

Pressure ranges from 0... 1 bar to 0... 25 bar



Advantages / Benefits

- ▶ Easy LINK for direct connection to Burkert control valves
- ▶ High shock and vibration resistance
- ▶ Wetted parts out of stainless steel no internal seal
- ▶ No moving parts
- ▶ Enhanced EMI
- ▶ 2 switching points closing or opening
- ▶ Accuracy <1%
- ▶ Repeatability <0.25%

Design

The principle features of these pressure switches are their high longterm stability as well as their sturdy and compact construction.

Wetted parts are made of stainless steel. There are no internal sealing materials which could limit the choice of the pressure mediums. The compact case is made of stainless steel and provides IP 65 rating as standard.

Power supply of the pressure switch is by means of nonstabilized DC 10... 30 V. Two switching points are available.

The configuration of the switching outputs is factory adjusted according to their switching mode (NO or NC). The switching outputs and switching hysteresis (mode of

connection PNP) are in accordance with the requirements of the customer.

Adjustment of the switching points by unauthorised persons is not possible. Any misadjustment is excluded even under the most extreme shock and vibration strains. This is achieved by completely eliminating adjustable components like potentiometers, hand-actuated auxiliary switches etc.

Electric connection of the pressure switch is made by means of an EaseOn-plug or a DIN 43 650-plug.

Application

Monitoring of pumps, filters, compressors, engines, hydraulic and pneumatic control system

Controlling and monitoring Steam

Filtration systems for food and pharma

Purification systems

Water preparation systems

Automation control

bürkert
Easy Fluid Control Systems

Pressure-Switch

2 switching points, NO and/or NC

Type 8310

Specifications

| | | thin film strain gauge | | | | | | | | | |
|---|---|--|-----|-----|---|-----|-----|----|----|----------------|-----|
| Sensing principle | | piezo-resistive | | | | | | | | | |
| Pressure ranges | bar | 0.25 | 0.4 | 0.6 | 1 | 1.6 | 2.5 | 4 | 6 | 16 | 25 |
| Overpressure safety | bar | 2 | 2 | 4 | 5 | 10 | 10 | 17 | 35 | 80 | 50 |
| Burst pressure of sensor element | bar | 2 | 2 | 4 | 5 | 10 | 10 | 17 | 35 | 80 | 250 |
| Pressure reference | | relative pressure | | | | | | | | | |
| Port connection | | G 1/2 B (1/2 NPT) | | | | | | | | | |
| Material | | stainless steel | | | | | | | | | |
| Wetted parts | | stainless steel 1.4301 | | | | | | | | | |
| Case | | silicon oil (only for pressure ranges up to 0... 16 bar) | | | | | | | | | |
| Internal transmitting fluid | | | | | | | | | | | |
| Power supply U_B | DC V | 10(12) $U_B \leq 30$ (with use of the program module) | | | | | | | | | |
| Number of switching points | | 2 | | | | | | | | | |
| Switching current (max. DC 30 V) | DC A | 2 | | | | | | | | | |
| Mode of connection | | PNP/PNP (other combinations on request) | | | | | | | | | |
| Switching function | | NC or NO | | | | | | | | | |
| Adjustment of switching points | % of span | 0... 100 | | | | | | | | | |
| Switching hysteresis | % of span | 1... 99 | | | | | | | | | |
| Response time (10... 90%) | ms | ≤ 2 | | | | | | | | | |
| Adjustment accuracy of switching points | % of span | ≤ 1.0 (limit point calibration) | | | | | | | | | |
| | % of span | ≤ 0.5 (BFSL) | | | | | | | | | |
| Repeatability | % of span | ≤ 0.25 | | | | | | | | | |
| 1-year stability | % of span | ≤ 0.2 (at reference conditions) | | | | | | | | | |
| Permissible temperatures of medium | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -30... +100 | | | | | | | | (-22... +212) | |
| ambient | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -20... + 80 | | | | | | | | (-4... +176) | |
| storage | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | -40... +100 | | | | | | | | (-40... +212) | |
| Compensated temp. range | $^{\circ}\text{C}$ ($^{\circ}\text{F}$) | 0... + 80 | | | | | | | | (+32... +176) | |
| Temperature coefficient in compensated temperature range: | | | | | | | | | | | |
| mean TK of zero | % of span/10 K | ≤ 0.2 | | | | | | | | | |
| mean TK of span | % of span/10 K | $\leq 0.2x$ | | | | | | | | | |
| CE -Conformity | | Interference emission per EN 50 081-1 (March 93) and EN 50 081-2 (March 94) Interference immunity per EN 50 082-2 (March 95); declaration of conformity on request | | | | | | | | | |
| Electrical connection | | EaseOn-plug or DIN 43 650 4-pin L-plug | | | | | | | | | |
| Wiring protection | | protected against polarity crossing, overvoltage and short circuiting | | | | | | | | | |
| Rating per EN 60 529 / IEC 529 | | IP 65 | | | | | | | | | |
| Weight | kg | approx. 0.2 | | | | | | | | | |
| Dimensions | | see drawings | | | | | | | | | |

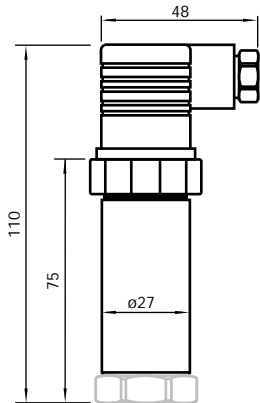
Pressure-Switch

2 switching points, NO and/or NC

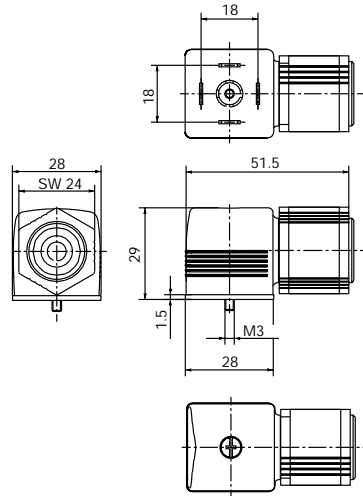
Type 8310

Dimensions [in mm]

