Installation instructions	Single high and low pressure switches	**QBE1900-Px**

⚠ Safety instructions

- Read the installation instructions thoroughly. Failure to comply can result in device failure, system damage or personal injury.
- Before opening any system make sure the pressure in the system is brought to and remains at atmospheric pressure.
- Ensure the supply voltage and current of electric device match rating on the QBE1900-Px name plate. Disconnect the supply voltage from the system and the QBE1900Px before installation or service.
- Do not exceed the test pressure.
- Keep temperatures within nominal limits.

Function/ type of switch (Fig. 1)

- The QBE1900-Px pressure switches are equipped with SPDT snap action contacts.
  After the pressure rises or drops by a fixed or adjustable differential, the switch will automatically or manually reset.

Mounting (Fig. 2)

- The QBE1900-Px pressure switches may be installed by using a mounting plate or as a wall-mounted device against a flat surface.
- Do not use the QBE1900-Px pressure switches in pulsating operating conditions! In order to achieve protection class IP33, the following instructions must be observed:
- The cover must be closed and the cover screw fastened.
- The QBE1900-Px must be mounted upright, against a flat surface so that all openings on the housing backside are fully covered. Do not remove the white backing.

Mounting direction

- Any direction except upside down.
- Upright if achieving of protection class IP33 needed (see also the other mounting conditions above).

Pressure connection

- Connection of the pressure side depends on the exact model / pressure connector.
- On the ½" Whitworth standard thread connectors do not apply torsional load to pressure connector; use a second spanner to counter-balance torque when tightening pressure connection.
- When connecting the QBE1900-Px to the hot gas line of a refrigeration system, a pipe, capillary or flexible tube of at least 80 mm must be used to allow sufficient temperature drop between the piping line and the pressure switch bellows.

Leakage test

After completion of installation, a test pressure must be carried out as follows:

- According to EN378 for systems which must comply with the European pressure equipment directive 2014/68/EU.
- To maximum working pressure of the system for other applications.

⚠ Warning:

- The pressure test must be conducted by skilled persons with due respect regarding the danger related to pressure.

Electric connection (Fig. 3)

(1) Range adjustment (2) Differential adjustment (3) Electrical terminals
(4) Cable entry grommet (7) Check-out lever

NOTE: Comply with local electrical regulations when conducting electrical wiring. Wire size must match the electrical load connected to the switch contacts.

- Feed the cables through a rubber grommet at the switch bottom.
- Optionally, if the cable is accessible after final installation, the rubber grommet must be replaced by a standard PG 13.5 cable gland in order to make a reliable strain relief.
- Connect the wires to the terminals by taking into account the switch functions as shown in Fig. 1.
- Fasten the terminal screws with a torque of 1.2 Nm max.
- Make sure the grounding conductor is adequately locked against loosening and its free length is not less than the length of the other conductors in the terminal box.
- For electronic applications with low electrical loads (voltage <24 V and current <50 mA), gold plated contacts are recommended.

Setpoint adjustment (Fig. 3)

(5) Differential pointer (6) Range pointer

- The QBE1900-Px pressure switches come with individually adjustable range and differential depending on the exact model.
- Manual reset switches always have a fixed differential.
- Use a flat screw driver or a ¼" (square) wrench to adjust the setpoints as described below.
- Adjust the upper setpoint using the range adjustment.
- Adjust the lower setpoint by turning the differential adjustment.

Upper setpoint – Differential = Lower setpoint

- Use a separate gauge for the exact adjustment of the setpoints. The integrated display scale can only be used for obtaining approximate settings.
- When changing the upper setpoint the lower setpoint must be re-checked.

Manual reset (Fig. 4) / auto reset (Fig. 3)

- Manual reset (external): Press the reset button (9) as indicated by Fig. 4
- Note that the reset is 'trip-free', i.e., the reset is only possible if the pressure has reached its reset threshold.

Check out lever (Fig. 3)

After the installation is completed, a test pressure must be carried out as follows:

- Use the check-out lever (7) to manually override the electrical contact position for testing out the system.
- Use the check-out lever (7) on low pressure switches to manually override the electrical contact position.

Fig. 1

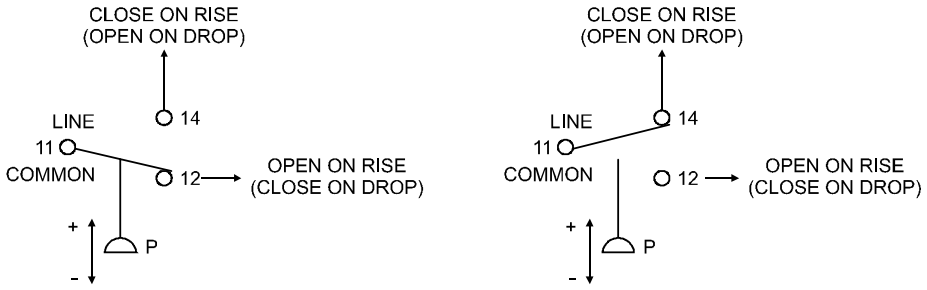


Fig. 2

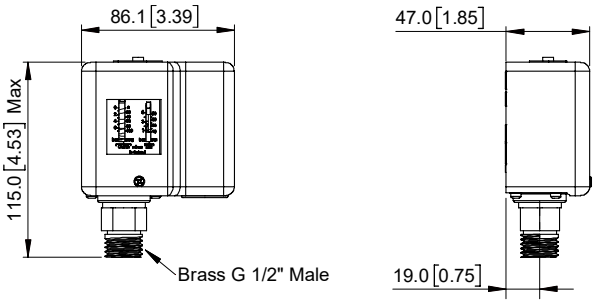


Fig. 3



Fig. 4



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