



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



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 adjustment potentiometer is available for offset to station elevation.

HD9408T 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 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 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 220 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 MACROLON 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.

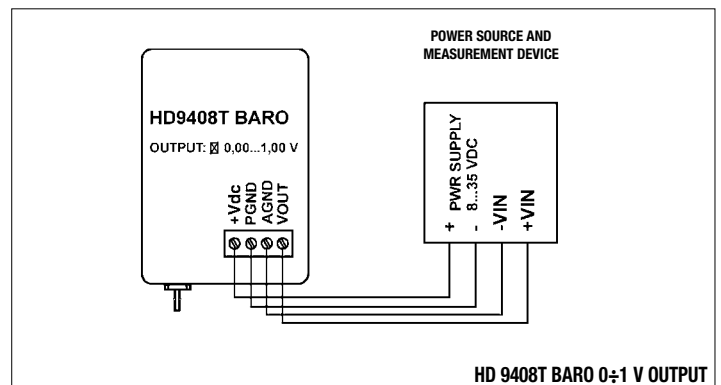
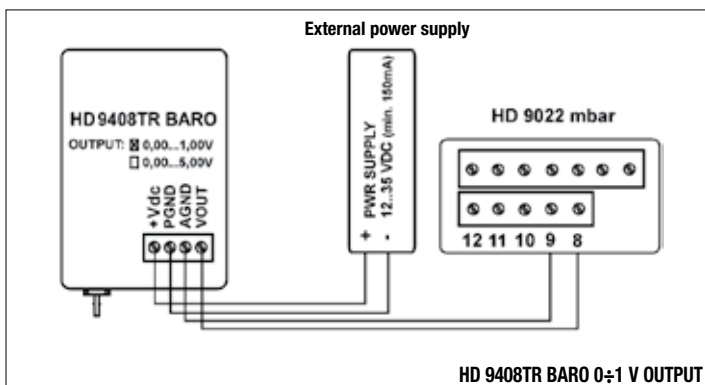
CONNECTION DIAGRAM AND OPERATION

