



Electric Contact Gauge, Magnetic Snap-action

Model: PRE4.H



PRODUCT DESCRIPTION

- ▼ Stainless steel bezel with glass window, beautiful but still durable
- ▼ A variety of contact types to choose from
- ▼ Used in chemical, petroleum, metallurgy, machinery and other industries
- ▼ Same specifications as WIKA-PGS23

PRODUCT SPECIFICATION

Connection location

Bottom mount, back mount with flange,
back mount without flange

Electrical connections

Cable terminal box

Nominal size

4", 6"

Scale ranges

-76 cmHg ... 1000 kg/cm²,
or other equivalent units of pressure,
vacuum or compound

Accuracy

CL 1.6

Process connection

316 SS
1/4, 3/8, 1/2
PT, G, NPT, M

Case/Ring

304 SS

Window

Flat instrument glass

Pointer

Aluminum alloy, black

Bourdon tube

316 SS

Filling liquid

Without, silicone oil

Movement

304 SS

Ambient temperature

-20°C ... 70°C

Medium temperature

≤200°C (unfilled)
≤100°C (silicone oil filled)

Contact

EC1 snap-action contacts,
70% silver & 30% nickel, golden plated

Switch contact specifications

Rated operating voltage: 380 V (Max.)
Switching power Max.: 30 W / 50 VA (Max.)
Switch-on current: 1.0 A (Max.)
Switch-off current: 1.0 A (Max.)
Continuous current: 0.6 A (Max.)

IP Rating

IP65

Adjustment lock

With/ without removable adjustment key

CONTACT MATERIAL

Due to the nature of switching function, the contacts are subject to erosion. SJ Gauge uses special contact alloy as 70% silver and 30% nickel which is 0.5um gold-plated, as gold is extremely resistant to aging and corrosion.

SJ Gauge EC1 contacts have low contact resistance which makes them the first choice for applications with long periods of machine downtime or where sulphurous gases are present.

CONTACT OPERATION DETAILS

Generally 3 contact operations are intended. Normally Closed, Normally Open, and Change-Over.

In the case of a normally-closed function, the rising actual-value pointer takes the contact arm with it, thus interrupting the circuit when the setpoint is reached.

In the case of a normally-open function, the rising pressure value pointer takes the contact arm with it, thus closing the circuit when the setpoint is reached.

In the case of a change-over (SPDT) contact, the rising actual-value pointer takes the contact arm with it and first interrupts and then closes the circuit when it approaches the setpoint.

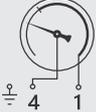
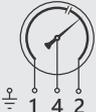
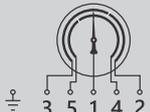
CONTACT FUNCTION CODES

* Logics are based on a clock-wise pointer motion.



SWITCHING FUNCTION OF SJ GAUGE EC1 SNAP-ACTION CONTACTS

- * Common terminal versions are shipped by default unless the customer points out his request for separate terminals.
- * If there are more than 1 contact in the instrument, the one considered to be the closest one to the left side beginning value in positive ranges. (for negatives it is the ending value).
- * If there are going to be 3 contacts in the instrument, mention them sequentially in your order confirmation.

Model	Contact type	When the pointer reaches the set-point with the rising pressure...	And if the pointer passes the set-point again by falling pressure...	Wiring (common terminal) default	Wiring (separate terminal) optional
EC1-1	NO	...one Contact will close	...that contact will open again		—
EC1-2	NC	...one Contact will open	...that contact will close again		—
EC1-3	SPDT	...one contact will open and one contact will close at the set-point value	...one contact will close & one contact will open again at the set-point value		—
EC1-33	DPDT	...1 st and 2 nd contact both will open and close at the set-point value...	...2 nd and 1 st contact will close and open again at the set-point value...		—
EC1-11	NO-NO	...1 st and 2 nd contacts will close	...the contacts will open again accordingly		
EC1-22	NC-NC	...1 st and 2 nd contacts will open	...the contacts will close again accordingly		
EC1-12	NO-NC	...1 st contact will close and 2 nd contact will open	...2 nd contact will close and 1 st contact will open again		
EC1-21	NC-NO	...1 st contact will open and 2 nd contact will close	...2 nd contact will open and 1 st contact will close again		
EC1-212	NC-NO-NC	...1 st contact will open, 2 nd contact will close, 3 rd contact will open	...3 rd contact will close, 2 nd contact will open and 1 st contact will close accordingly		

The functions described in switching functions table is based on the clockwise pointer motion. In anti-clockwise motion, opposite switching results will occur.

