KH41・43, KD41・43
Process Pressure Transmitter

Overview

Suitable for on-site type pressure transmitter for process application. Both general application and flameproof type are available corresponding to working environment.

KH43

KH41

KD41・KD43

Features

- **Since the sensor uses a semiconductor strain gauge, durability and stability are excellent.**
- **Since the wetted parts utilize high corrosion resistant metal diaphragm, corrosion resistance is excellent suitable for use with a wide range of gases and liquids is possible.**
- **Designed for EMI prevention caused by transceivers and other electronic devices.**

Model configuration

General process use	Flameproof type (Flameproof enclosure)
KH41 KH43	KD41 (d2G4) KD43 (d2G4)

Specifications

Media:
Gas, liquid
*The diaphragm seal type is available when the high viscosity in process fluid is present. Please contact us.

Installation Environment:
KH41・43 (General process use)
Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition
KD41・43 (Flameproof enclosure)
Hazardous area For details, please refer to the description of the flameproof enclosure.

Type:
Direct mounting, surface mounting, pipe mounting

Connection:
Rc 1/2, Rc 1/4, G3/8B (Diaphragm seal type only)

Wetted parts:
KH41 SCS14+SUS316
KH43 SUS316+Co-Ni alloy
KD41 SCS14+SUS316+SUS304
KD43 SCS14+Co-Ni alloy

Pressure range:
-5 to +5→-50 to +50kPa
-0.1 to 0→-0.1 to 2MPa
0 to 5kPa→0 to 50MPa

Power source:
12 to 32V DC (Standard 24V DC)

Output:
4 to 20mA DC (2 wire system)

Load resistance:
600Ω Maximum (24V DC)

Withstand voltage:
250V AC, 1 minutes

Allowable maximum pressure:
150% of pressure range

Operating temperature range:
KH41・43 -30 to 80℃ (No freezing or condensation)
KD41・43 -20 to 60℃ (No freezing or condensation)

Storage temperature range:
KH41・43 -30 to 80℃ (No freezing or condensation)
KD41・43 -30 to 70℃ (No freezing or condensation)

Operating humidity range:
30 to 95%RH (No condensation)

Accuracy:
±0.25%F.S., ±0.5%F.S., ±1.0%F.S. (Diaphragm-seal type)
(Includes Linearity, hysteresis, repeatability)

Temperature coefficient:
±0.025%F.S./℃ (Zero)
±0.025%F.S./℃ (Span)
(-20 to 70℃)

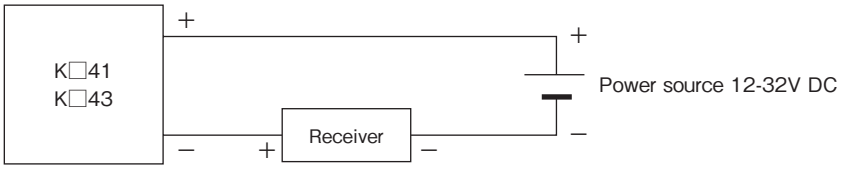
Outlet for electric wire:
KH41・43 PF1/2
KD41・43 Flameproof cable gland type・Counduit type
(Adjustable cable diameter ϕ7 to ϕ12)

Case material:
ADC12

Enclosure:
K□41 Splash-proof (IP54)
K□43 Jet-proof (IP55)
Splash-proof for the range 2MPa and below (IP54)

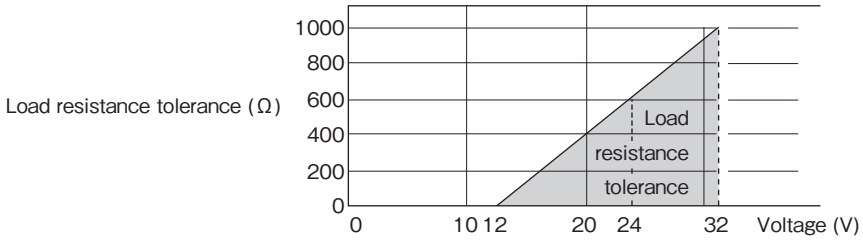
Weight:
Approx. 0.85kg to 5.8kg

Wiring



(Example: GC95 Digital meter relay, etc.)

Load resistance range



Flameproof

Flameproof type approval:

Type approval number refers approval by Ministry of Labor notification that meets the appropriate requirement of technical standard and new guideline for explosion protection in accordance with IEC standard.