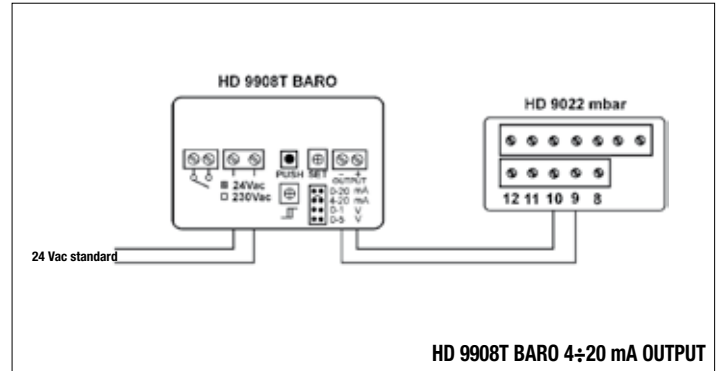
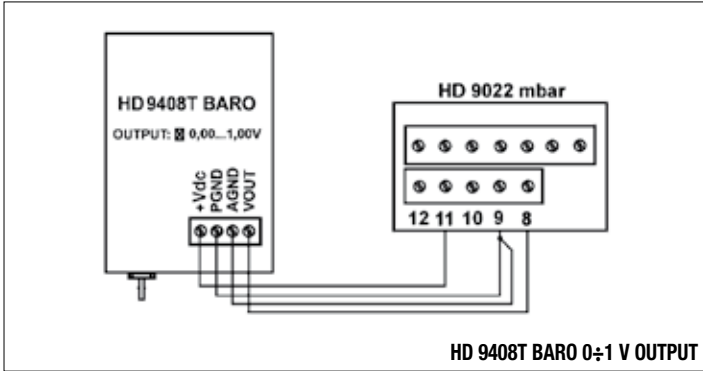
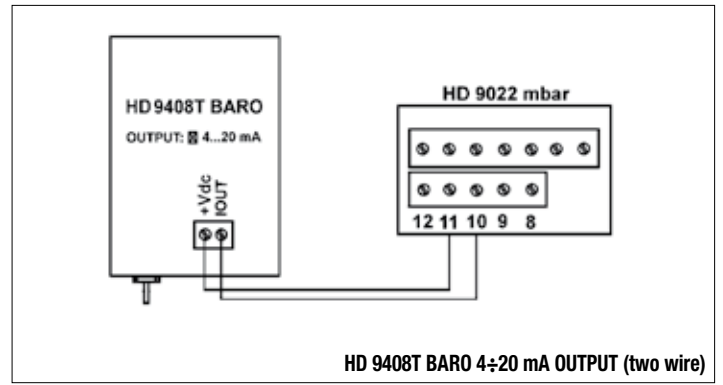
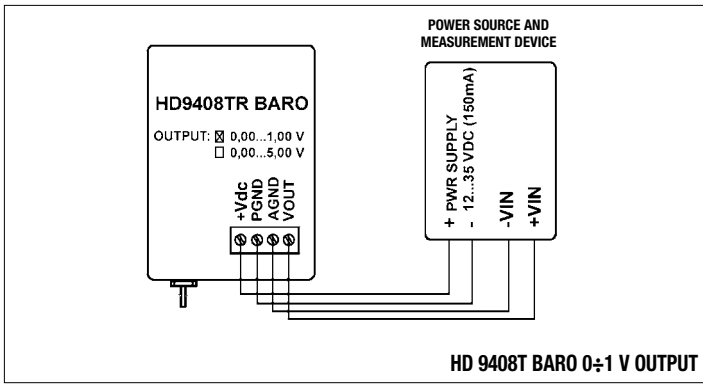
- Make the power connections for the HD 9908T BARO.
- Make the connections for the relay output, the relay contact is free.
- Select the analog output 0÷20 mA, 4÷20 mA, 0÷1 V, 0÷5 V by means of the jumper.
- Switch on the instrument, press the PUSH button and turn the SET trimmer to set the desired threshold value between 800 and 1100 mbar; the set value is shown on the LCD display.
- Using the trimmer i □, set the desired HYS (=hysteresis) value between 5 and 50 mbar.
- The instrument will now indicate the barometric pressure; HI led, LO led or ALARM led and ALARM relay will switch on if one the following cases occurs (see table 1).

NOTE: the ALARM led comes on to indicate that the relay is energized and the contact is closed.

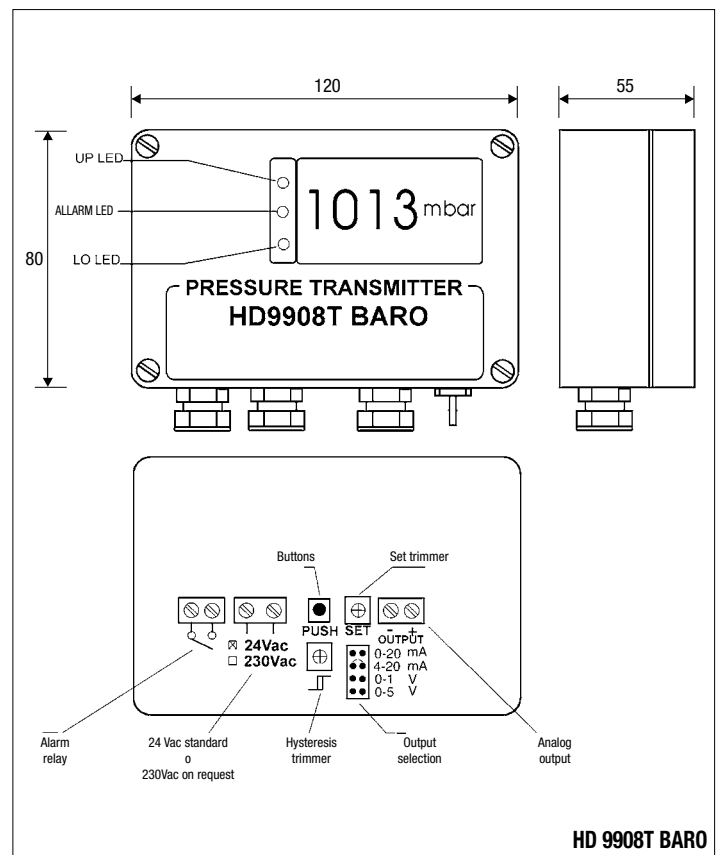
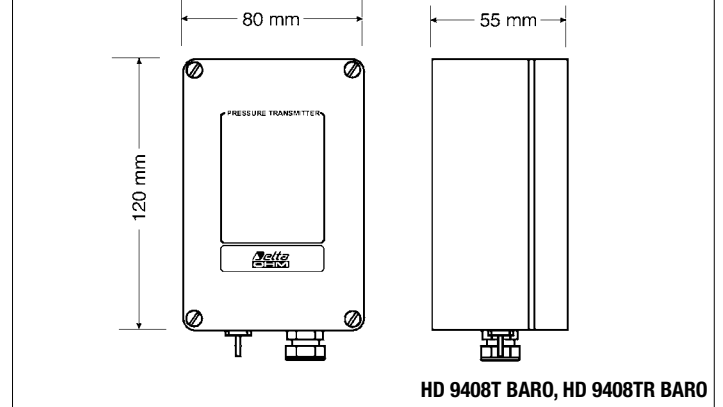
- **Once installation is completed, check that the cover is tightly closed; the same applies to the grommets.**