- * Use contact protection relays for high loads or liquid filled electric contact pressure gauges.
- * Minimum switching current is 20mA.
- * Use electronic contact for PLC service.

MAXIMUM CONTACT RATINGS FOR EC1 SNAP-ACTION CONTACTS

Max. contact ratings with resistive loads	Not filled instrument	Filled instrument
Contact closing	1.0 A	1.0 A
Contact opening	1.0 A	1.0 A
Continuous load	0.6 A	0.6 A
Maximum load	30 W / 50 VA	20 W / 20 VA
Ambient temperature	-20...+60°C	-25...+60°C

* For snap-action change-over contacts (SPDT, DPDT) the maximum load will be 10 W/ ~18VA and maximum thermal current will be 0.38 A, and the contact rating will be approximately 30% less than the other version.

* In an instrument with two EC1 contacts, if the range lower than 2.5 bar it is advised to consider half the table values as maximum.

* It is advised to follow recommended contact ratings to ensure longtime durability of the instrument.

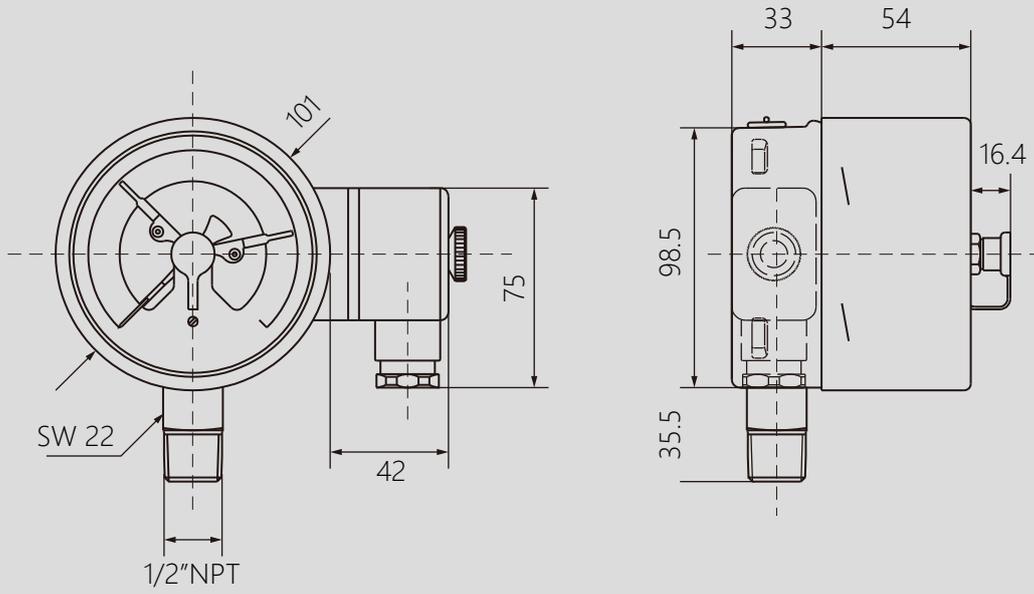
RECOMMENDED CONTACT RATINGS FOR EC1 SNAP-ACTION CONTACTS

Voltage	Magnetic Snap-action EC1 Unfilled Instrument	
	Resistive load (mA)	Inductive load (mA)
24V DC	400	250
24V AC	600	250
48V DC	300	200
48V AC	450	200
110V DC	200	125
110V AC	240	125
230V DC	100	65
230V AC	120	65

