Model CD31
Explosion-protected Construction Differential Pressure Switch

OUTLINE

This is a differential pressure switch equipped with a pressure indicator applied to inflammable and explosive measuring liquid and environment. This pressure switch can be applied to warning and controlling a liquid level in a hermetic tank, measuring flow in a pipe line and checking strainer clogging.

FEATURES

- This pressure switch is a combination of a differential pressure indicator and a differential switch, and is appropriately applied to the job site where differential pressure indication is required.
- The change of setting position for contactors can be performed using a knob from the outside.

* Also should be confirmed whether the wetted parts material is suit able for the fluid or not.
* The base pressure refers to the pressure to be used as the basis out of pressures at two points, or a pressure with smaller fluctuation. One-side pressure tight means the maximun differential pressure.

SPECIFICATION 1

Kind of explosion proof construction:
Explosion-proof d2 G4

Fluid:
Gas or liquid

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

Connection:
G1/2B (PF), R1/2 (PT), 1/2NPT
* For other connections, please contact us.

Wetted parts material:

General use	Bellows	Phospher bronze (C5212R)
	Socket	Copper alloy (C3604BD)
	Packing	NBR
Corrosion-proof use	Bellows	316Lst.st.
	Socket	316st.st.
	Packing	NBR, PTFE

Differential pressure range:
0~0.03 → 0 ~ 0.4MPa (0 ~ 3000mmH_2O → 0 ~ 4kgf/cm^2)

Base pressure:
0 ~ 1MPa (0 ~ 10kgf/cm^2)

Operating temperature:
-5 ~ 40℃(But fluid should not be frozen)

Indication accuracy:
±2% max. P.

Setting accuracy:
±3% max. P.

Repeatability:
1.5%max. P.

Dead band:
Fixed Less than 8% max. P.

Temperature coefficient:
±0.05%F.S. /℃

Switch:
JIS C4505 Industial Microswitch

Number of contact:
One contact

Setting system:
External adjustment, With setting scale

Methods of leading external conductors and cable:
Conduit type, Flame-proof packing type

Construction:
Outdoor type (IP54)

Case material • finishing:
Aluminium alloy casting (AC7A) • Gray

Valve-manifold: (Option)
Three-way valve manifold which combined the stop valve for high and low pressure and strap valve. This valve manifold is suitable for checking zero point or zero adjustment during operation and also available to prevent excess differential pressure or reversal differential pressure.

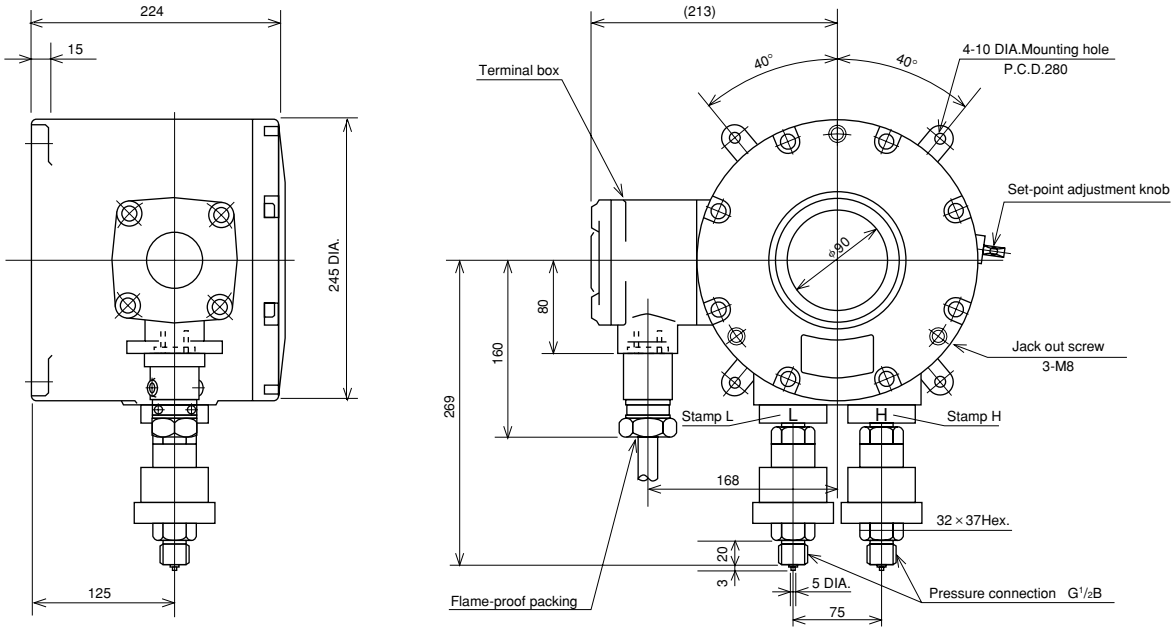
Weight:
Approx. 21.5kgs ~ approx. 21.75kgs