Model		Type approval number
KD41		No. T54934
KD43	-0.1 to 0.3→0 to 3.5MPa	No. T54935
	0 to 5→0 to 20MPa	No. T55046

KD41・43 Flameproof enclosure d2G4

Flameproof enclosure:

Flameproof enclosure is a totally-enclosed construction such that even if an explosive gas explodes inside the container, the container will withstand the force of the explosion and there is no danger of ignition by external explosive gases. Our pressure and differential pressure transmitter manufactured under this policy are used in pressure measurements where inflammable gas or the vapors generated from combustible liquid may exist in factories and business offices.

KD41・43 Pressure transmitter

Application range: d2G4
Flameproof enclosure: d
Explosion class: 2 (Minimum gap which permits flame propagation at a gap depth of 25mm is 0.4mm to 0.6mm)
Ignitability: G4 (Container with an ignition point of 135 to 200°C and whose outside surface temperature rise limit is 70degs)
Hazardous areas: Zone 1 or Zone 2
Scope of industries: Petrochemical, chemical fiber, ethylene, ethanol, 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.

Hazardous area classification:

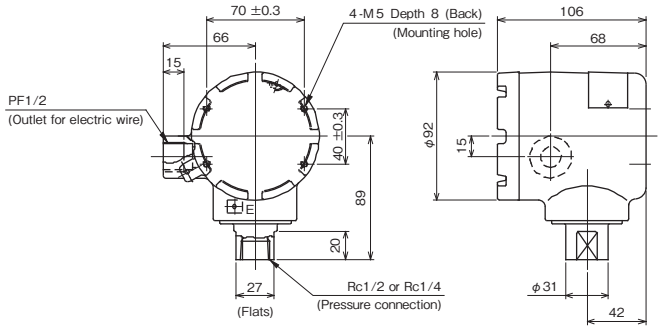
Hazardous area	Contents
Zone 0	Areas where a hazardous atmosphere is continuously present or present for a long period under ordinary circumstances
Zone 1	Areas where hazardous atmosphere is likely to occur under ordinarycircumstances
Zone 2	Areas where hazardous atmosphere is likely to occur under abnormal circumstances

Dimensions 1

Unit: mm

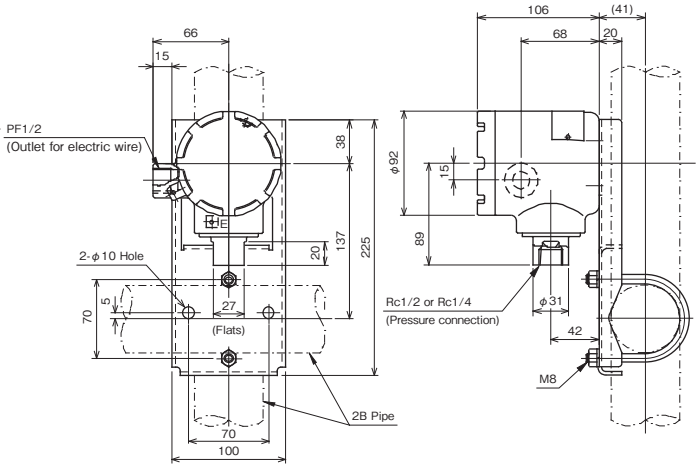
KH41 Pressure Transmitter

Direct mounting (Weight: Approx. 1.8kg)



