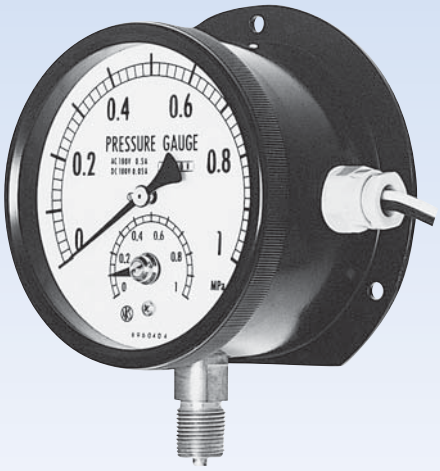
JC__
Pressure Gauge with Electric Contact (Contact Switch Type)



Overview

This pressure contact switch incorporating release low pressure contact switch is mainly utilized for warning bell, buzzer ramp.

Features

- **Pressure indication at facility**
- **Small and lightweight with single pressure element with indication and switch function**
- **Pressure indication dial and switch setting dial separately exist but with arbitrarily adjustable all over the pressure range**
- **Broad angle of dial with narrow deadband with easy setting**
- **Utilizes Platinum-osmium base alloy for armature inside movement**

＊To maximize performance, select full scale pressure range to indicate normal operating pressure which comes to conditions below.
For constant pressure : The maximum operating pressure should not exceed three-quarters of the full-scale range.
For fluctuating pressure: The maximum operating pressure should not exceed two-thirds of the full-scale range.
Select appropriate wetted parts compatible with process fluid (gas and liquid) which the gauge will be subjected.
Please refer to JIS B 7505-1 for details.

Specifications 1

Media:
Gases or liquids (For bourdon tube element only)
Operating environment:
Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition
Type:
Stem ···· B type (Mounting hole)
Panel···· D type (Mounting clamp・Mounting hole)
Pressure sensing element:
Bourdon tube or bellows pressure sensing element (30kPa and below)
Size:
ϕ100 (Model: JC11・16), ϕ150 (Model: JC13・18・21・26), ϕ200 (Model: JC31・36・41・46)
Connection:
G3/8B, G1/2B
＊Consult us for other nonstandard connections.
Wetted parts:
General type
Socket CAC203
Bourdon tube C6872T or SUS316 (Varies depending on pressure ranges)
Bellows C5212R
＊Available up to 35MPa range
Corrosion resistant type
Socket SUS316 or SCS14
Bourdon tube SUS316 Bellows SUS316L
Pressure range:
20 to 100kPa (Receiver)
0 to 1.5kPa→0 to 70MPa
-0.1 to 0→-0.1 to 2MPa
＊Built with bellows for 0 to 30kPa and below.

Operating temperature range:
-5 to 40℃ (Non-freezing)
Indication accuracy:
±1.5%F.S. (±0.75%F.S. for receiver gauge)
＊When switch contact is in-free
Setting accuracy:
±2%F.S. and below
Switch accuracy:
±1%F.S. and below
Deadband:
2%F.S. and below
DC load 5%F.S. and below
Switch accuracy:
Contact Switch (Release low pressure contact switch)
Number of contacts
One contact or two contacts
＊Always use normally open
Setting method:
Internally adjustable
After removing front cover followed by adjustment of setting screw by screwdriver, set switch operating point moving setting pointer downward from high pressure scale for upper limit, and moving setting pointer upward from low pressure scale for lower limit.
＊External adjustable type also available. (Option)
Electrical wire outlet:
Gland JIS 20b (4P terminal)
2P metal consent for Φ100
Case material・finish:
AC7A・Black (ADC12 for stem Φ100)
Enclosure rating:
Drip-proof II type (IP32)
Weight:
Approx. 0.8kg to 3.2kg

