Precision barometer HD9408.3B...

HIGH PRECISION BAROMETRIC TRANSMITTER SERIES

INTRODUCTION

The **HD9408.3B barometric transmitter** is a versatile, high-performance instrument designed to meet the needs of a wide range of applications. Its combination of accuracy, temperature compensation, flexible output options, and low power consumption make it an essential tool for professionals seeking reliable atmospheric pressure measurements in both standard and challenging environments.

FEATURES

High-Accuracy Piezoresistive Sensor

Measures atmospheric pressure with extreme precision, offering a range of 0 to 1350 hPa (digital) and 500 to 1200 hPa (analog). Ensures consistent accuracy with low hysteresis and excellent repeatability.

Temperature Compensation for Optimal Performance

Maintains accuracy across a wide temperature range (-40°C to +85°C) through factory calibration and real-time temperature compensation.

Low Power Consumption

Energy-efficient design ideal for remote systems, such as solar-powered weather stations.

Broad Application Range

Perfect for meteorology, environmental monitoring, laboratories, clean rooms, and vehicle emission testing, ensuring reliable data in demanding conditions.

CONFIGURATION & MEASUREMENT

Versatile Output Options

Available in three versions with different output types (digital and analog), providing flexibility for various applications.

MODBUS RTU and SDI-12 Protocols

Supports MODBUS RTU and SDI-12 communication protocols for easy integration into data systems and sensor networks. Measurements can be displayed in various user-selectable units.

HIGH-ACCURACY MEASUREMENT
Uses a piezoresistive sensor for accurate, stable, and repeatable atmospheric pressure measurements

WIDE RANGE AND TEMPERATURE COMPENSATION
Measures pressure across various ranges with temperature compensation from -40°C to +85°C

MULTIPLE OUTPUT OPTIONS
Available in three versions with analog and digital outputs, including MODBUS-RTU, NMEA 0183, and SDI-12 protocols

RUGGED AND VERSATILE DESIGN
IP67-rated watertight housing makes it ideal for harsh environments and meteorological applications

LOW POWER CONSUMPTION
Designed for remote systems, it's optimized for low energy use, making it suitable for solar-powered stations

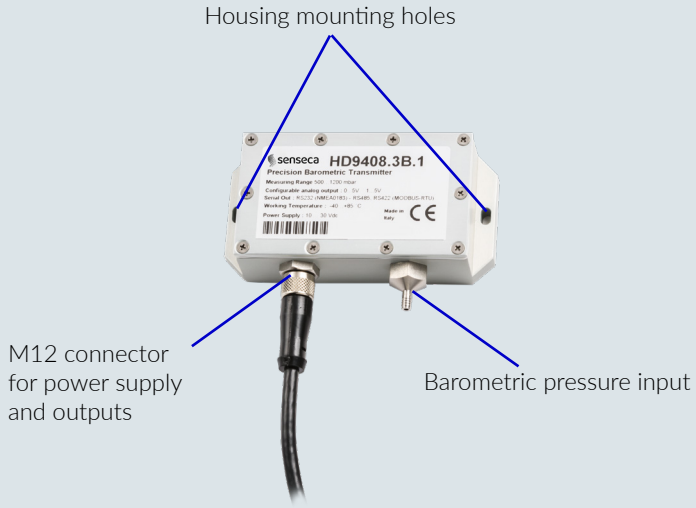
Measurement specifications

Sensor	High accuracy piezoresistive
Measuring range	
HD9408.3B.1	0...1350 hPa digital outputs / 500...1200 hPa analog outputs
HD9408.3B.2	0...1350 hPa digital outputs / 500...1200 hPa analog outputs
HD9408.3B.3	100...1350 hPa
Resolution	0.01 hPa
Accuracy	
Digital outputs	± 0.1 hPa (500...1200 hPa) / ± 0.2 hPa (remaining range) @ 23 °C
	± 0.3 hPa (500...1200 hPa) / ± 0.4 hPa (remaining range) @-40...+85 °C
Analog outputs	± 0.3 hPa (500...1200 hPa) @ 23 °C
	± 0.6 hPa (500...1200 hPa) @-40...+85 °C
Measuring units (Modbus and SDI-12 protocols)	Pa, hPa, kPa, mbar, bar, atm, psi, mmHg, inHg, mmH_2O, ftH_2O, kg/cm^2, Torr.
Long-term stability @ 25 °C	0.25 hPa/year
Output	
HD9408.3B.1	RS485 / RS422 / RS232 / analog 0...5 or 1...5 V
HD9408.3B.2	RS485 / RS422 / RS232 / analog 0...20 or 4...20 mA
HD9408.3B.3	SDI-12
Warm-up time	2 s approx. from powering
Measuring period	
HD9408.3B.1	16 ms
HD9408.3B.2	16 ms
HD9408.3B.3	upon user request
Analog output response time	150 ms to reach 90% of final value with step pressure input (from 600 to 1000 hPa)
Overpressure limit	3 x f.s.
Compatible media	Only dry air and non-corrosive gases

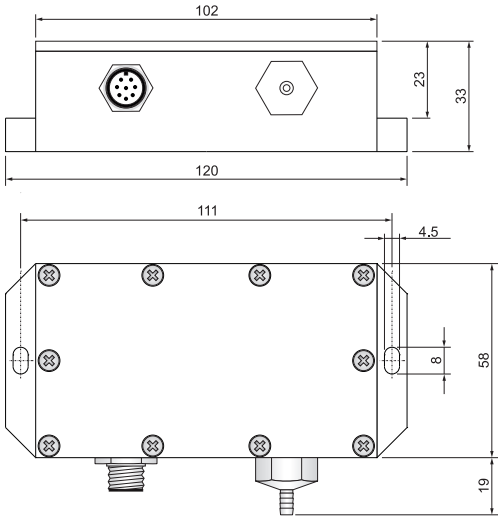
General specifications

Power supply	
HD9408.3B.1	10...30 Vdc
HD9408.3B.2	10...30 Vdc
HD9408.3B.3	8...30 Vdc
Absorbtion	
HD9408.3B.1	< 10 mA @ 12 Vdc
HD9408.3B.2	< 10 mA @ 12 Vdc
HD9408.3B.3	< 200 µA @ 12 Vdc (average consumption between two subsequent measurements)
Pressure connection	Ø 5 mm flexible tube
Electrical connections	M12
Operating conditions	-40...+85 °C 0...100 %RH
Storage temperature	-40...+85 °C
Housing material	Anticorodal
Protection degree	IP67

Description



Dimensions



Ordering codes

	Output
HD9408.3B	**.1 =** RS485 / RS422 / RS232 / analog 0...5 or 1...5 V
	.2 = RS485 / RS422 / RS232 / analog 0...20 or 4...20 mA
	.3 = SDI-12

vs3.0

Senseca Italy Srl
Via G. Marconi, 5 - Selvazzano Dentro (PD) - Italy
www.environmental.senseca.com
sales.padua@senseca.com