

NJM21 Pressure gauge with Electric Contact (Micro Switch Type)



OUTLINE

In the design of this unit, a mechanical contact mechanism has been built in an indicator i.e. a pressure gauge with contacts. At a pre-set pressure, electric signals of ON/OFF are transmitted, giving a warning of buzzer, bell, pilot lamp or being able to control the processes such as motor, pump and control valve etc.

FEATURES

- ◆ Confirmation can be made on the pressure differential pressure.
- ◆ As the switching current is large, this type is best suited for direct control over machines and apparatuses.
- ◆ Adoption of a microswitch design assures you of stable switching by snap action.
- ◆ Indication and setting scales are separate, resulting in being possible to set optionally.

* When selecting a pressure range, select in such a way that the working pressure is within 30~65% of the pressure range so that its capacity can be displayed. The setting range of pressure recommended is 20~80% of the pressure range. At the same time, materials used for solvents are suited for gas and solvent to be measured.

SPECIFICATION 1

Model :

Gas or Liquid, Gas

Operating Condition :

Under the normal condition. Where there is no inflammable gas or liquid which cause the ignition or explosion.

Size :

150A

Mounting :

Stem... Type B (Mounting holes)

Connection :

G3/8B(PF), G1/2B(PF), R3/8(PT), R1/2(PT), 3/8NPT, 1/2NPT

* For other connections, please contact us.

Wetted parts material :

General use

Socket CAC203

Bourdon tube (150 DIA.)

C6872T or 316st.st. (Depend on range)

* Available up to 35MPa

Corrosion-proof use

Socket 316st.st

Bourdon tube (150 DIA.) 316 st.st

Pressure range :

0~1.5kPa → 0~100MPa 0~150mmH₂O → 0~1000kgf/cm²)

-0.1~0 → -0.1~2MPa

(76cmHg~0kgf/cm² → 76cmHg~20kgf/cm²)

20~100kPa (Receiver) (0.2~1kgf/cm²)

* For details, please refer to table of Minimum Graduation in specification 2.

Operating temperature :

-20~60 °C

Indication accuracy :

Within ±1.0%F.S

Setting accuracy :

Within ±0.5%F.S

Dead band :

Fixed within 6~15%F.S. (Depend on range)

Switch :

Industrial Micro switch

Number of contact :

two contact or four contact

Setting :

Internal adjustment

Remove a cover and turn an adjustment screw on the front side to a setting point by a screw driver, shifting a pointer from the high pressure side for upper limit type or from the low pressure side for lower limit type.

* External adjustment is available (Option)

Case material · finishing :

ADC12 or AC7A · Black

Weight :

Approx. 1.4kg~9.5kg

SPECIFICATION 2

Electric characteristics :

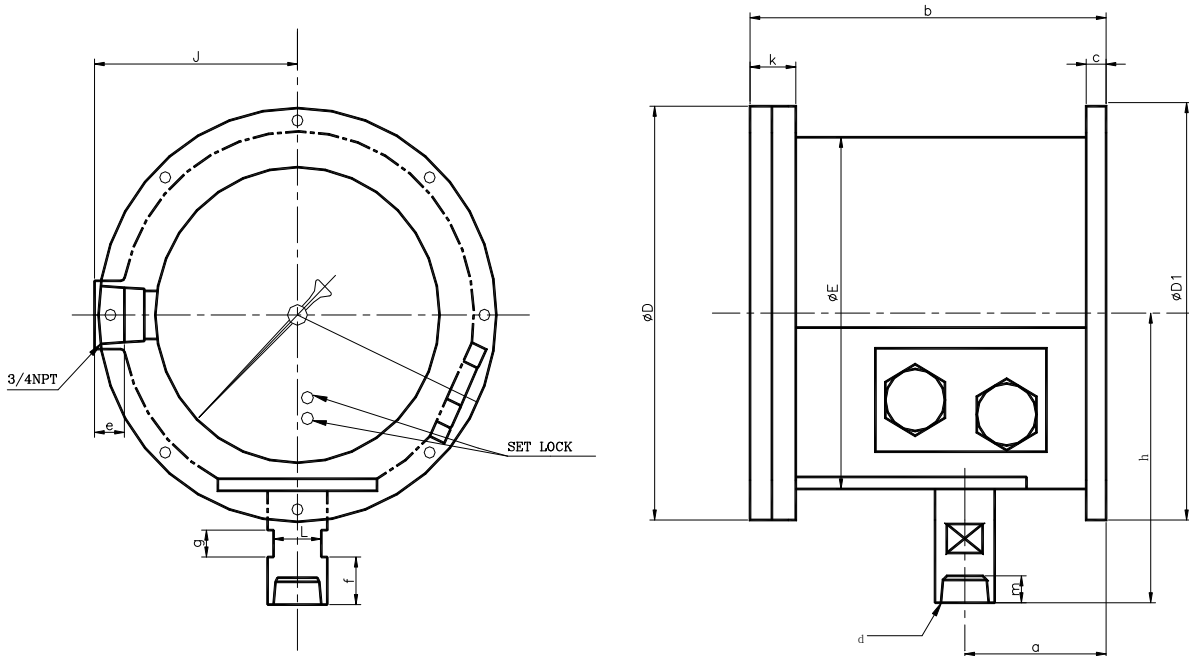
	Rating		Withstand voltage	Insulation Resistance
	Resistance Load	Inductance Load		
125V AC	15A	15A	1500V AC Between terminal and case 1minute	500V AC 100MΩ over Between terminal and case
250V AC	15A	15A		
125V DC	5A	0.5A		