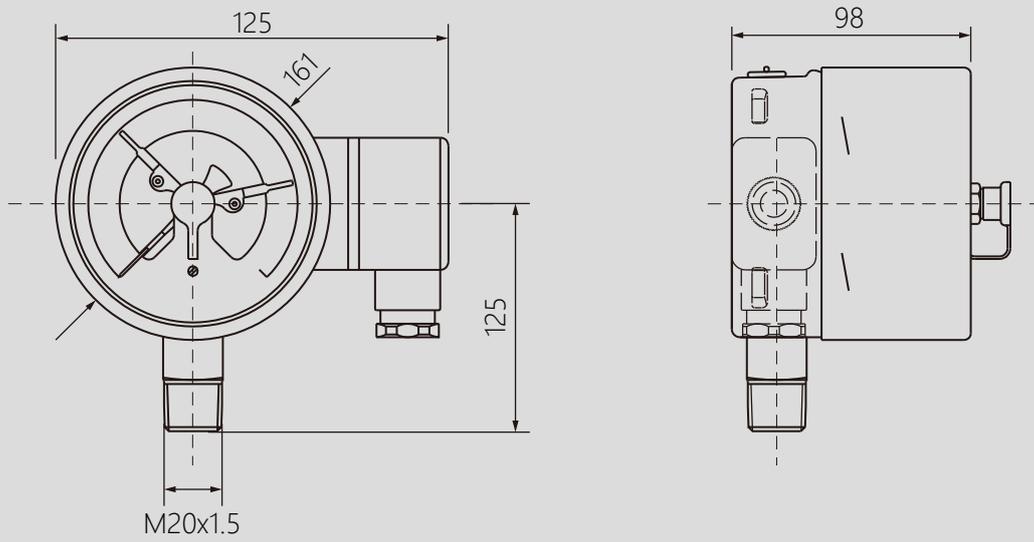
* Abovementioned values are reduced by approximately 40% if the instrument is filled. It is advised that switching does not fall below 25 mA and the switching voltage shall fall below 24 V. It is highly recommended to use contact protection relays for higher loads and liquid filled instruments.

DIMENSIONS (IN MM)

