

Pressure Gauge Accessories

Inductive Pressure Switch Window Assembly

Type 830.1E switch

WIKA Datasheet 830.1E

Applications

- Pressure gauge accessory used to signal a high or low alarm function. Example: To signal a “low contents” alarm on a compressed gas cylinder.



Type 830.1E Pressure Switch Assembly

Standard Features

Sizes

Fits 2" (53 mm)
Types 111.11, 131.15, 130.15 &
230.25 pressure gauges

Accuracy

Determined by accuracy of pressure gauge

Ranges

Field adjustable. Suitable for use with all standard pressure ranges and units of measure.

Operating Temperature

Ambient: -13°F to 158°F (-25°C to 70°C)
Media: max. 212°F (+100°C)

Window

Twist-lock polycarbonate

Pointer

Requires flag-pointer P/N 2140349

Operating voltage

DC 10...30 V with 10% residual ripple

Switching current

< 100 mA and < 100 μ A residual
Safe for use in Class 1, Div. 2

Voltage drop when I_{max}

<0.7 V

Function of switching element

The switching electronics are integrated into the slot sensor. The contact is open if the flag is outside of the slot. The contact closes when the flag moves into the slot sensor sending a signal to a PLC or other controller

Switching frequency

1,000 Hz

Switching hysteresis

0.004 to 0.008 inches
0.10 to 0.20 mm

Switching indication

LED contact indication

Output signal

NPN-transistor amplified signal
(PNP also available as an option)

Other ambient conditions

Same as those of the pressure gauge
on which the switch is used

Cable length

39" (1 m) standard

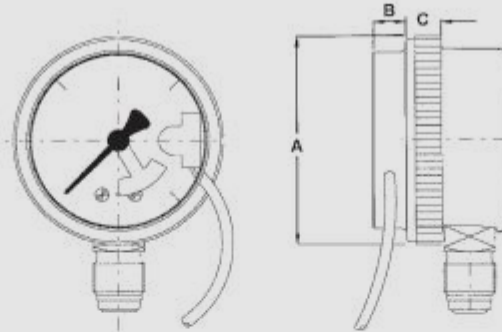
Description	Switch Type¹	Part Number
Inductive Pressure Switch factory installed to 2" pressure gauge (gauge sold separately)	NPN	1325545
	PNP	4361151
Inductive Pressure Switch kit. Includes switch window, flag pointer, and instruction sheet.	NPN	1192523
	PNP	2252759
Inductive Pressure Switch, window only	NPN	2126362
	PNP	2246813
Flag-pointer for use with Pressure Switch window.		2140349
Instruction sheet (this data sheet)		4005953

¹ NOTE: NPN is US standard. PNP is European standard.

Installation Instructions:

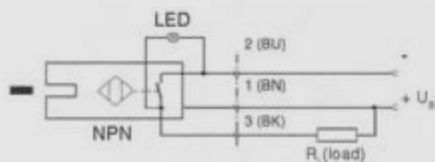
1. Remove standard twist-lock window from pressure gauge by turning counterclockwise.
2. Remove standard pointer from pressure gauge using a pointer puller tool (contact factory for more information on this special tool available from WIKA).
3. Calibrate the gauge by pressurizing gauge to a known value. WIKA suggests pressurizing to one of the printed numbers on the dial around the 12 o'clock position. Press the special flag-pointer (P/N 2140349) onto pointer hub tightly with the tip of the flag-pointer on the tick mark of the current pressure. For instance, on a 100 PSI gauge, WIKA suggests pressurizing to 50 PSI which is one of the printed numbers on the dial and is near 12 o'clock. In this case, the flag-pointer should be put on to the hub so that the tip is right at 50 PSI.
4. Attach the window assembly loosely onto the case with about a 1/4 turn. Make sure the yellow inductive sensor and the flag on the flag-pointer are separated.
5. Turn the center portion of the window so that the inductive sensor moves towards the flag of the flag-pointer. Make sure that the flag runs through the middle of the inductive sensor. If there is any blockage, bend the flag by hand to a position that allows it to travel through the inductive sensor without touching the sensor.
6. Turn the center portion of the window so that the green setpoint line on the window corresponds to the pressure at which the alarm should activate.
7. Pressing the center portion of the window down to hold it in place, fully tighten the window (about another 1/2 turn).
8. It is possible that the flag-pointer could be bent during shipping and handling causing the alarm to activate at the wrong pressure. The activation setpoint can be "tweaked" by either changing the position of the flag or changing the position of the inductive sensor.
9. For further technical assistance, contact WIKA Customer Service at 1-888-WIKA-USA.

Dimensions

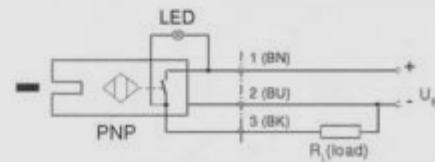


Type 830.1E Pressure Switch Assembly
Attached to 2" Pressure Gauge

TYPE/SIZE	WEIGHT	KEY	A	B	C
Type 830.1E Pressure Switch Assembly (attached to 2" pressure gauge)	0.05 lbs. (Switch Only)	mm	57.8	7.5	10
		in	2.28	0.30	0.39



BN (brown) +
BU (blue) -
BK (black) A
R_L load



With PNP switching apparatus, the switched output (BK) is a connection towards PLUS (BN). The load between (BK) and (BU) should be selected in the way not to exceed the maximum switching current (100 mA)

With NPN switching apparatus, the switched output (BK) is a connection towards MINUS (BU). The load between (BK) and (BN) should be selected in the way not to exceed the maximum switching current (100 mA)