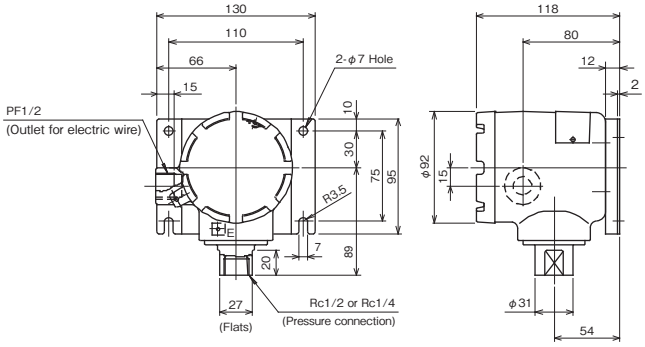
KH41-173・KH41-193

2B Pipe mounting



KH41-373・KH41-393

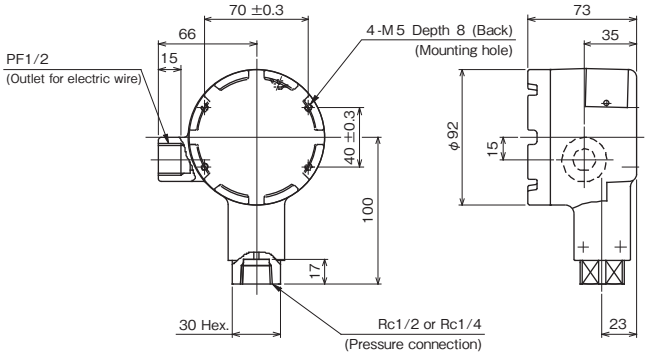
Surface mounting



KH41-273・KH41-293

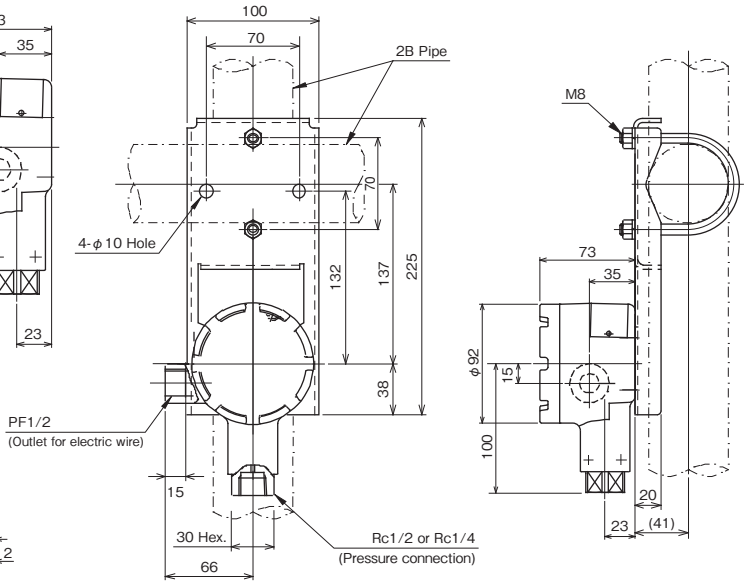
KH43 Pressure Transmitter

Direct mounting (Weight: Approx. 0.85kg)