4"-Bottom mount

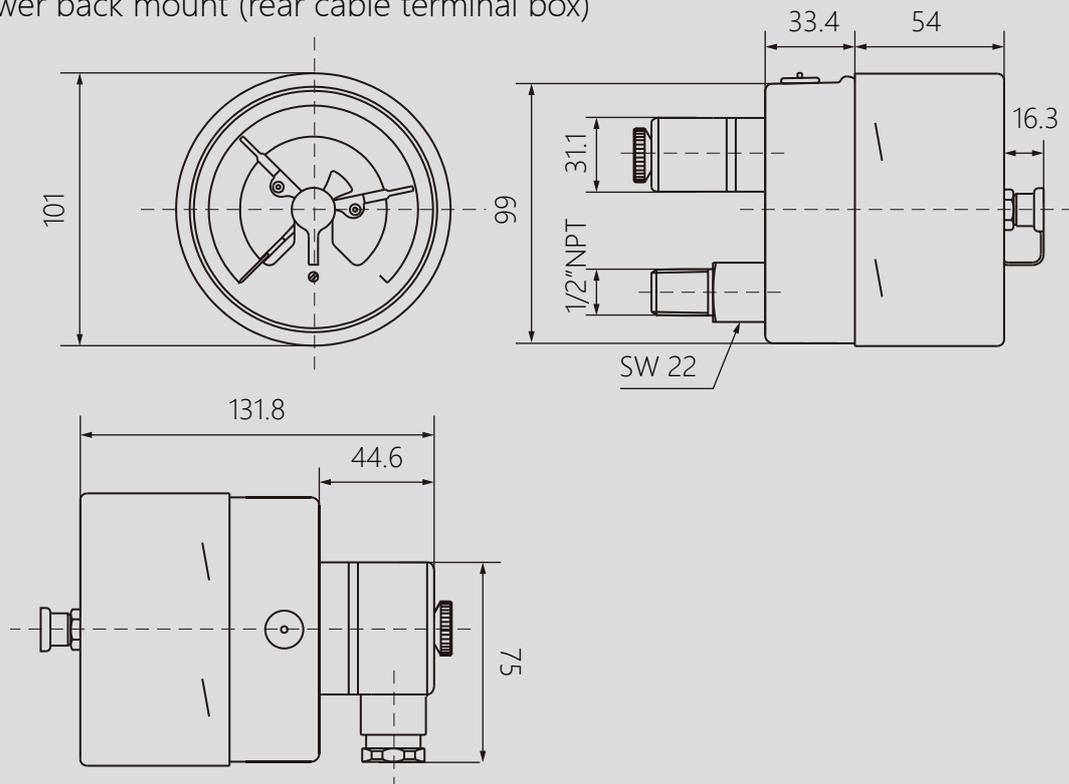


6"-Bottom mount

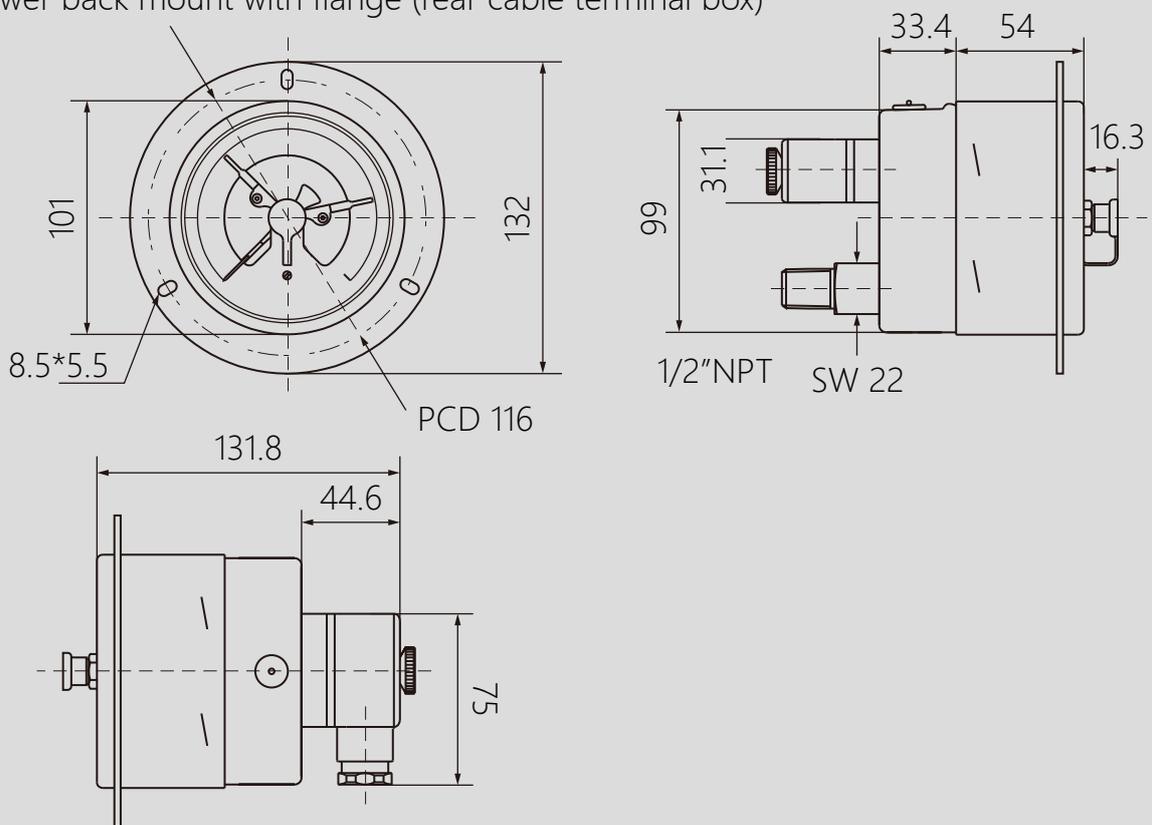


DIMENSIONS (IN MM)

Lower back mount (rear cable terminal box)



Lower back mount with flange (rear cable terminal box)





Gauging your needs!

ORDERING INFORMATION

Model / Connection location / Scale range / Process connection / Liquid filled / Contact type / Options

CONTACT INFORMATION

ADD : 3F.-3, No. 4, Ln. 609, Sec. 5, Chongxin Rd., Sanchong Dist., New Taipei City 241402 , Taiwan (R.O.C.)

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- For any changes to the specifications of this catalogue, the latest version shall prevail. -

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