



CD30 Explosion-Protected Construction Pressure Switch

OUTLINE

This is a highly reliable pressure switch in which a special Bourdon tube, demonstrating excellent durability, is applied. Especially, excellent vibration resistance is demonstrated and as a job site pressure gauge this is applied to the control of equipment.

FEATURES

- With the application of a special Bourdon tube principally manufactured for high durability, this pressure switch demonstrates excellent vibration resistance.
- The one contact type or two contact type can be selected. With the two contact type, the setting of upper limit and lower limit can be possible.
- An explosion resistant switch with light weight has been realized. (installed in an aluminum die-cast case)
- Setting and locking can be performed from the exterior without removing the cover.

* In case of selecting pressure gauge, choose the pressure range which can be used in between 30 ~ 65% of full scale, so that the gauge can give its full capacity.

SPECIFICATION 1

Kind of explosion proof construction:

Explosion-proof (d2G4)

Fuild:

Gas or liquid

Operating condition:

Hazardous area. The details refer to explanation column of explosion-protected construction.

Mounting:

Panel mounting, 2B pipe mounting

Connection:

G1/2B(PF), Rc1/4(PT female), Rc1/2(PT female), R1/2(PT), 1/2NPT

For other connections, please contacts.

Wetted parts material:

Bourdon tube 316st.st.

Socket SCS14

Pressure range:

0 ~ 0.2 → 0 ~ 35MPa (0 ~ 2 → 0 ~ 350kgf/cm²)

-0.1 ~ 0.2 → -0.1 ~ 2MPa (-1 ~ 2 → -1 ~ 20kgf/cm²)

Proof-pressure:

0.3 ~ 52.5MPa (3 ~ 525kgf/cm²)

(Depending on range)

Recommended adjustable range:

15 ~ 90% of pressure range

Operating temperature:

-5 ~ 40°C

Accuracy:

1%max.P.

Temperature coefficient:

0.05%max.P./°C

Dead band:

Fixed 0.014 ~ 1.75MPa or less (0.14 ~ 17.5kgf/cm²)
(Depending on range or number of contact)

Switch:

Micro switch

Number of contact:

One contact or two contact

Setting system:

External adjustment type With setting lock

Methods of leading external conductors and cable in to a terminal box:

Conduit type or flame-proof packing type

Case material-finishing:

Aluminium alloy die casting (ADC12)-Gray

Case material:

Outdoor type (IP54)

Weight:

Approx. 4.1kg

SPECIFICATION 2

Electric characteristics:

	Rating		Withstand voltage	Insulation resistance
	Load resistance	Inductive load		
125V AC	15A	15A	1500V AC Between terminal and case 1 minute	500V DC 100MΩ over Between terminal and case
250V AC	15A	15A		
125V DC	0.5A	0.05A		
30V DC	2A	1A		
· Inductive load:Power factor more(AC) Time-constant 7ms or less(DC)				

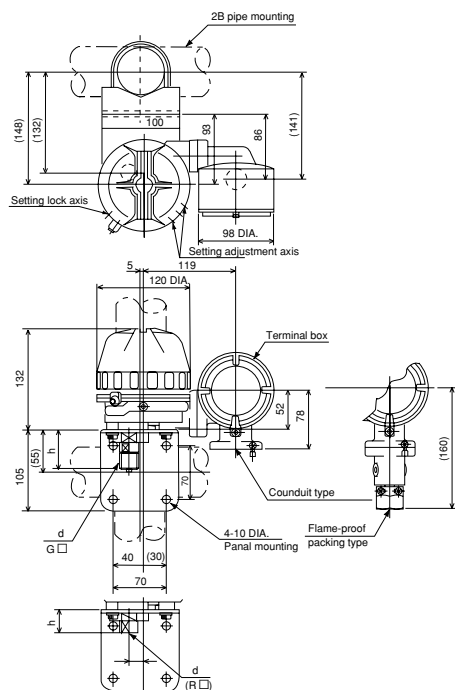
Pressure range & dead band·Proof-pressure:

