

Digital Differential Pressure Gauge Switch

Users Guide

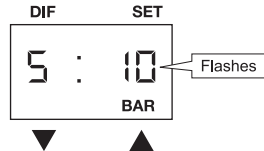
42571501 (6.20)



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9 Time interval between measurements

The device checks pressure differential every few seconds. This interval may be set by the user. The longer the interval is between measurements, the lower the power consumption and the greater the battery life. The time interval may be set for any value from 0,5 to 99 seconds (0,5 appears as R). Press the two buttons simultaneously for 6 seconds, until the following display appears:

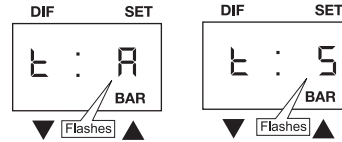


- Using the buttons, add or subtract time until you reach the desired time interval selection. In this example, 10 seconds has been selected.
- Set by holding the two buttons down simultaneously for 2 seconds, until the display returns to the basic screen.

10 Contact closing time

- When the pressure differential is greater than or equal to the setting - $DIF \geq SET$ the switch contacts are closed for the period of time "R" in seconds. This closed time may be set as follows: R, or any value from 1 to 99 seconds. R = closed time depending on the interval between measurements "S" and is explained in the chart which follows these steps.

- Press the two buttons simultaneously for 8 seconds until one of the following appears on the display:

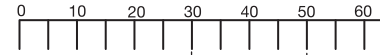


- Use the buttons to adjust the time or to select R: ▼ to decrease, ▲ to increase.
- Press the two buttons simultaneously for 2 seconds until the basic display appears, to set the selection.

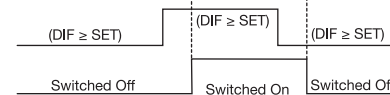
11 Contact Closing Time = A

The below diagram shows how the relay "On" time is dependent upon the duration time setting when the contact closing time is set to "R" ($t=R$):

For example, the interval between measurements "S" is set at 10 seconds.



Differential pressure exceeds the setting point ($DIF \geq SET$) for 12 seconds in this example.



The relay is switched **On** only when the gauge senses that a differential pressure change has taken place, and will not be switched **On** or **Off** between measuring samples, which in this case results in an **On** time of 20 seconds.

12 Time Interval between Contact closure

- This section explains how to operate the contact according to an internal timer; in addition to being operated by pressure differential. If $I_n = R$ this section is not active. If I_n value is between 1 - 24 hours the maximum time between two cycles will be the I_n value. Example: $I_n = 3$ if the pressure differential will not cause contact closure, then the contact will be closing every 3 hours for "R" time (section 10).
 - Press the two buttons simultaneously for 10 seconds.
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- Use the buttons to adjust the time or to select R: ▼ to decrease, ▲ to increase.
 - Press the two buttons simultaneously for 2 seconds until the basic display appears, to set the selection.

13 Zero Calibration Set

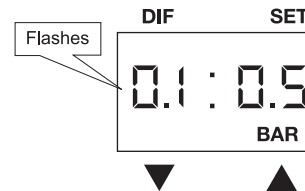
Important

- Connect High pressure **before** Low pressure
- Disconnect Low pressure **before** High pressure

The pressure sensor should read zero when the pressure differential is zero. To check the calibration, remove the two pipe fittings from H and L. The pressure reading when the fittings are open to the atmosphere and there is no pressure differential between them should be "0". If not, set the reading to zero as follows:

- Press the two buttons at the same time and hold for 10 seconds until the following display appears:

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The pressure differential reading (here 0.1 BAR) flashes.

- Press the two buttons at the same time for 2 seconds until the auto display appears and will now show 0.0.

15 Service Information

Guarantee

Baccara products are guaranteed to be free from defects in material and workmanship for a period of one year from the date of delivery. This guarantee does not apply where equipment is not used and installed strictly in accordance with **Baccara** specifications and Users Guide. Neither does it apply to failures cause by lightning strikes or damage due to freezing temperatures or mechanical causes. **Baccara** is not liable for indirect, incidental or consequential damage in connection with the use of equipment.

To receive guarantee benefits, customers should return defective units along with the receipt of to the nearest **Baccara** distributor. **Baccara** reserves the right to alter, modify or redesign its products, pricing and guarantee at all times without creating any liability for the obsolescence of customer inventory of such parts or products. This manufacturer guarantee policy may apply differently in different countries.

1 Getting Started-Description

The Baccara Digital Differential Pressure Gauge Switch combines a gauge and a switch in one unit, which allows the user to program a wide range of monitoring and switching parameters to suit specific applications.

Display

The LCD display shows the actual Differential Pressure (DIF) and the pressure differential trigger setting (SET) continuously when power is connected. When the switch contacts are closed, this is indicated by displaying **On**.

Display Range:

1 PSI in the range 0 - 99 psi

0.1 BAR in the range 0.0- 7.0 BAR

Mechanical

- 2 inch (52 mm) diameter
- Operating temperature -10° C to 60° C
- Dust and water tight according to IP 66 specifications
- Outdoor UV stabilised protection
- Front panel cover protection
- Maximum "H" pressure 200 PSI / 14 BAR
- "H" pressure ≥ "L" pressure.