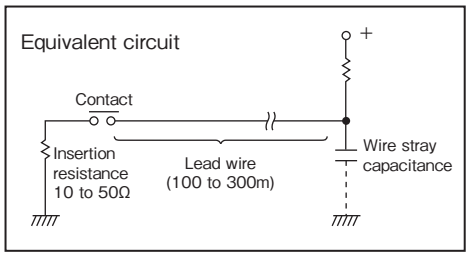
Specification 2

Electrical rating (DG56・58):

Rating			Withstand voltage	Insulation resistance
	Resistance load	Inductive load※		
100V AC	0.5A	0.05A	1000V AC Between terminal and case 1 minute	500V DC 100MΩ or over Between terminal and case
100V DC	0.05A	0.01A		
·Inductive load: Power factor 0.6 or over (AC) Time constant 7ms and below (DC) ※Alsways ensure the use of contact circuit protecting diode.				

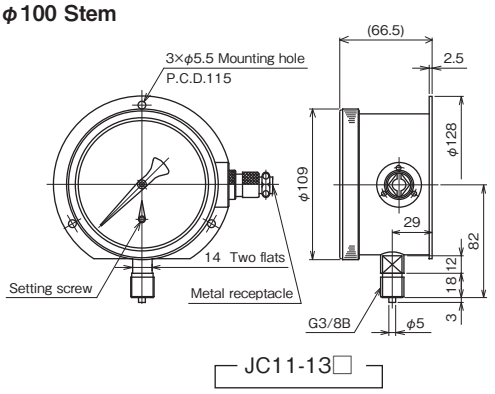
※When an inrush current is generated by use of an inductive load and long cable (several tens of meters or over), use a contacts protection circuit like that shown at the right.

Example of contacts protection circuit:



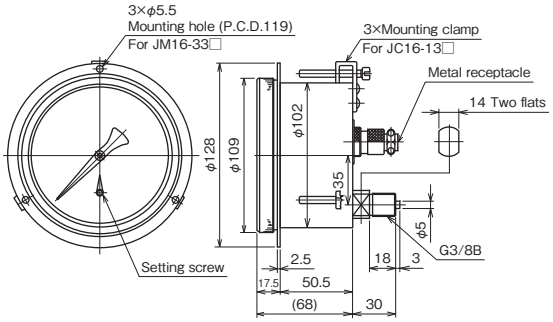
Dimensions

φ100 Stem



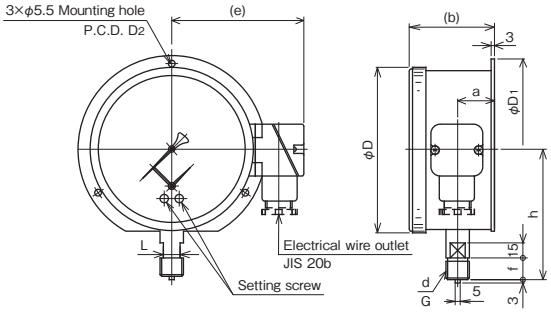
JC11-13□

φ100 Panel

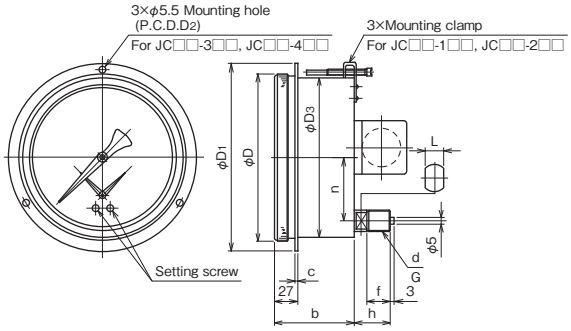


JC16-13□

φ150・200 Stem



φ150・200 Panel



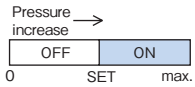
Model	Connection d	D	D1	D2	a	b	h	e	L	f
JC13-□□□	G3/8B	159	178	165	36	82.5	123	129	14	18
JC21-□□□	G1/2B						125		17	20
JC31-□□□	G3/8B	210	235	220	84	132	150	150	14	18
	G1/2B						152		17	20
JC41-□□□	G3/8B	210	235	220	70	140	150	150	14	18
	G1/2B						152		17	20