Minimum graduation :

Size	Element	Pressure range	Min.Indication	Min.Setting scale	Dean band within%F.S
				150 DIA	150 DIA
150 DIA	Bourdon tube	20~100kPa (0.2~1kgf/cm ²)			15
		0~0.1MPa (0 ~ 1kgf/cm ²)	0.002MPa (0.02kgf/cm ²)	0.01MPa	
		~0.2 (~2)	0.005 (0.05)	0.02	10
		~0.3 (~3)	0.01 (0.1)	0.05	
		~0.4 (~4)	0.01 (0.1)	0.05	8
		~0.6 (~6)	0.02 (0.2)	0.1	
		~1 (~10)	0.02 (0.2)	0.1	
		~1.5 (~15)	0.05 (0.5)	0.1	
		~2 (~20)	0.05 (0.5)	0.2	
		~2.5 (~25)	0.05 (0.5)	0.2	
		~3.5 (~35)	0.1 (1)	0.5	
		~5 (~50)	0.1 (1)	0.5	
		~7 (~70)	0.2 (2)	1	
		~10 (~100)	0.2 (2)	1	
		~15 (~150)	0.5 (5)	1	
		~25 (~250)	0.5 (5)	2	
		~35 (~350)	1 (10)	5	
		~50 (~500)	1 (10)	5	
		~70 (~700)	2 (20)	10	
		~100 (~1000)	2 (20)	10	
		-0.1~0 Mpa (76cmHg~ 0kgf/cm ²)	0.002MPa (2cmHg)	0.01	15
		-0.1~0.1 (76cmHg~ 1kgf/cm ²)	0.005 (5cmHg~ 0.05kgf/cm ²)	0.02	
		~ 0.2 (76cmHg~ 2kgf/cm ²)	0.01 (10cmHg~ 0.1 kgf/cm ²)	0.05	10
		~ 0.3 (76cmHg~ 3kgf/cm ²)	0.01 (10cmHg~ 0.1 kgf/cm ²)	0.05	
		~ 0.4 (76cmHg~ 4kgf/cm ²)	0.01 (10cmHg~ 0.1 kgf/cm ²)	0.05	8
		~ 0.6 (76cmHg~ 6kgf/cm ²)	0.02 (50cmHg~ 0.2 kgf/cm ²)	0.1	
		~ 1 (76cmHg~ 10kgf/cm ²)	0.02 (50cmHg~ 0.2 kgf/cm ²)	0.1	
		~1.5 (76cmHg~ 15kgf/cm ²)	0.02 (50cmHg~ 0.2 kgf/cm ²)	0.2	
		~2 (76cmHg~ 20kgf/cm ²)	0.02 (50cmHg~ 0.2 kgf/cm ²)	0.2	

DIMENSIONS

(Unit:mm)



Type No.	D	D1	E	a	b	c	e	m	J	K	d	f	g	h	L
NJM21-□□□	200	200	170	71	179	10	15	13	102	23	NPT 1/2B	23	13	140	24