| TABLE 1 | HI | LO | ALARME LED |
|----------------------------------|-----|-----|------------|
| MISURA > SET, MISURA < SET + HYS | ON | OFF | OFF |
| MISURA > SET, MISURA > SET + HYS | ON | OFF | ON |
| MISURA < SET, MISURA > SET - HYS | OFF | ON | OFF |
| MISURA < SET, MISURA < 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 ÷ 5 Vdc, 1 ÷ 6 Vdc and 4 ÷ 20 mA (two wires) on request | 0 ÷ 1 Vdc standard; 0 ÷ 5 Vdc, 1 ÷ 5 Vdc and 1 ÷ 6 Vdc on request | 0 ÷ 20 mA, 4 ÷ 20 mA, 0 ÷ 1 V and 0 ÷ 5 V (0 ÷ 10 V on request), configurable by means of a jumper. |
| Accuracy | ± 0.5 mbar, @ 20°C | ± 0.5 mbar, @ 20°C | Display: ± 1 mbar, @20°C Analog output: ± 0.8 mbar, @ 20°C |
| Resolution | Infinite | Infinite | Display: Analog output: 1 mbar Infinite |
| Thermal effects | < 1% F.S., zero; <1% F.S., span over -20°C to +60°C (-4° to 140°F) | ± 0.8 mbar over -40°C to +60°C (-40° to 40°F) | < 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 | < 0.2 % F.S. over 6 months at 20°C | < 0.25 % F.S. over 6 months at 20°C |
| Turn on time | 1 sec. to 99% of full scale reading | 5 min @ 24 Vdc supply to 99% of full scale reading | 5 sec. to 99% of full scale reading |
| Response time | < 200 msec. to reach full accuracy after a pressure step | | |
| Relay contact output | Absent | Absent | 3A/220 Vac resistive load |
| Set point | Absent | Absent | Configurable from 800 to 1100 mbar |
| Supply Voltage | 8 ÷ 35 Vdc | 12 ÷ 35 Vdc | 24 Vac ±10% (230 Vac on request) |
| Supply current | < 4 mA | 25 mA @ 20°C, 24 Vdc (warm-up 120 mA) | 1VA |
| Operating Temperature | -30 ÷ +60°C | -40 ÷ +60°C | -20 ÷ +60°C |
| Media ompatibility | Air and dry gases only | | |
| Overload pressure | 30 psi | | |



ORDERING CODE

HD9408T BARO 800÷1100mbar barometric transmitter output 0÷1Vdc. Upon request output: 0÷5Vdc, 1÷5Vdc, 1÷6Vdc, 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. Temperature working range -40°C ÷ +60°C, heaters 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.