Version 4-pin-plug DIN 43 650



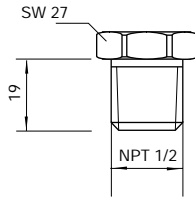
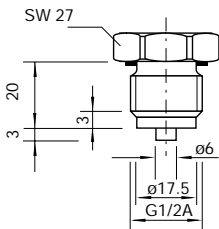
Version EaseOn-plug



Pressure connections

G 1/2 B

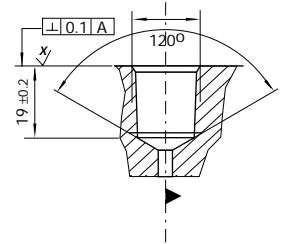
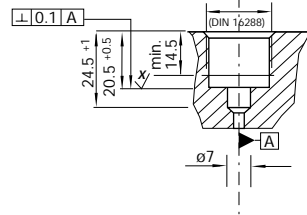
NPT 1/2



Socket for pressure connections

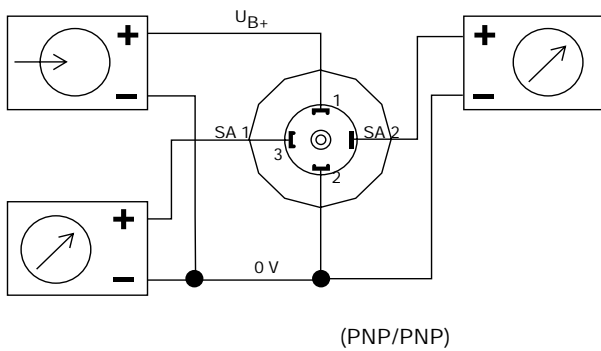
G 1/2 A

NPT 1/2



Electrical connection

2-wire system (DIN 43 650 plug / EaseOn)



EASY ON/OFF Control

-30 %

Pressure-Switch

2 switching points, NC and/or NO

Type 8310

Ordering instructions for the switching outputs

Type 8310 with G 1/2

| Measuring ranges [bar] | I t e m - N o. | |
|---------------------------|--------------------|-----------|
| | Process connection | |
| | EaseOn-plug* | DIN 43650 |
| 0 - 0.25 | 429 930 Y | 429 908 F |
| 0 - 0.40 | 429 931 M | 429 909 G |
| 0 - 0.60 | 429 932 N | 429 910 U |
| 0 - 1.00 | 429 933 P | 429 911 R |
| 0 - 1.60 | 429 934 Q | 429 912 J |
| 0 - 2.50 | 429 935 R | 429 913 K |
| 0 - 4.00 | 429 936 J | 429 914 L |
| 0 - 6.00 | 429 937 K | 429 915 M |
| 0 - 10.00 | 429 938 U | 429 916 N |
| 0 - 16.00 | 429 939 V | 429 917 P |
| 0 - 25.00 | 429 940 A | 429 918 Y |

*on request

Type 8310 with 1/2 NPT

| Measuring ranges [bar] | I t e m - N o. | |
|---------------------------|--------------------|-----------|
| | Process connection | |
| | EaseOn-plug* | DIN 43650 |
| 0 - 0.25 | 429941 X | 429 919 Z |
| 0 - 0.40 | 429 942 Y | 429 920 W |
| 0 - 0.60 | 429 943 Z | 429 921 K |
| 0 - 1.00 | 429 944 S | 429 922 L |
| 0 - 1.60 | 429 945 T | 429 923 M |
| 0 - 2.50 | 429 946 U | 429 924 N |
| 0 - 4.00 | 429 947 V | 429 925 P |
| 0 - 6.00 | 429 948 E | 429 926 Q |
| 0 - 10.00 | 429 949 F | 429 927 R |
| 0 - 16.00 | 429 950 C | 429 928 S |
| 0 - 25.00 | 429 951 Z | 429 929 T |

*on request

Please order per **I t e m - N o.** and add a copy to your order:

| | |
|-----------------------------|--|
| I t e m - N o. _____ | Quantity: _____ |
| Switching point 1 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Normally open | <input type="checkbox"/> |
| Normally closed | <input type="checkbox"/> |
| Pressure value [bar] _____ | (Switch ON) |
| Pressure value [bar] _____ | (Switch OFF) |
| Switching point 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Normally open | <input type="checkbox"/> |
| Normally closed | <input type="checkbox"/> |
| Pressure value [bar] _____ | (Switch ON) |
| Pressure value [bar] _____ | (Switch OFF) |

| | |
|-----------------------------|--|
| I t e m - N o. _____ | Quantity: _____ |
| Switching point 1 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Normally open | <input type="checkbox"/> |
| Normally closed | <input type="checkbox"/> |
| Pressure value [bar] _____ | (Switch ON) |
| Pressure value [bar] _____ | (Switch OFF) |
| Switching point 2 | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Normally open | <input type="checkbox"/> |
| Normally closed | <input type="checkbox"/> |
| Pressure value [bar] _____ | (Switch ON) |
| Pressure value [bar] _____ | (Switch OFF) |

| | |
|----------------|----------------------|
| Client/Company | Date |
| Address | |
| Name | Department |
| Phone | Fax |
| Project | |
| Quantity | Delivery date (wish) |

In case of special application requirements, please consult for advice.

We reserve the right to make technical changes without notice.
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