Pressure range MPa(kgf/cm ²)	Deadband MPa(kgf/cm ²)		Proof-pressure MPa (kgf/cm ²)	Approval number for labor ministry inspection*
	One contact	Two contact		
0~0.2 (0~ 2)	0.014 or less (0.14 or less)	0.02 or less (0.2 or less)	0.3 (3.0)	No. 20093
~0.4 (~ 4)	0.028 or less (0.28 ")	0.04 or less (0.4 ")	0.6 (6.0)	No. 20094
~0.6 (~ 6)	0.042 or less (0.42 ")	0.06 or less (0.6 ")	0.9 (9.0)	No. 20095
~1 (~10)	0.07 or less (0.7 ")	0.1 or less (1.0 ")	1.5 (15.0)	No. 19919
~1.5 (~15)	0.08 or less (0.8 ")	0.12 or less (1.2 ")	2.25 (22.5)	No. 20487
~2 (~20)	0.08 or less (0.8 ")	0.14 or less (1.4 ")	3 (30.0)	No. 19920
~2.5 (~25)	0.1 or less (1.0 ")	0.18 or less (1.8 ")	3.75 (37.5)	No. 20488
~3.5 (~35)	0.14 or less (1.4 ")	0.25 or less (2.5 ")	5.25 (52.5)	No. 19914
~5 (~50)	0.2 or less (2.0 ")	0.35 or less (3.5 ")	7.5 (75)	No. 20489
~7 (~70)	0.25 or less (2.5 ")	0.4 or less (4.0 ")	10.5 (105)	No. 19915
~10 (~100)	0.3 or less (3.0 ")	0.5 or less (5.0 ")	15 (150)	No. 19916
~15 (~150)	0.45 or less (4.5 ")	0.75 or less (7.5 ")	22.5 (225)	No. 20490
~20 (~200)	0.6 or less (6.0 ")	1.1 or less (11.0 ")	30 (300)	No. 19921
~25 (~250)	0.75 or less (7.5 ")	1.25 or less (12.5 ")	37.5 (375)	No. 20491
~35 (~350)	1.25 or less (12.5 ")	1.75 or less (17.5 ")	52.5 (525)	No. 19922

*Registered model for labor ministry inspection and approval number:

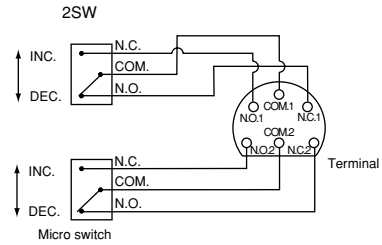
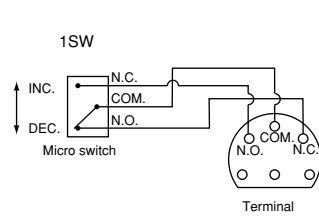
Registered model for labor ministry inspection:CD30 Approval number for labor ministry inspection:Depending on range	It is official approval number to represent that explosion-protected construction pressure switch conformed to explosion proof standard. It is national official approval which is examined and authorized by technology institution of industrial safety.
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DIMENSIONS



d	h
G1/2B	50
Rc 1/4	30
Rc 1/2	84

WIRING



EXPLOSION-PROOF

Explosion-protected construction:

Explosion protected-construction is a totally enclosed construction such that even if the explosive gas explodes inside the container, the container withstands the force of the explosion and there is no danger of ignition of external explosive gases. Our pressure transmitter manufactured under this basic policy are widely used in the measurement, alarm, and control of pressure in factories and business offices where combustible gases or the vapor of combustible liquids having a flash point of 40°C or less may exist.

Application range: d2G4

Explosion-protected construction: d
Explosion class: 2 (Minimum gap with 25mm length of patch which permits the flame propagation: 0.4mm to 0.6mm)
Ignitability: G4 (Ignition point: 135°C to 200°C, limits of temperature rise: 70 deg)

Hazardous areas: Zone 1 or zone 2

Objective industries: Petrochemical, chemical fibersynthetic resin, ethylene, methanol, dielectric products manufacturing, liquefied gas, electric furnace, pharmaceuticals, paints, ammonium sulfate, soda, other measurement medium or industries in which there is the danger of ignition and explosion.

Classification of hazardous areas:

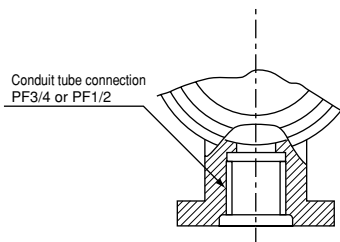
Hazardous areas	Contents
Zone 0	A place where hazardous atmosphere is continuously present or present for a long period under ordinary circumstances.
Zone 1	A place where hazardous atmosphere is likely to occur under ordinary circumstances.
Zone 2	A place where hazardous atmosphere is likely to occur under abnormal circumstances.