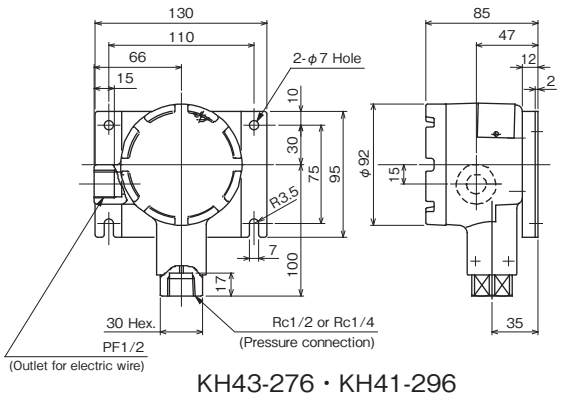
KH43-176・KH41-196

2B Pipe mounting



KH43-376・KH41-396

Surface mounting

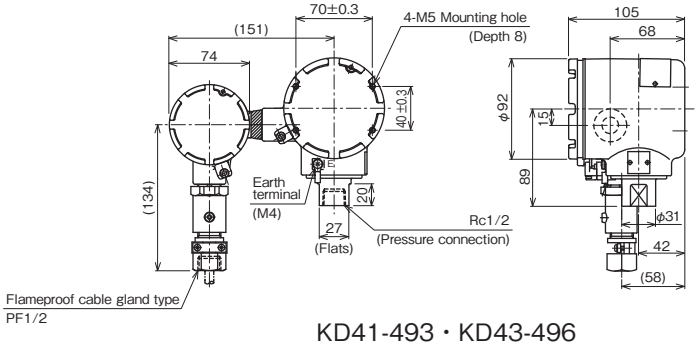


KH43-276・KH41-296

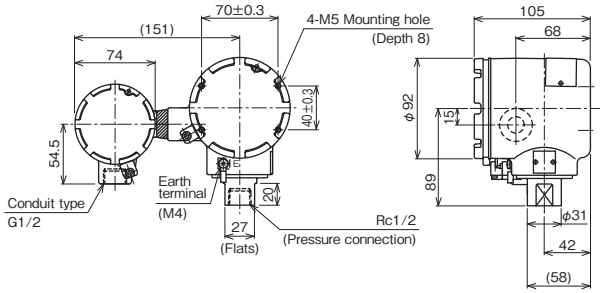
Dimensions 2

Unit: mm

KD41・43 Flameproof Pressure Transmitter

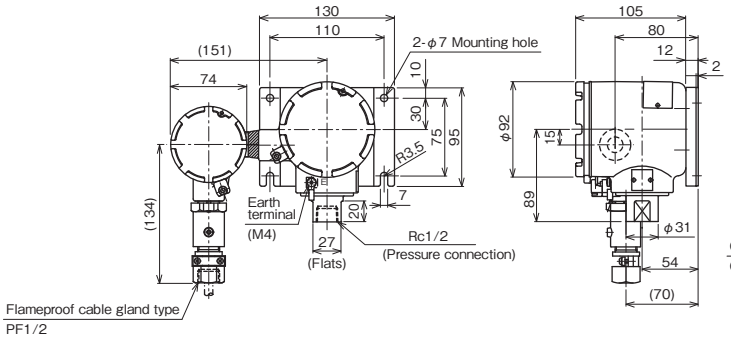


KD41-493・KD43-496

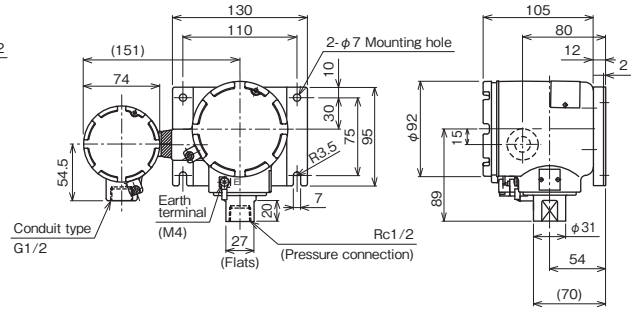


KD41-793・KD43-796

Direct mounting
(Weight: KD41 Approx. 2.4kg, KD43 Approx. 1.9kg)

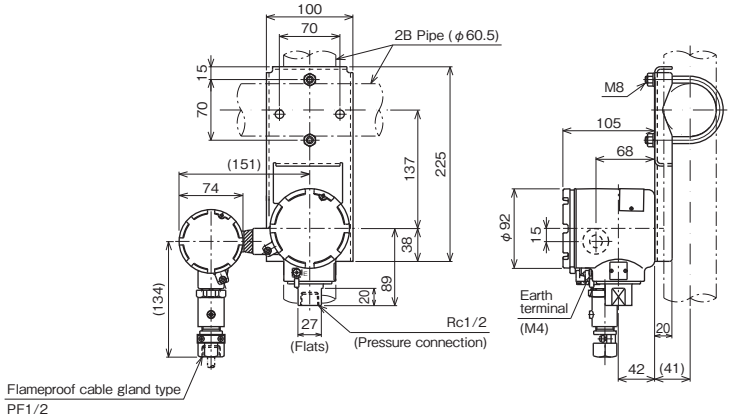


KD41-593・KD43-596

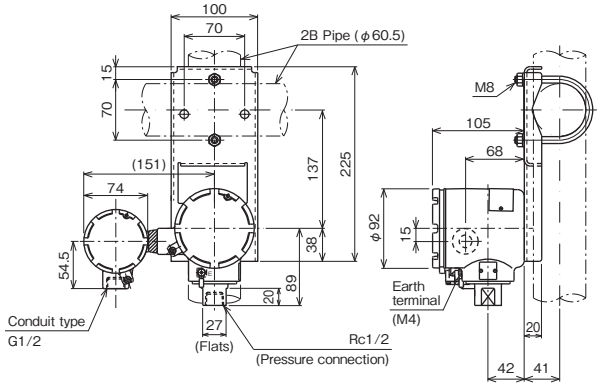


KD41-893・KD43-896

Surface mounting



KD41-693・KD43-696



KD41-993・KD43-996

2B Pipe mounting

Model number configuration 1

Please specify the model number, each specs and the range for ordering.

Model

K H 4 1	—	①	②	3	—	④	⑤	⑥	1	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Process Pressure Transmitter		①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Model number						Product specifications					Additional specifications (Optional)						

① Type	1	Direct mounting
	2	Surface mounting
	3	2B pipe mounting
② Connection	3	G3/8B (Diaphragm seal only)
	7	Rc1/4
	9	Rc1/2
③ Wetted parts	3	SCS14 + SUS316
④ Pressure range	1	0 to 5, 10, 20, 30, 40, 50kPa
	2	0 to 0.1, 0.2, -0.1 to 0MPa
	3	±5, ±10, ±20, ±30, ±40, ±50kPa
	4	±0.1, -0.1 to 0.2MPa
⑤ Accuracy	4	±0.25%F.S.
	5	±0.5%F.S.
	7	±1.0%F.S. (Diaphragm type)
⑥ Power source	1	24V DC±10%
	9	Others
⑦ Output	1	4 to 20mA DC 2 wire system
⑨ Treatment	0	Not required
	1	Use no oil
	2	Use no water
	3	Use no oil & water
⑩ Other additional spec.	0	Not required
	1	Diaphragm seal type specification (Main body + Adder for diaphragm seal part) (Please refer to SC□□)
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 Calibration test report for pressure standard Strength calculation sheet Attending inspection

