

electric contacts for pressure gauges MN14

01S...B22 (option)



Are accessories with movable contacts in air, which open or close electric circuits depending of the position of the indicating pointer. They are used with Bourdon tube pressure gauges, bellows, diaphragm of LEITENBERGER production, in such way they become pressure switches: the optimal and sure solution to automatize any kind of equipment.

Functional and constructive characteristics

Accuracy: when the indicating pointer is affected by the contact link add to the gauge accuracy the 50% of their accuracy (with the exclusion of the working area within the 5% if the contact is magnetic type).

Contact setting: over an arc of 270 °, trough the knob placed on front lens or trough removable key.

Electrical wiring: junction box PG9 as per DIN 43650 or cable 0,5 mt.

Ambient temperature: -25...+65 · C.

Protection: IP 44 as per IEC 529, (option IP 55).

Contact material: Silver-Nickel 80%-20% (options Gold-Silver and Platinum-Iridium).

Window: Makrolon.

Overpressure: non suitable.

MINIMUM RANGES

for contact types (as per DIN 16085)

DS	Model	N. 1 contact	N. 2 contacts
100-150	01.18.1	1,6 bar*	2,5 bar*
150	01.01	1,6 bar*	2,5 bar*
100-150	02.40-42-44-45	40 mbar	60 mbar
150	02.43	60 mbar Abs	100 mbar Abs
150	02.12	40 mbar	60 mbar
150	02.15	100 mbar	160 mbar
150	02.17	1 bar	1,6 bar

* Ranges lower then those stated above, vacuum and compound are available upon request.

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.

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).

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

Vdc Minimum values : 24Vdc/20mA.

(1) DIN 16085 recommendation

Gold-Silver contacts (Gold 80%-Silver 20%)

This alloy is particularly corrosion and surface oxidation resistant. The resistance of the contact is very low. To be used typically where the tension and the signal current are very low: intrinsically safe barrier, PLC and computer (options AU1-AU2).

Minimum voltage: 12Vdc.

CONTROL RELAYS

The use of signal amplifier is required where the instruments are subject to a frequent operations and where the applied load is the maximum permitted. In fact, from the possible production of arc, the result is high wearing of contact parts which reduces the life of the system. (see our catalogue sheet 08.WS1-WS2).

Inductive sensors

(pressure gauges DN150 only)

The inductive contacts are intrinsically safe certified as per EN 50014/50020 norm with protection degree EEXia IIC T6. To guarantee such protection degree the contacts must be supplied via a control relay which must have the same type of certificate (see our catalogue sheet 08.W01-W02). Therefore they are suitable for use in hazardous areas and in where high reliability against vibrations and frequent operations is required.

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.

Functional and constructive characteristics

Set-point accuracy: 150% of instrument accuracy.

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

Break rating: 30W/50VA.

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

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

Vdc Minimum values : 24Vdc/20mA.

Platinum-Iridium contacts (Platinum 75%-Iridium 25%)

This alloy has good resistance against the electrical arc as well as good chemical resistance. To be used typically in case of frequently operations with high current values (options PL1-PL2).

Minimum voltage: 24Vdc.

Functional and constructive characteristics

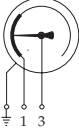
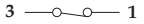
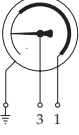


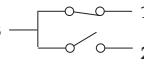

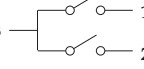

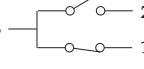

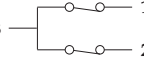

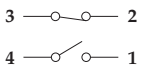

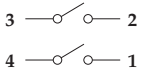
Set-point accuracy: 150% of instrument accuracy.

Set-point hysteresis: 0,3...1% of full scale value.

LOAD RATINGS

(output relay of control unit W01-W02)