Approval number for labor ministry inspection:

Specification 2 Please refer to a column of pressure range and dead band-withstand pressure

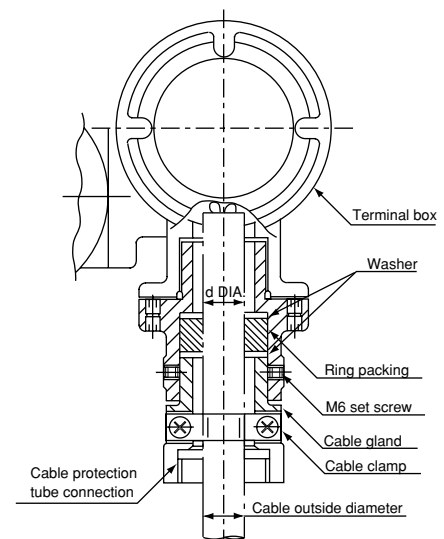
METHODS OF LEADING EXTERNAL CONDUCTORS AND CABLE IN TO A TERMINAL BOX

Conduit type



Flame-proof packing type

Packing inside (d) DIA.	Application cable out side DIA.	Protection tube connection
10.5	9.4	PF $\frac{1}{2}$ PF $\frac{3}{4}$
	9.9	
	10.1	
12	10.5	
	11.0	
	11.5	
14	11.9	PF $\frac{3}{4}$ PF1
	12.0	
	12.5	
15.5	12.6	
	13.1	
	13.5	
	13.6	
16.5	14.5	
	15.6	

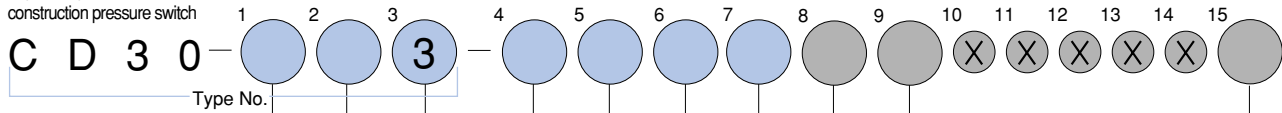


Type No. constitution

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.

Explosion-protected
construction pressure switch



1 Mounting type (Methods of leading external conductors and cable in to a terminal box)

1	One contact, Panel mounting, Conduit type
2	Two contact, Panel mounting, Conduit type
3	One contact, Panel mounting, Flame-proof packing type
4	Two contact, Panel mounting, Flame-proof packing type
5	One contact, 2B pipe mounting, Conduit type
6	Two contact, 2B pipe mounting, Conduit type
7	One contact, 2B pipe mounting, Flame-proof packing type
8	Two contact, 2B pipe mounting, Flame-proof packing type

2 Connection

4	G1/2B
7	Rc 1/4
9	Rc 1/2
H	R1/2
M	1/2NPT

3 Wetted parts material

3	Bourdon tube: 316st.st. Socket: SCS14
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5 Type of contact point

1	H : Upper limit type with one contact
2	L : Lower limit type with one contact
3	HL: Upper and lower limit type with two contact
4	2H: Upper limit type with two contact
5	2L: Lower limit type with two contact

4 Pressure range (MPa)

(When ordering, please specify pressure range & unit.)

1	-0.1 ~ 0.2, 0.4, 0.6 -0.1 ~ 1, 1.5, 2
2	0 ~ 0.2, 0.4
3	0 ~ 0.6, 1, 1.5, 2, 2.5 0 ~ 3.5, 5, 7
4	0 ~ 10, 15, 25, 35

6 Switch

0	Standard type
1	Ultra high sensitivity switch
3	Standard+gold plated
4	Ultra high sensitivity switch+gold plated

Additional spec. (Option)

9 Other additional spec.

0	Nil
1	Please specify your requirement Case finishing, Wetted parts 316Lst.st. option

8 Treatment

0	Nil
1	Use no oil
2	Use no water
3	Use no oil-water (Applicable to 25MPa range)

7 Outlet for electric wire

In case of conduit type

2	PF1/2 female
3	PF3/4 female (Standard)
4	PF1 female

7 Outlet for electric wire

In case of flame-proof packing type

0	PF1/2 female	10.5
1	PF1/2 female	12
2	PF3/4 female	10.5
3	PF3/4 female	12
4	PF3/4 female	14
5	PF3/4 female	15.5
6	PF3/4 female	16.5
7	PF1 female	14
8	PF1 female	15.5
9	PF1 female	16.5

15 Document

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

The contents in the catalogue are subject to change without notice.

NAGANO KEIKI CO., LTD.



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