



## Features

- / Level monitoring for fluids
- / Filter and air-duct monitoring
- / Dry-run protection for pumps

# FD-02

## Pressure Bell Switch

### Description:

In pressure bell switches, the static pressure of the fluid is converted into air pressure in suitable pressure transmitters (tube or hose). The rising level of fluid produces a locked up air space in the pressure transmitter as soon as the level reaches the locking edge. If the level continues to rise an overpressure builds up in the tube which on reaching a value of approx. 50 mm of water column actuates a pressure switch. The tube or the hose must be perfectly pressure-tight as, otherwise, the switching point may change due to air losses in the pressure transmitter tube. The FD-02 is factory-adjusted to a switching point of 50 mm of water column so that it is defined as the tube length minus 50 mm. Normally, the FD-02 is supplied without a pressure transmitter tube to allow the user to select the tube material as per his preference and thereby to customize it to the media to be monitored. In the case of warm, viscous or sticky materials, we suggest maintaining a constantly less air bubble formation over a T-piece connected to a pressurized air supply.

### Application:

Pressure bell switches are simple and cost-effective devices for monitoring the level especially in open vessels, sumps and ducts. Since these switches do not have any mechanically moving parts, they are particularly dirt-insensitive. By correctly selecting the pressure transmitter material even hostile media can be monitored economically.



## Versions:

### FD-02 Pressure Bell Switch

#### Version:

**FD-02.1** - no housing

**FD-02.2** - with housing, R 1/2"-female

**FD-02.3** - with housing, R 1/2"-female, R1 1/4"-male

**FD-02.4** - with housing, hose joint 40 mm

## Electrical Specifications:

**Switching load /** change-over 6 A, 250 V, 50 Hz, ohmic; tested as per VDE 0630

**Electrical connection /** flat plug, 6.3 DIN 46248

## Technical Specifications:

**Pressure range /** 0.05 to 1 m water column

**Least switching pressure /** 50 mm water column

**Least switch back pressure /** 20 mm water column

**max. Temperature /** -10...+85°C

#### Materials /

**Housing:** polyamide

**Membrane:** nitrile rubber

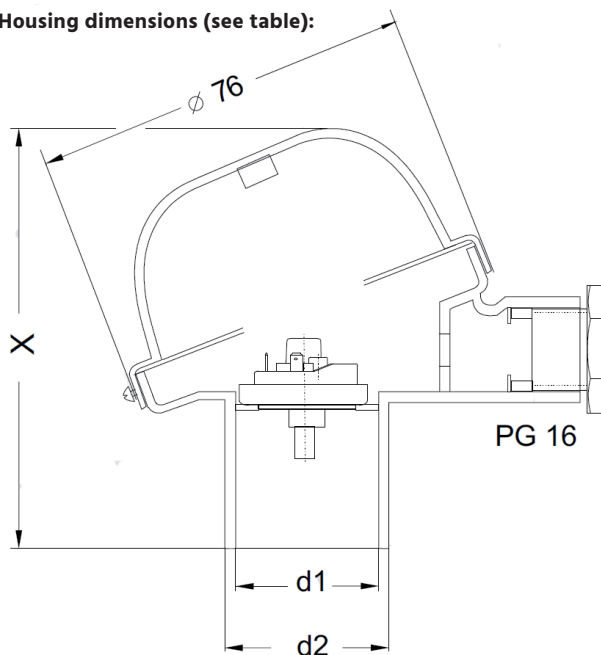
**Pressure chamber:** polyamide, fiberglass reinforced

**Hysteresis /** 15%, min. 30 mm water column

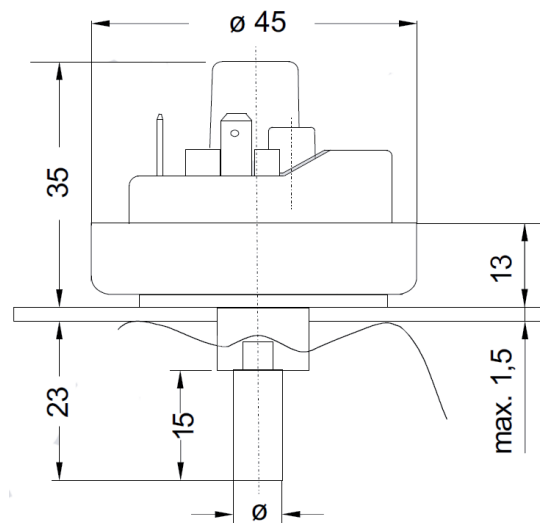
**Indexing tolerance /** ± 10%, min. +7.5 mm water column

## Dimensions in mm:

Housing dimensions (see table):



Switch Dimensions FD-02.1 (without housing)



## Housing Dimensions:

Version	d1	x	d2
FD-02.2	R 1/2" female	78 mm	-
FD-02.3	R 1/2" female	85 mm	R1 1/4" male
FD-02.4	hose	108 mm	40 mm

## Ordering Codes:

Order number

FD-02. 2

FD-02 Pressure Bell Switch

#### Version /

1 = no housing

2 = with housing, R 1/2"-female

3 = with housing, R 1/2"-female, R1 1/4"-male

4 = with housing, hose joint 40 mm