HD 9408T BARO, HD 9408TR BARO, HD 9908T BARO

BAROMETRIC TRANSMITTERS

HD 9408T BARO, HD 9408TR BARO and HD 9908T BARO are analog output electronic barometers. They use a piezoresistive sensor element which gives extremely accurate and stable measurement of the atmospheric pressure and assures excellent repeatability, low hysteresis and very good temperature stability. The output signal of the sensor is conditioned to provide a voltage or a current output linearly proportional to the barometric pressure. The transmitters are ready as they have been calibrated at the factory. A zero adjustments potentiometer is available for offset to station elevation.

HD 9408T BARO requires a continuous dc power supply, its low power consumption (< 4 mA) makes it ideal for portable and remote battery or solar powered applications. It is available in different kinds of analog output: 0÷1 Vdc, (0÷5 Vdc 1÷5 Vdc, 1÷6 Vdc, 0÷10 Vdc on request) or 4÷20 mA (two wires).

HD 9408TR BARO offers superior temperature performance: the internal circuitry allows the sensor to work at constant temperature so that it achieves accurate temperature compensation over the whole range from -40°C to +60°C. HD 9408TR BARO requires a continuous dc power supply and a differential cabling connection to achieve best results. It is available in different output versions: 0÷1 Vdc, (0÷5 Vdc 1÷5 Vdc, 1÷6 Vdc, 0÷10 Vdc on request).

HD 9908T BARO, unlike the other models, is equipped with a display showing the pressure measurements, an analog output 0÷20 mA, 4÷20 mA, 0÷1 V and 0÷5 V (0÷10 V on request) configurable by the customer and with an ON/OFF relay output with programmable alarm threshold.

HD 9908T BARO requires a 24 Vac (or 230 Vac on request) power supply.

HD 9408T BARO, HD 9408TR BARO and HD 9908T BARO are low cost and excellent performance solutions for meteorological applications, environmental monitoring systems, metrological and environmental data logging, altitude applications, barometric pressure compensation in the performance of internal combustion engine, cleanroom barometric pressure compensation, testing of vehicle emissions.

HOUSING AND INSTALLATION

In all models the sensor electronics are housed in a sturdy polycarbonate blend with IP67 protection. Opening the lid holes are available that allow you to secure the base of the transmitter directly to a panel or a wall. The measurement accuracy is independent of the position of the transmitter. However, it is advisable to mount the transmitter so that the sensor is facing down to reduce dust and dirt on the filter. If the installation is in an open environment is recommended to use a special static port to minimize errors caused by the wind flow on the input pressure.

CONNECTION DIAGRAM AND OPERATION

- Make the power connections for the HD 9908T BARO.
- Make the connections for the relay output, the relay contact is free.
- Select the analog output 0÷20 mA, 4÷20 mA, 0÷1 V, 0÷5 V by means of the jumper.
- Switch on the instrument, press the PUSH button and turn the SET trimmer to set the desired threshold value between 800 and 1100 mbar; the set value is shown on the LCD display.
- Using the trimmer 

| TABLE 1 |
| MEASURE > SET, MEASURE < SET + HYS |
| HI | LO | LED ALARM |
| ON | OFF | OFF |
| MEASURE > SET, MEASURE > SET + HYS |
| ON | OFF | ON |
| MEASURE < SET, MEASURE > SET - HYS |
| OFF | ON | OFF |

NOTE: the ALARM led comes on to indicate that the relay is energized and the contact is closed.
- Once installation is completed, check that the cover is tightly closed; the same applies to the grommets.

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HD 9408T BARO 0÷1 V OUTPUT

HD 9408T BARO 4÷20 mA OUTPUT (two wire)

HD 9408T BARO 0÷1 V OUTPUT

HD 9408T BARO 4÷20 mA OUTPUT

HD 9908T BARO

MEASURE < SET, MEASURE < SET - HYS
OFF ON ON

HD9408T BARO
HD9408TR BARO
HD9908T BARO

Sensor type
Piezoresistive diaphragm

Measuring range
800 ÷ 1100 mbar / 600 ÷ 1100 mbar on request

Analog output
0 ÷ 1 Vdc standard; 0 ÷ 5 Vdc, 1 ÷ 6 Vdc and 4 ÷ 20 mA (two wires) on request

Accuracy
± 0.5 mbar, @ 20°C

Resolution
Infinite

Thermal effects
< 1% F.S., zero; <1% F.S., span over -20°C to +60°C (-4° to 140°F)

Long term stability
< 0.25% F.S. over 6 months at 20°C

Turn on time
1 sec. to 99% of full scale reading

Response time
< 200 ms after pressure stabilization

Relay contact output
Absent

Set point
Absent

Supply Voltage
8 ÷ 35 Vdc

Supply current
< 4 mA

Operating Temperature
-30 ÷ +60°C

Media compatibility
Air and dry gases only

Overload pressure
2 bar - 30 PSI

ORDERING CODE
HD9408T BARO 800÷1100mbar barometric transmitter output 0÷1Vdc. Upon request output: 0÷5Vdc, 1÷5Vdc, 1÷6Vdc, 0÷10 Vdc, 4÷20mA. Working temperature range -30°C ÷ +60°C.

HD9408TR BARO 800÷1100mbar barometric transmitter output 0÷1Vdc. Upon request output 0÷5Vdc, 1÷5Vdc, 1÷6Vdc, 0÷10 Vdc. Temperature working range -40°C ÷ +60°C, heated sensor.

HD9908T BARO 800÷1100mbar digital barometric transmitter with LCD indication. Outputs: 0÷20mA, 4÷20mA, 0÷1Vdc, 0÷5Vdc. Working temperature range -20°C ÷ +60°C.