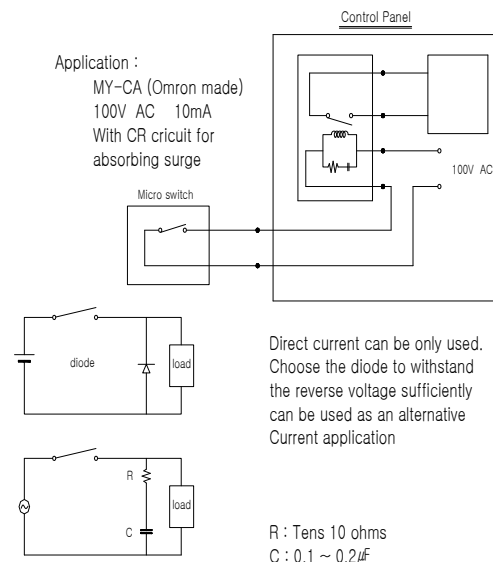
REMARKS

1. As a sequencer input :

Use this switch gauge in the ventilated condition. Otherwise the following might be caused. The contact resistance of the microswitch increases gradually as time passes. For the application in the atmosphere, especially including Si, SiO₂ will be accumulated on the contact part as switch operated. Then the contact resistance will be increased, so that switch may be not operated. Therefore, above is suggested for the application controlling, input or connect through 100V AC Relay.

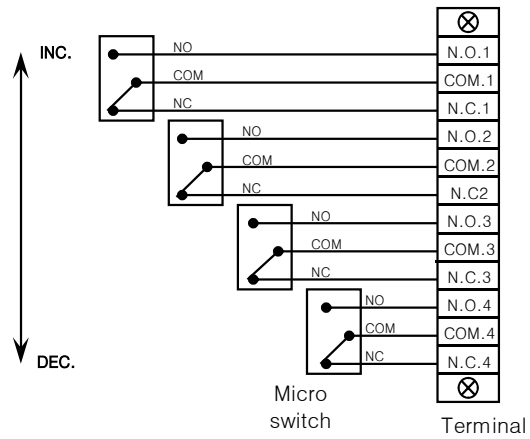
2. Installation of protection circuit for contact

In the inductive load open and close circuit, install the protection circuit to protect the contact. When you use the relay, choose the built-in protection circuit for the contact.

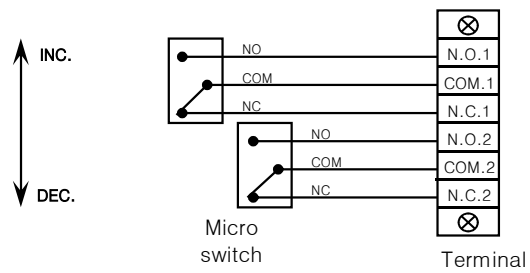


WIRING DIAGRAM

4SW



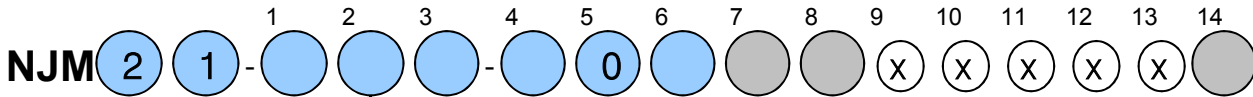
2SW



Type No. constitution

Please specify Type No., each specification and range when ordering

Note : For this Model, there is no applicable item for the figures X, but please specify X when ordering



1. Type of contact point

A	2contact (SPDTx2)
B	4contact (SPDTx4)

2. CONNECTION

1	3/8"PF(F)
2	3/8"NPT(F)
3	1/2"PF(F)
0	1/2"NPT(F)
9	OTHER

3. Wetted parts material

1	General use (Available up to 35MPa) Socket : CAC203 or C3604BD Bourdon tube : C6872T or 316 st.st. & C5212R
3	Corrosion-proof use Socket : 316 st.st. Bourdon tube : 316 st.st

4 Pressure range (When ordering, please specify pressure range & unit)

A	20~100kPa (Receiver)	K	0~3.5 MPa
B	-0.1~0 MPa	L	0~5 MPa
C	0~0.1 MPa	M	0~7 MPa
D	0~0.2 MPa	N	0~10 MPa
E	0~0.3 MPa	O	0~15 MPa
F	0~0.4 MPa	P	0~25 MPa
G	0~0.6 MPa	Q	0~35 MPa
H	0~1 MPa	R	0~50 MPa
I	0~1.5 MPa	S	0~70 MPa
J	0~2 MPa	T	0~100 MPa
K	0~2.5 MPa	Z	OPTION RANGE

8. Other additional spec.

0	Nil
1	Please specify your requirement. External adjustment

7. Treatment

0	Nil
1	Use no oil
2	Use no water
3	Use no oil & water

6. Outlet for electric wire

1	1/2"PF
2	1/2"NPT
3	3/4"PF
4	3/4"NPT

14 Document

0	Nil
1	Please specify your requirement. Drawing one sheet, Instruction manual, Inspection procedure, Mill sheet, Test report

○ Setting scale includes setting error. Therefore when precise adjustment is required, please set the value comparing with master gauge or standard pressure gauge.



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