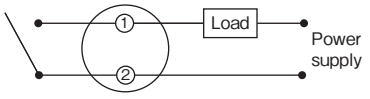
Model	Connection d	D	D1	D2	D3	b	c	h	n	L	f
JC18-□□□	G3/8B	159	178	169	152	77.5	2.5	30	60	14	18
JC26-□□□	G1/2B							32		17	20
JC36-□□□	G3/8B	210	235	220	203	115	3	30	70	14	18
	G1/2B							32		17	20
JC46-□□□	G3/8B	210	235	220	203	139	3	33	70	14	18
	G1/2B							35		17	20

Switch action and wiring

1. Upper limit (H)

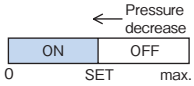
When pressure goes up and reaches at set point, switch operates and turn circuit ON.

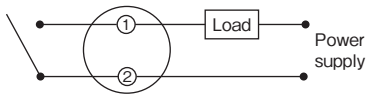




2. Lower limit (L)

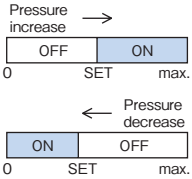
When pressure goes down and reaches at set point, switch operates and turn circuit ON.

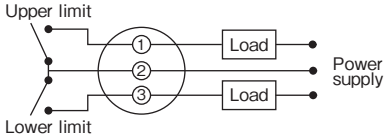




3. Upper and lower limit with two contacts (HL)

The gauge with two contacts in combination with upper and lower limit incorporates two circuits but not independently due to existence of common pole.





Model number configuration

Please specify for ordering the model number and each specs.

Model

J	C	1		—		3		—			0	0			×	×	×	×	×	
Pressure Gauges with Electric Contact (Contact Switch Type) (ϕ100 Bourdon tube type)					①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮

Model number		Product specifications	Additional specifications (Optional)
Mounting	1	Stem	
	6	Panel	
① Mounting (Type and number of contacts)		Stem	Panel
	1	B type (Mounting hole) One contac	D type (Mounting clamp) One contact
	3	———	D type (Mounting hole) One contact
② Connection	3	G3/8B	
		Others	
③ Wetted parts	1	General use	
	3	Corrosion resistant	
④ Pressure range (MPa)	1	20 to 100kPa Receiver	
	2	-0.1 to 0.1, 0.2, 0.3, 0.4, 0.6, 1, 1.5, 2 Compound range	
	3	0 to 0.05, 0.07, 0.1, 0.2, 0.3, 0.4, 0.6, 1, 1.5, 2, 2.5, 3.5, -0.1 to 0	
	4	0 to 5, 7, 10	
	5	0 to 15, 25, 35	
	6	0 to 50, 70 (Corrosion resistant use only)	
⑤ Contact	A	H: Upper limit with one contact	
	B	L : Lower limit with one contact	
⑥ Switch	0	Standard (Contact Switch)	
⑦ Electrical wire outlet	0	Standard (2P metal consent)	
		Others	
⑧ Treatment	0	Not required	
	1	Use no oil	
	2	Use no water	
	3	Use no oil & water	
⑨ Other additional spec.	0	Not required	
	1	Required (Specify required additional spec.) External adjustment type	
⑮ Documents	0	Not required	
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Attending inspection	

Please specify pressure range and unit of measure along with corresponding ordering code.

「Scope of manufacturing」
- Indication accuracy: ±1.5%F.S.
  Receiver: ±0.75%F.S.
- Setting accuracy: ±2%F.S.
- Φ100 two contacts not available
- Select pressure range if compound range is the requirement considering its set point around ±10%F.S. zero (atmospheric pressure) becoming unstable.
- Available up to 50MPa range (Use no water available up to 70MPa)

＊Specify code "X" to refer N/A

Model number configuration

Please specify for ordering the model number and each specs.