2 Electrical

Electrical

- Power supply 9 - 24VDC or 12 - 24VAC
- Low power indication: "LO P" on display
- Dry contact (N.O.) 0.5 A at 24 VAC
- Internal memory retains settings when power is not supplied.

Mounting

- 2 ft /60 cm. 4 wire cable
- Red (+) and Black (-) to power supply
- Green and White to N.O. contacts
- Pressure ports 1/8" BSP or NPT male
- "H" pressure port marked on housing

Important

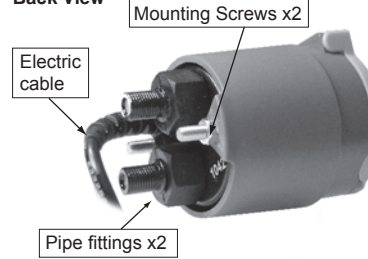
- **Connect High pressure before Low pressure**
- **Disconnect Low pressure before High pressure**

Programmable Settings

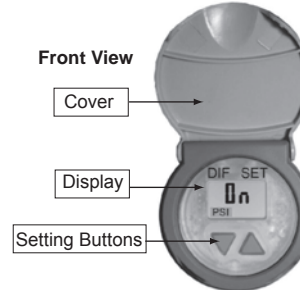
- Manual operation
- PSI or BAR display
- Time interval between pressure measurements
- Contact closed time
- Zero calibration

3 Parts Identification

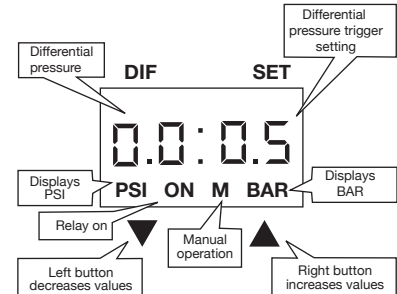
Back View



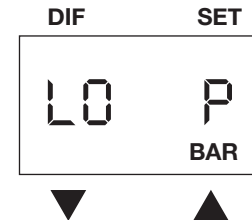
Front View



4 Display



Low power display

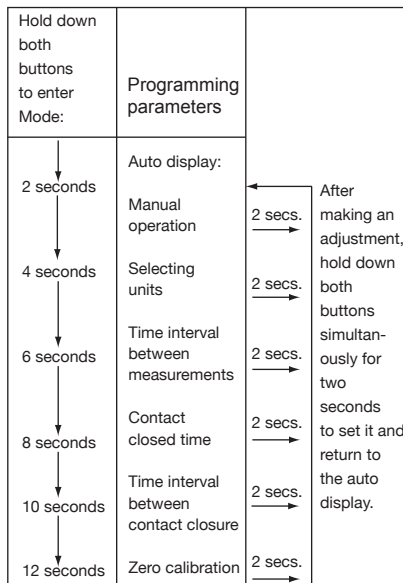


5 Programming

General - Using the arrow buttons

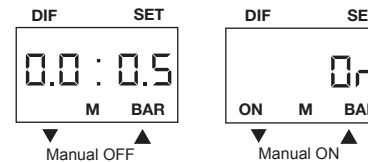
- To enter settings press and hold both buttons simultaneously for 2 seconds.
- Use the left button ▼ for decreasing settings, selecting BAR measurements, and for turning off the device in the Manual mode.
- Use the right button ▲ for increasing settings, selecting PSI measurements, and for turning on the device in the Manual mode.
- After making an adjustment, holding the two buttons at the same time for 2 seconds, sets the adjustment and returns the display to the auto display.
- If the buttons are not held down for the full 2 seconds, until the auto display appears, no changes are made to the previous settings.
- When making an adjustment, if a button is not pressed within 30 seconds, the auto display appears and no changes are made to the previous settings.

6 Flow chart for settings



7 Manual Operation

Press both buttons for 2 seconds until the letter **M** flashes and the word "On" appears. Select **On** or **Off**. The left button ▼ selects **Off**. The right button ▲ selects **On**. Hold the two buttons simultaneously for 2 seconds to set the selection. If you selected manual **On**, **M** and **Off** will appear on the display. If you selected manual **Off** only the **M** appears in the bottom row of the display.



Manual Operation ON time

If you selected **On** (L=On) as the contact closed time setting, the contacts will close and remain closed until the third pressure differential measurement takes place, then the contacts will open or close according to the pressure differential.

8 Selecting units of measure

If you selected contact closed time "L" as a specific time in seconds, for example 10 seconds, then the contacts will close for 10 seconds.

Selecting units of measure

1. Press the two buttons simultaneously for 4 seconds until PSI or BAR flashes.



Setting readings in PSI Setting readings in BAR

2. Press ▲ to switch from PSI to BAR.
3. Press ▼ to switch from BAR to PSI.
4. Set the selection by pressing on the two buttons simultaneously for 2 seconds.