SPECIFICATION 2

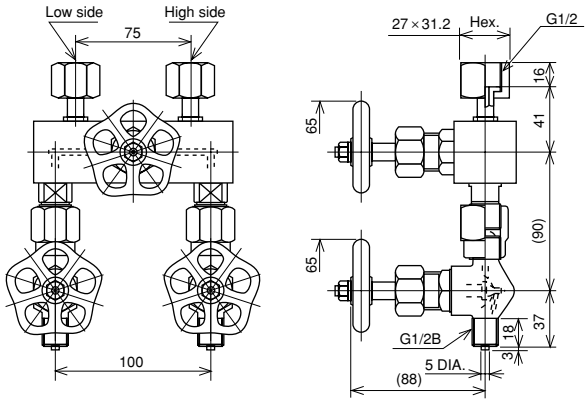
Electric characteristics:

Rating			Withstand voltage	Insulation resistance
	Resistance load	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 is power factor 0.4 over (AC) Time-constant 7ms or less (DC)				

DIMENSIONS



Valve-manifold: (Option)



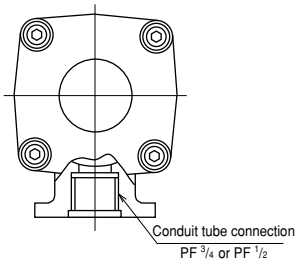
TYPE OF CONTACT POINT AND WIRING SYSTEM

Type of contact point	Mark	A figure of operation system and operation	Connection terminal number	Setting pointer	Note
Upper limit-type with one contact	H	* When the differential pressure rises to a set value, contact points work to turn a circuit ON. Pressure up → OFF ON 0 SET max.	① — ②	Black pointer	Connecting ②-③ reverses ON and OFF at the set point. (HR)
Lower limit-type with one contact	L	* When the differential pressure decreases to a set value, contact points work to turn a circuit ON. ← Pressure down ON OFF 0 SET max.	② — ③	Black pointer	Connecting ①-② reverses ON and OFF at the set point. (LR)

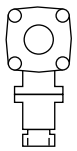
Setting when setting pressure dial of products expresses * point each mentioned above, and, accordingly, it becomes use in the upper limit type and reverse the bottom type, the bottom type the upper limit type revise only dead band share.

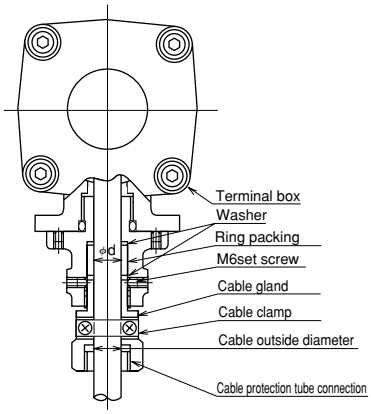
METHODS OF LEADING EXTERNAL CONDUCTORS AND CABLE IN TO A TERMINAL BOX

(1) Conduit type



(2) Flame-proof packing type

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



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 with stands the force of the explosion and there is no danger of ignition of external explosive gases.

Our pressure switches and differential pressure switches manufacured 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℃ or less may exist.

Application range: d2G4

Explosion-protected construction:d

Explosion class: (2 Minimun gap with a 25mm length of patch witch permits the flame propagation is 0.4mm to 0.6mm)

Ignitability: G4 (An ignition point exceeds 135 ℃, and temperature-rise limit of container outside is 70deg with a thing less than 200 ℃)

Hazardous areas: Zone 1 or Zone 2

Object industries: Petrochemical, chemical fiber, synthetic 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 explosion.

