

for bourdon tube pressure gauges and temperature gauges

Sliding contacts

The electrical sliding contacts guarantee an accurate operation within a controlled hysteresis. However they are rather sensitive to vibration, moreover, very slow pressure changes may cause an electric arc which can reduce its working life.

Magnetic Snap-Action Contacts

This type of contact is universally used to guarantee the reliable operation of gauges under severe vibration. The magnetic action is guaranteed by a "click operation", which improves contact capacity, life and is less sensitive to vibration. The required power to overcome the magnetic resistance causes an hysteresis at set-point between 2% to 5% of full scale value (from 4% to 10% of full scale value for double contacts).

Functional and constructive characteristics

Set-point accuracy: 150% of instrument accuracy.

Set-point hysteresis: 0,3% of full scale value.

Break rating: 10W/18VA.

Maximum rating: 250Vac/0,7A (ohmic load).

Contact material: Silver-Nickel 80/20%, gold plated.

Contact setting: over an arc of 270°, by a fixed key fitted to the front lens or by a removable key.

Electrical wiring: junction box with cable exit, as per instrument data-sheet.

Functional and constructive characteristics

Set-point accuracy: 150% of instrument accuracy.

Set-point hysteresis: 2...5% of full scale value.

Break rating: 30W/50VA (20W/20VA for filled version).

Maximum rating: 250Vac/1A (ohmic load).

Contact material: Silver-Nickel 80/20%, gold plated.

Contact setting: from 10% to 90% of scale value by a fixed key fitted to the front lens or by a removable key.

Electrical wiring: junction box with cable exit, as per instrument data-sheet.

LOAD RATINGS (1)

Volt	DC	AC	Inductive load
220	40 mA	45 mA	25 mA
110	80 mA	90 mA	45 mA
48	120 mA	170 mA	70 mA
24	200 mA	350 mA	100 mA

Minimum values : 24V/20mA/0,4W/4VA.

LOAD RATINGS (1)

Volt	DC	AC	Inductive load
220	100 mA	120 mA	65 mA
110	200 mA	240 mA	130 mA
48	300 mA	450 mA	200 mA
24	400 mA	600 mA	250 mA

Minimum values : 24V/20mA/0,4W/4VA.

Dielectric silicone oil filled pressure gauges

Volt	CC	CA	Inductive load
220	65 mA	90 mA	40 mA
110	130 mA	180 mA	85 mA
48	190 mA	330 mA	130 mA
24	250 mA	450 mA	150 mA

Minimum values : 24V/20mA/0,4W/4VA.

(1) as per DIN 16085.

CONTROL RELAYS

We recommend the use of control relays as they increase the working life of all types of contacts. For intrinsically safe applications an appropriate barrier must be used.

WIRING SCHEME (1)	ELECTRIC SCHEME (before set)	CLOCKWISE MOVEMENT OF THE POINTER CAUSES:	CONTACT CODE	
			sliding	magnetic snap-action
SINGLE CONTACT				
MINI 		<u>Opening</u>	01S	M1S
MAXI 		<u>Closing</u>	02S	M2S
DOUBLE CONTACT (2)				
1° MINI 2° MAXI 		<u>Opening 1</u> <u>Closing 2</u>	01D	M1D
1° MAXI 2° MAXI 		<u>Closing 1</u> <u>Closing 2</u>	02D	M2D
1° MAXI 2° MINI 		<u>Closing 1</u> <u>Opening 2</u>	03D	M3D
1° MINI 2° MINI 		<u>Opening 1</u> <u>Opening 2</u>	04D	M4D
INDEPENDENT DOUBLE CONTACT (2)				
1° MINI 2° MAXI 		<u>Opening 1</u> <u>Closing 2</u>	08D	M8D
1° MAXI 2° MAXI 		<u>Closing 1</u> <u>Closing 2</u>	09D	M9D

(1) The above numbers are the same of those stamped on the junction box.

(2) Each contact must not exceed the next one.