Model

J	C	1	□	—	①	②	③	—	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
											0	7			×	×	×	×	×	

Pressure Gauges with Electric Contact (Contact Switch Type) (φ150 Bourdon tube type)

Model number		Product specifications	Additional specifications (Optional)
Mounting	3	Mounting	
	8	Panel	

① Mounting (Type and number of contacts)		Stem	Panel
	1	B type (Mounting hole) One contact	D type (Mounting clamp) One contact
	2	B type (Mounting hole) Two contacts	D type (Mounting clamp) Two contacts
	3	————	D type (Mounting hole) One contact
	4	————	D type (Mounting hole) Two contacts

② Connection	
3	G3/8B
4	G1/2B
	Others

③ Wetted parts	
1	General use
3	Corrosion resistant

Please specify pressure range and unit of measure along with corresponding ordering code.

④ Pressure range (MPa)	
1	20 to 100kPa Receiver
2	-0.1 to 0.1, 0.2, 0.3, 0.4, 0.6, 1, 1.5, 2 Compound range
3	0 to 0.05, 0.07, 0.1, 0.2, 0.3, 0.4, 0.6, 1, 1.5, 2, 2.5, 3.5, -0.1 to 0
4	0 to 5, 7, 10
5	0 to 15, 25, 35
6	0 to 50, 70 (Corrosion resistant use only)

⑤ Contact	
A	H: Upper limit with one contact
B	L : Lower limit with one contact
C	HL: Lower limit with one contact

⑥ Switch	
0	Standard (Contact Switch)

⑦ Electrical wire outlet	
7	Gland JIS 20b (4P metal consent)
	Others

⑧ Treatment	
0	Not required
1	Use no oil
2	Use no water
3	Use no oil & water

⑨ Other additional spec.		
0		Not required
1		Required (Specify required additional spec.) External adjustment type

⑮ Documents		
0		Not required
1		Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Attending inspection

「Scope of manufacturing」
- Indication accuracy: ±1.5%F.S.
  Receiver: ±0.75%F.S.
- Setting accuracy: ±2%F.S.
- Select pressure range if compound range is the requirement considering its set point around ±10%F.S. zero (atmospheric pressure) becoming unstable.
- Available up to 50MPa range (Use no water available up to 70MPa)

＊Specify code "X" to refer N/A

Model number configuration

Please specify for ordering the model number and each specs.

Model

J	C	2	□	—	①	②	③	—	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
											0	7			×	×	×	×	×	

Pressure Gauges with Electric Contact (Contact Switch Type) (φ150 Bellows type)

Model number		Product specifications	Additional specifications (Optional)
Mounting	1	Stem	
	6	Panel	

① Mounting (Type and number of contacts)		Stem	Panel
	1	B type (Mounting hole) One contact	D type (Mounting clamp) One contact
	2	B type (Mounting hole) Two contacts	D type (Mounting clamp) Two contacts
	3	————	D type (Mounting hole) One contact
	4	————	D type (Mounting hole) Two contacts

② Connection	
3	G3/8B
4	G1/2B
	Others

③ Wetted parts	
1	General use
3	Corrosion resistant

Please specify pressure range and unit of measure along with corresponding ordering code.

④ Pressure range (kPa)	
1	0 to 15
2	0 to 20
3	0 to 30

⑤ Contact	
A	H: Upper limit with one contact
B	L : Lower limit with one contact
C	HL: Upper and lower limit with two contacts

⑥ Switch	
0	Standard (Contact Switch)

⑦ Electrical wire outlet	
7	Standard Gland JIS 20b (4P terminal)
	Others

⑧ Treatment	
0	Not required
1	Use no oil
2	Use no water
3	Use no oil & water

⑨ Other additional spec.		
	0	Not required
	1	Required (Specify required additional spec.) External adjustment type

⑮ Documents		
	0	Not required
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Attending inspection

「Scope of manufacturing」
- Indication accuracy: ±1.5%F.S.
- Setting accuracy: ±2%F.S.

