DATASHEET

HGPTxxxx

H SERIES SENSORS

LCD display module provides 350 degree rotation for all orientation mounting

Highlights

- Nominal pressure rating options: 5, 30, 150, 400, 1500, 3K, 6K and 10K PSI
- Reference accuracy: ± 0.075% of full span
- Stability: ± 0.15 % Upper Range Limit / 5 years
- Output signal options:
  (1) 1-5 V (2) RS485 Modbus
  (3) 4-20 mA (4) 4-20 mA/HART
- Adjustable span, Turndown ratio of 20:1[1]
- Backlit LCD option provided with both internal and external buttons
- HART support:
  - Universal and Common Practice Commands supported
  - Compatible with most HART Field Communicators
- Diaphragm option: Hastelloy C or 316L SS
- 2X overload pressure using dual diaphragm structure
- Dual seal certified per CSA C22.2 No. 30-20
- Accurate filling fluid technology eliminates effects of temperature and static pressure
- Explosion-proof (standard on all models)
- Intrinsically Safe (4-20mA/HART options only)
- NACE MR0175 Compliant

C SP US RoHS

The Ideal Choice for Pressure Monitoring Applications

The OleumTech H Series Smart Gauge Pressure Transmitter is a high performance instrument utilizing the world's most advanced monocrystalline silicon pressure sensor[3] and patented encapsulation technology. The Smart Pressure Transmitter is designed for use in rigorous industrial applications with robust resistance to chemical exposures, mechanical loads, and EMI.

The Smart Pressure Transmitter is easy to install and operate. It can be ordered with a 1/2" NPT male or female process connection option. The OleumTech H Series Smart Pressure Transmitter is a natural choice for a wide variety of oil, gas, water, wastewater, and other mission-critical applications that require a high level of accuracy and reliability.

Part Number	Nominal Value / Upper Range Limit	Lower Range Limit	Overload Limit	Burst Pressure
HGPT0005	5 PSI (0.345 BAR)	-5 PSI (-0.345 BAR)	145 PSI (10 BAR)	1450 PSI (100 BAR)
HGPT0030	30 PSI (2.068 BAR)	-14.5 PSI (-1 BAR)	580 PSI (40 BAR)	3625 PSI (250 BAR)
HGPT0150	150 PSI (10.34 BAR)	-14.5 PSI (-1 BAR)	870 PSI (60 BAR)	7250 PSI (500 BAR)
HGPT0400	400 PSI (27.58 BAR)	-14.5 PSI (-1 BAR)	2175 PSI (150 BAR)	14500 PSI (1000 BAR)
HGPT1500	1500 PSI (103.4 BAR)	-14.5 PSI (-1 BAR)	2900 PSI (200 BAR)	14500 PSI (1000 BAR)
HGPT3000	3000 PSI (206.84 BAR)	-14.5 PSI (-1 BAR)	11600 PSI (800 BAR)	14500 PSI (1000 BAR)
HGPT6000	6000 PSI (413.68 BAR)	-14.5 PSI (-1 BAR)	11600 PSI (800 BAR)	14500 PSI (1000 BAR)
HGPT10000 [1,3,4]	10000 PSI (689.48 BAR)	-14.5 PSI (-1 BAR)	21750 PSI (1500 BAR)	24650 PSI (1700 BAR)

The above measurement ranges can be converted to MPa and kPa units. The Lower Range Value (LRV) and Upper Range Value (URV) can be adjusted within the scope of the upper and lower range limits.