Volt	DC	AC
220	0,1 A	4 A
110	0,2 A	4 A
48	0,6 A	4 A
24	4 A	4 A

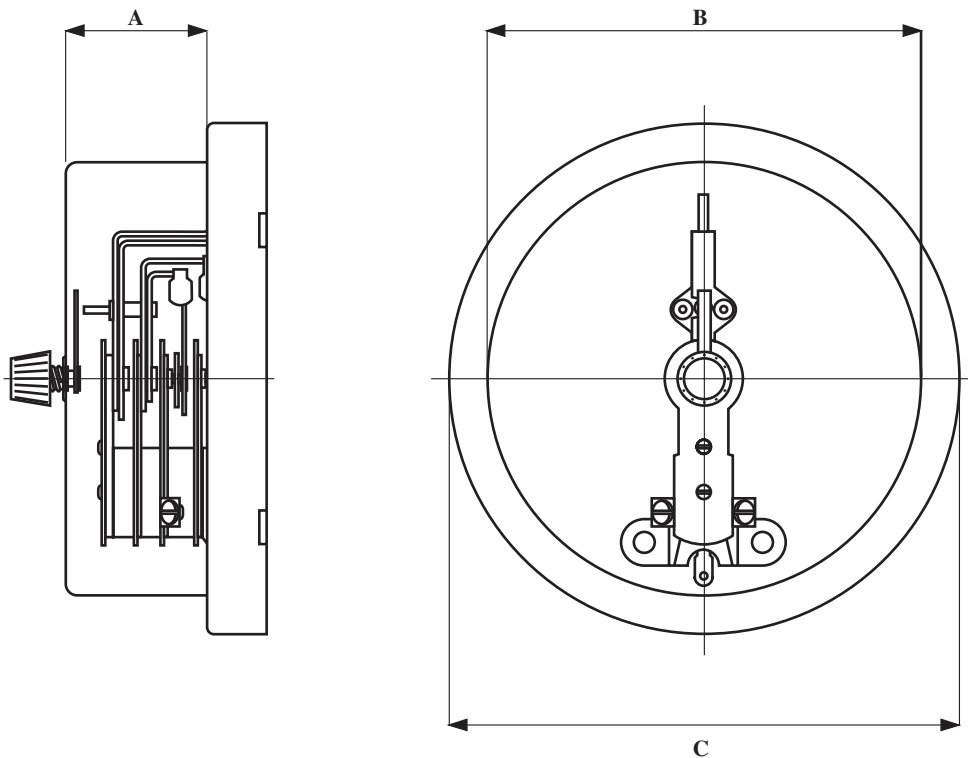
WIRING SCHEME	ELECTRIC SCHEME	CLOCKWISE MOVEMENT OF THE POINTER CAUSES:	JUNCTION TYPE	CONTACT CODE	
				sliding (inductive)	magnetic snap-action
SINGLE CONTACT					
MINI 		<u>Opening</u>	Junction box PG9 DIN 43650 (1)	01S (B1)	01S.BM1
MAXI 		<u>Closing</u>	Junction box PG9 DIN 43650 (1)	02S (B2)	02S.BM1
DOUBLE CONTACT (2)					
1. MINI 2. MAXI 		<u>Opening 1</u> <u>Closing 2</u>	Junction box PG9 DIN 43650 (1)	01D	01D.BM2
1. MAXI 2. MAXI 		<u>Closing 1</u> <u>Closing 2</u>	Junction box PG9 DIN 43650 (1)	02D	02D.BM2
1. MAXI 2. MINI 		<u>Closing 2</u> <u>Opening 1</u>	Junction box PG9 DIN 43650 (1)	03D	03D.BM2
1. MINI 2. MINI 		<u>Opening 1</u> <u>Opening 2</u>	Junction box PG9 DIN 43650 (1)	04D	04D.BM2
INDEPENDENT DOUBLE CONTACT (2)					
1. MINI 2. MAXI 		<u>Opening 1</u> <u>Closing 2</u>	Cable 0,5 mt brown ⑩ (-) black ① (-) blue ② (+) gray ③ (+)	08D (B12)	08D.BM2
1. MAXI 2. MAXI 		<u>Closing 1</u> <u>Closing 2</u>	Cable 0,5 mt brown ⑩ (-) black ① (-) blue ② (+) gray ③ (+)	09D (B22)	09D.BM2

(1) cable 0,5 mt. for back connection and clamp instruments

(cable colours: ⑩ brown; ① black; ② blue; ③ gray.

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

DIMENSIONS (mm.)



Single contact

DS	A	B	C
100	29	95	110,6
150	29	141	161
150 *	46	141	161

* dimensions for inductive contact only.

Double contacts

DS	A	B	C
100	36	95	110,6
150	36	141	161
150 *	46÷61	141	161

* dimensions for inductive contacts only.

HOW TO ORDER

see wiring scheme on page 3

01D

Options

BM1 -single magnetic snap-action

BM2 -double magnetic snap-action

AU1 - N. 1 gold contact

AU2 - N. 2 gold contacts

PL1 - N. 1 platinum contact

PL2 - N. 2 platinum contacts

CH1 - removable key, protection IP 55

BM2

P.S. - the electrical contact must be ordered as an "optional" of the listed instrument on table "MINIMUM SCALE VALUE...".

E.G. : 01.18.1-A-.E-2 (0/10 bar)-41M-**01D-BM1-CH1**.

For the complete ordering code of instrument see their respective catalogue sheet.

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