＊Specify code "X" to refer N/A

Model number configuration

Please specify for ordering the model number and each specs.

Model

J	C	3	□	—	①	②	③	—	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
											0	7			×	×	×	×	×	

Pressure Gauges with Electric Contact (Contact Switch Type) (φ200 Bellows type)

Model number		Product specifications	Additional specifications (Optional)
Mounting	1	Stem	
	6	Panel	

① Mounting (Type and number of contacts)		Stem	Panel
	1	B type (Mounting hole) One contact	D type (Mounting clamp) One contact
	2	B type (Mounting hole) Two contacts	D type (Mounting clamp) Two contacts
	3	————	D type (Mounting hole) One contact
	4	————	D type (Mounting hole) Two contacts

② Connection	
3	G3/8B
4	G1/2B
	Others

③ Wetted parts	
1	General use
3	Corrosion resistant

Please specify pressure range and unit of measure along with corresponding ordering code.

④ Pressure range (kPa)	
1	0 to 5
2	0 to 7
3	0 to 10

⑤ Contact	
A	H: Upper limit with one contact
B	L : Lower limit with one contact
C	HL: Upper and lower limit with two contacts

⑥ Switch	
0	Standard (Contact Switch)

⑦ Electrical wire outlet	
7	Standard Gland JIS 20b (4P terminal)
	Others

⑧ Treatment	
0	Not required
1	Use no oil
2	Use no water
3	Use no oil & water

⑨ Other additional spec.		
	0	Not required
	1	Required (Specify required additional spec.) External adjustment type

⑮ Documents		
	0	Not required
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Attending inspection

「Scope of manufacturing」
- Indication accuracy: ±1.5%F.S.
- Setting accuracy: ±2%F.S.

＊Specify code "X" to refer N/A

Model number configuration

Please specify for ordering the model number and each specs.

Model

J	C	4	□	—	①	②	③	—	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
											0	7			×	×	×	×	×	

Pressure Gauges with Electric Contact (Contact Switch Type) (φ200 Bellows type)

Model number		Product specifications	Additional specifications (Optional)
Mounting	1	Stem	
	6	Panel	

① Mounting (Type and number of contacts)		Stem	Panel
	1	B type (Mounting hole) One contact	D type (Mounting clamp) One contact
	2	B type (Mounting hole) Two contacts	D type (Mounting clamp) Two contacts
	3	————	D type (Mounting hole) One contact
	4	————	D type (Mounting hole) Two contacts

② Connection		
	3	G3/8B
	4	G1/2B
		Others

③ Wetted parts		
	1	General use
	3	Corrosion resistant

Please specify pressure range and unit of measure along with corresponding ordering code.

④ Pressure range (kPa)		
	1	0 to 1.5
	2	0 to 2
	3	0 to 3
	4	0 to 4

⑤ Contact		
	A	H: Upper limit with one contact
	B	L : Lower limit with one contact
	C	HL: Upper and lower limit with two contacts

⑥ Switch		
	0	Standard (Contact Switch)

⑦ Electrical wire outlet		
	7	Gland JIS 20b (4P terminal)
		Others

⑧ Others		
	0	Not required
	1	Use no oil
	2	Use no water
	3	Use no oil & water

⑨ Other additional spec.		
	0	Not required
	1	Required (Specify required additional spec.) External adjustment type

⑮ Documents		
	0	Not required
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Attending inspection

「Scope of manufacturing」
- Indication accuracy: ±1.5%F.S.
- Setting accuracy: ±2%F.S.

＊Specify code "X" to refer N/A