Technical Specifications

HARDWARE FEATURES	
Device Functionality	· Smart Gauge Pressure Transmitter
Output Signal Options	· 1-5 V, 4-20 mA, 4-20 mA + HART, RS485 Modbus
Linear Output Accuracy	· TD ≤10, ± 0.075% of span (With a TD ratio equal to or less than 10:1, the accuracy is 0.075% of span) · 10 < TD ≤ 20, ± 0.0075% x TD of span (With a TD ratio greater than 10:1 but equal to or less than 20:1, the accuracy is 0.0075% times the turndown of the span)
LCD Display Mode	· PV (Process Variable) / mA / %
Damping Time	· Amplifier: 0-100 Seconds (Adj), Diaphragm Capsule and Silicone Oil Filling: ≤0.2 S, Start After Power Off: ≤ 6 S
Unit	· PSI (Factory Default), OSI, Pa, kPa, MPa, BAR, mbar, mmHg, mHg, INHg, mmH2O, mH2O, INH2O, FTH2O, TORR, g/cm2, kg/cm2, ATM, mm, m
Analog Output Type	· Linearity
Basic Operational Functions	· Set PV = 0, Zero Adj (4 mA Re-range with Pressure), Span Adj (20 mA Re-range with Pressure), Factory Reset
ELECTRICAL SPECIFICATIONS	
Power Supply	· 1-5 V: 9-55 Vdc Max · 4-20 mA: 16.5 Vdc to 55 Vdc Max (28 Vdc Max for IS) · 4-20 mA/HART: 16.5 Vdc to 55 Vdc Max (28 Vdc Max for IS) · RS485 Modbus: 9 to 30 Vdc Max
Power Consumption	· 1-5 V: 5 mA (Max) / 4-20 mA/HART: 21 mA (Max) / HART Multi-drop: 4 mA / RS485: 12 mA (Max)
Surge Protection	· The transmitter has been tested to withstand a transient surge up to 2000 V (common mode) or 1000 V (normal mode) without damage (Per IEC Std. 61000-4-5)
MECHANICAL SPECIFICATIONS	
Dimensions (LCD)	· 3.7" (W) x 5.1" (H) x 5.2" (D) / 94 mm (W) x 130 mm (H) x 133 mm (D) (5 and 30 psi Models are 0.4" / 10mm Taller)[5]
Weight	· Net: 3.1 lbs. (1.39 kg), Package: 4.0 lbs. (1.81 kg)
Package Dimensions	· 9.5" (W) x 8.0" (H) x 8.25" (D) / 241 mm (W) x 203 mm (H) x 210 mm (D)
Enclosure Casing Material	· Type 4X Aluminum; IP66
Cable Entry Ports	· (2) 1/2" NPT, 1 Plug Included
Process Connection	· 1/2" NPT 316 SS: Male (6R01) or Female (6R03), See Ordering Info
CERTIFICATION & COMPLIANCE	
Safety	· IS Option Available on 4-20 mA and 4-20 mA/HART Only, Explosion-proof (Standard) All Models
C SP US	· Class I, Division 1, Groups A, B, C, D T6; Class I Division 2, Groups A, B, C, D, T4 · Class II Division 1, Groups E, F, G T80 °C; Class III · Ambient Temperature: Ta = -40 to 60 °C (-40 to 140 °F) · Smart Pressure Transmitters, approved for hazardous locations, are dual seal certified per CSA C22.2 No. 30-20.
NACE	· NACE MR0175 Compliant
GENERAL SPECIFICATIONS	
Operating Temperature	· -40 to 60 °C (-40 to 140 °F) / LCD -20 to 60 °C (-4 to 140 °F)
Storage Temperature	· -40 to 110 °C / -40 to 230 °F / LCD -20 to 70 °C (-4 to 158 °F)
Process Temperature	· Silicone Oil Filling (S): -40 to 120 °C (-40 to 248 °F)
Process Temp. Measurement[2]	· -40 to 85 °C (-40 to 185 °F), ±4% Accuracy (°C), Supported on Modbus and HART (SV) Models
Operating Humidity	· 5 to 100% @ 40 °C (104 °F)
Warranty	· 2-Year Parts and Labor
ACCESSORIES	
Mounting Kit	· SX1000-MK9, Includes L-Bracket 6.93" x 6.3" (176 x 160 mm), 2" U-Bolt (50.8 mm), 3" U-Bolt (76.2 mm)

Ordering Information

HGPT[ ]-[S][S][S]-[F][C]-[6R01]-[E1]

Pressure, Nominal
0005 = 5 PSI
0030 = 30 PSI
0150 = 150 PSI
0400 = 400 PSI
1500 = 1500 PSI
3000 = 3000 PSI
6000 = 6000 PSI
10000 = 10000 PSI

Diaphragm Material
H = Hastelloy C
S = 316L SS

Sensor Filling Fluid
S = Silicone

Sensor Seal
F = FKM
S = SS Welding

Output Type
D = 1-5 V
F = 4-20mA
H = 4-20mA/HART
R = RS485 Modbus

Display Option
C = LCD Display (Backlit LCD Type)

Process Connection
6R01 = 1/2" NPT, Male 316 SS
6R03 = 1/2" NPT, Female 316 SS

Certification
E1 = EX: Factory Default
I1 = IS: 4-20 mA or 4-20 mA/HART Only

[1]The span adjustability does not apply to the RS485 model since the reading output is digital.
The 20:1 turndown ratio does not apply to the HGPT10000.
[2]The limitation of the upper range is due to the industry rating of the sensor components.
[3]HGPT10000 utilizes a Piezoresistive Silicon sensor.
[4]For the HGPT10000, setting the URV below 7250 PSI can impact accuracy.
[5]The 5 and 30 psi models are equipped with a venting hole that increases the overall height by 0.4" or 10mm.

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