integrated sensor/electronic design has a high degree of accuracy over a wide temperature range. Ceramic and FPM wetted materials offer an excellent range of media compatibility



1) Connection Fitting
2) Rupture Protection
3) Seal
4) Ceramic Cell
5) Electrical Connection

•HIGH RESISTANCE TO EXTREME TEMPERATURE

•COMPACT, RUGGED CONSTRUCTION

•PATENTED RUPTURE SEALING DEVICE IN CONNECTOR PREVENTS MEDIA LEAKAGE IN EVENT OF SENSOR FAILURE

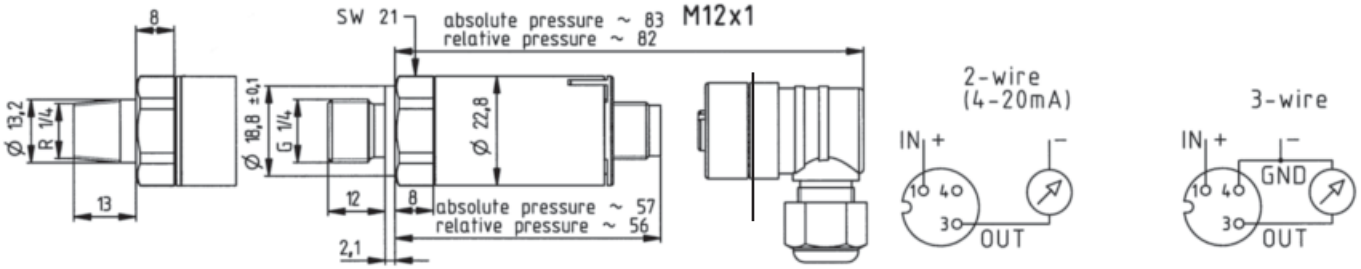
•CERAMIC SENSOR FOR UNMATCHED LONG TERM RELIABILITY

SPECIFICATIONS

Pressure Measurement: Absolute pressure & gage pressure (differential measurement of pressure relative to ambient pressure).
F.S. Pressure Ranges: -14.5 to 7500 PSI
Maximum/Rupture Pressure:
3.0x Full scale at -14.5 … 7500 PSI
2.5x Full scale at 100 … 6000 PSI
2.0x Full scale at 8700 PSI
Higher rupture pressure on request
A patented media stop system prevents media egress when exceeding rupture pressure range (600 PSI nominal value)
Accuracy:
Total of linearity, hysteresis and repeatability: < +/- 0.3% fs
Adjustment accuracy zero point and full scale: < +/- 0.3% fs
Casing: Stainless steel 1.4305 (AISI 303)
Materials In Contact With The Medium:
Ceramic Al_2O_3
Stainless steel 1.4305 (AISI 303)
Rupture Seal: PPS
Seal Material: FPM, NBR, others on request
Media Temperature With Sealing Materials:
FPM -15 … +125 °C
NBR -25 … +85 °C
FPM SPEC. -40 … +150 °C

Ambient Temperature: Max. 85°C
(Versions up to 150°C on request)
Temperature Influences:
Zero < +/- 0.015% fs/°C
Span < +/- 0.015% fs/°C
Temperature range -40 … +125 °C
Dynamic Response: Suitable for static and dynamic measurements. Response time < 2 ms, typ. 1 ms
Pressure Connections: See order code selection table
Weight: Version inside thread 85 grams
Version outside thread 95 grams
Installation Orientation: Unrestricted
Signal/Power Supply: See order code selection table
Protection: Short circuit-proof and protected against polarity reversal. Each connection is protected against other with max. +/- supply voltage.
Electric strength 500 VDC, on request 1000 VDC
Load:
Voltage outputs: > 10 kOhm / < 100 nF
Current Output: Max 1250 Ohms
Current Consumption With Max. Signal Output:
Voltage outputs: < 4 mA
4 - 20 mA: < 20 mA
Electrical connections : M12 x 1 or 1.5 meters cable, other connectors available on request

DIMENSIONS (MM) & ELECTRICAL



TESTING

Shock according to IEC 68-2-27: 75 G, 11 ms half sine wave, all 3 directions. Free fall from 1 m on concrete (6x).
Constant shock according to IEC 68-2-29: 40 G for 6 ms, 1000x all 3 direc-tions.
Vibration according to IEC 68-2-6: 20 G, 9 ... 200 Hz, 2 ... 9 Hz with amplit +/- 15 mm, 1 Octave / min. all 3 directions, 50 constant load.

Electromagnetic compatibility: CE conformity (EMC) by application of harmonized standards: Interference stability EN 50082-2, IEC 61000-6-2 and EN 61326-1, interference emit EN 50081-1, EN 55022, CISPR 22, EN 61326-1

Interference stability	Test standard	Effects
Electrostatic discharge (ESD)	EN 61000-4-2 15 kV air discharge, 8 kV contact discharge	No effect
High-frequency electromagnetic radiation (HF)	EN 61000-4-3 200 V/m, 80 … 1000 Mz	No effect
Conducted HF interference	EN 61000-4-6 30 V, 0.15 ... 80 MHz	No effect
Fast transients (burst)	EN 61000-4-4 4 kV	No effect
Surge	EN 61000-4-5 Line-Line, Line-Case 500 V, 12 Ohm, 9 µF 1 kV, 42 Ohm, 0.5 µF	No failure
Magnetic fields	EN 61000-4-8 30 A/m, 50 Hz	No effect
Insulation voltage	500 VDC (optional 1000 VDC) 350 VAC (optional 700 VAC)	No effect

Interference emit	Test standard	Effects
	EN 55022	
Conducted interference	0.15... 30 MHz	No emission
Radiation from housing	30...1000 MHz, 10 meters	No emission

ORDERING INFORMATION

MODEL NUMBER = 511.ABCDEFG

Example: 511.9A1003031

A=Type

9=Gage pressure
8=Absolute pressure

***B=Range**

A1= 0 to 30"Hg Vacuum
B1= 0 to 15 PSI
B4= 0 to 30 PSI
B5= 0 to 60 PSI
B7= 0 to 100 PSI
C1= 0 to 200 PSI
C2= 0 to 300 PSI
C3= 0 to 500 PSI
D0= 0 to 750 PSI
D1= 0-1000
D2= 0 to 2000 PSI
D3= 0 to 3000 PSI
E46= 0 to 5000 PSI (FPM SPEC seal only)
E56= 0-7500 PSI (FPM SPEC seal only)

Ranges in other units of pressure such as bar are available. Special ranges available on request.

C=Seals

00=FPM
20=NBR
60=FPM SPEC

D=Output

3=4-20 mA
(2-wire, 8-33VDC)
1= 0-5 V
2= 0-10 V
(3-wire, 8-33VDC)

E=Elect. Connections

0=1.5 Meter Cable
1=M12 x 1 (without female connector)

Consult us with special requirements

F=Press. Connections

3= 1/4-18 NPT
A= 1/8-27 NPT (ranges<500 PSI)
1=G1/4 female
5= M12 x 1.5 male
6= M14 x 1.5 male

G=Connection Orifice

1=Without (ranges to 300 PSI)
2=With (ranges 500 PSI and greater)

Accessories & Options:
106975= Female connector for M12 x 1
Packaging
Single= Single Package for each transmitter
Multiple= Packaged in 25 piece lots

BOLD ITEMS ARE TYPICALLY IN STOCK
(2-3 week delivery for non-stock items)

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