Classification of hazardous area:

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

TYPE APROVAL NAME AND NOMBER

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 industial safety.

Type approval name:

MSD

Type approval number:

CD31-□□1 21111

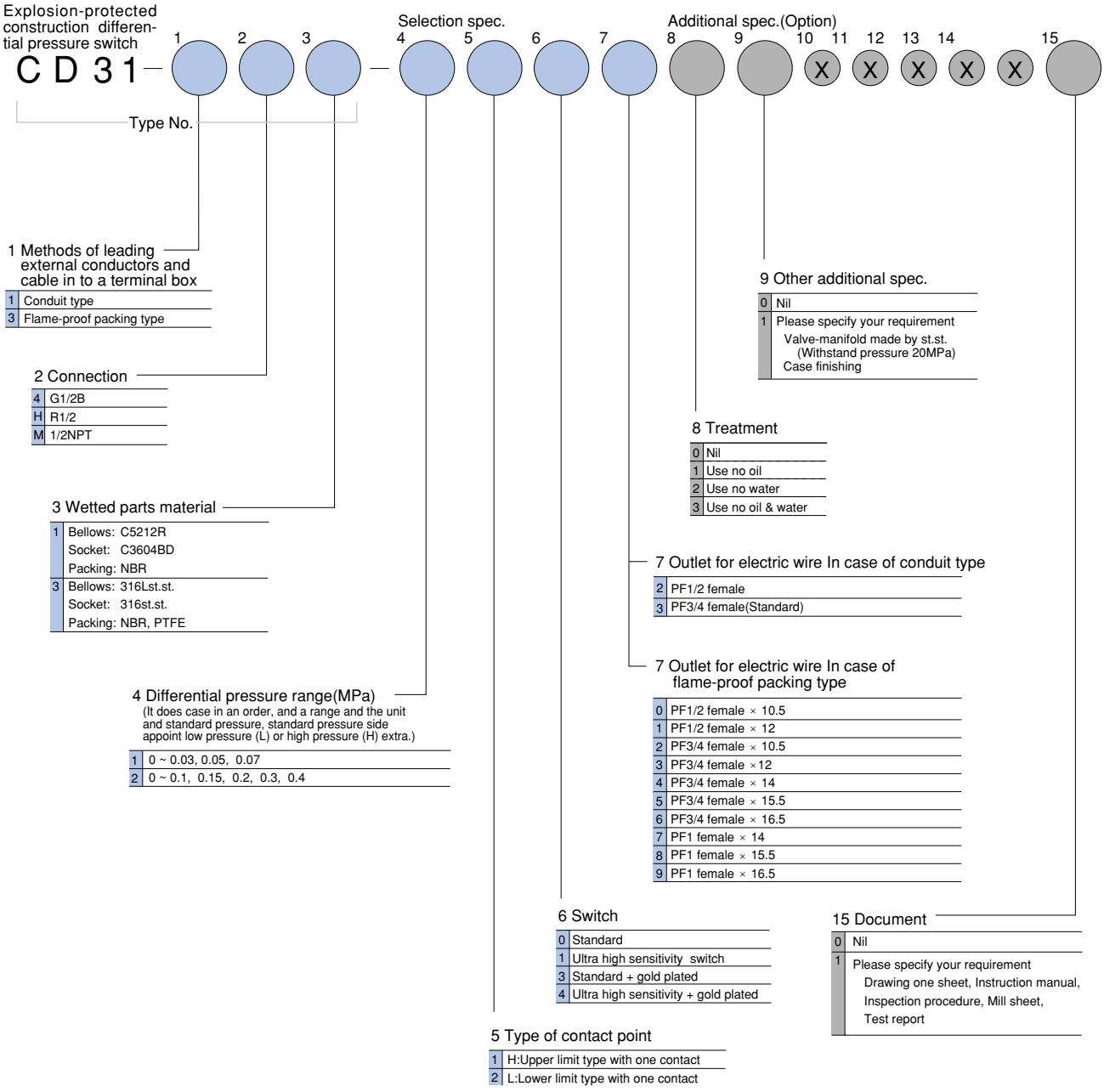
CD31-□□3 21934

: 03 (3776) 5528
: 03 (3776) 5447
: 2468452 NKSTKY J

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.



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PRINTED IN JAPAN '96.11.1000A