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

Treatment against wetted parts

■**Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

■**Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

■**Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

＊Specify code "X" to refer N/A

Model number configuration 2

Please specify the model number, each specs and the range for ordering.

Model

K H 4 3	—	①	②	6	—	④	⑤	⑥	1	×	⑨	⑩	×	×	×	×	⑮
Process Pressure Transmitter																	
Model number						Product specifications					Additional specifications (Optional)						

① Type	1	Direct mounting
	2	Surface mounting
	3	2B pipe mounting
② Connection	3	G3/8B (Diaphragm seal only)
	7	Rc1/4
	9	Rc1/2
③ Wetted parts	6	SUS316 + Co-Ni alloy
④ Pressure range (MPa)	1	0 to 0.3, 0.5, 1, 2, 3.5, 5, 10, 20, 35, 50
	2	-0.1 to 0.3, 0.5, 1, 2
⑤ Accuracy	4	±0.25%F.S.
	5	±0.5%F.S.
	7	±1.0%F.S. (Diaphragm type)
⑥ Power source	1	24V DC±10%
	9	Others
⑦ Output	1	4 to 20mA DC　2 wire system
⑨ Treatment	0	Not required
	1	Use no oil
	2	Use no water
	3	Use no oil & water
⑩ Other additional spec.	0	Not required
	1	Diaphragm seal type specification (Main body + Adder for diaphragm seal part) (Please refer to SC□□)
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 Calibration test report for pressure standard Strength calculation sheet Attending inspection

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

「Manufacturing range」
・2 MPa or lower: IP54 for enclosure rating

Treatment against wetted parts

■**Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

■**Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

■**Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

＊Specify code "X" to refer N/A

Model number configuration 3

Please specify the model number, each specs and the range for ordering.

Model

K	D	4	1	—			3	—				1	×			×	×	×	×	
Flameproof Pressure Transmitter					①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮
Model number									Product specifications					Additional specifications (Optional)						

① Type	4	Direct mounting	Flameproof cable gland type: PF1/2
	5	Surface mounting	Flameproof cable gland type: PF1/2
	6	2B pipe mounting	Flameproof cable gland type: PF1/2
	7	Direct mounting	Conduit type: G1/2
	8	Surface mounting	Conduit type: G1/2
	9	2B pipe mounting	Conduit type: G1/2
② Connection	3	G3/8B (Diaphragm only)	
	9	Rc1/2	
③ Wetted parts	3	SCS14 + SUS316 + SUS304	
④ Pressure range	1	0 to 5, 10, 20, 30, 40, 50kPa	
	2	0 to 0.1, 0.2, -0.1 to 0MPa	
	3	±5, ±10, ±20, ±30, ±40, ±50kPa Compound	
	4	-0.1 to 0.1, 0.2MPa Compound	
⑤ Accuracy	4	±0.25%F.S.	
	5	±0.5%F.S.	
	7	±1.0%F.S. (Diaphragm type)	
⑥ Power source	1	24V DC±10%	
	9	Others	
⑦ Output	1	4 to 20mA DC 2 wire system	
⑨ Treatment	0	Not required	
	1	Use no oil	
	2	Use no water	
	3	Use no oil & water	
⑩ Other additional spec.	0	Not required	
	1	Diaphragm seal type specification (Main body + Adder for diaphragm seal part) (Please refer to SC□□)	
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 Calibration test report for pressure standard Strength calculation sheet Attending inspection	

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

「Manufacturing range」
・Applicable cable diameter φ7 to φ12

Treatment against wetted parts

■Use no oil
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

■Use no water
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

■Use no oil & water
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

＊Specify code "X" to refer N/A

Model number configuration 4

Please specify the model number, each specs and the range for ordering.

Model

K D 4 3	—			6	—				1	×			×	×	×	×	
Flameproof Pressure Transmitter		①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮

Model number			Product specifications	Additional specifications (Optional)
① Type	4	Direct mounting	Flameproof cable gland type: PF1/2	
	5	Surface mounting	Flameproof cable gland type: PF1/2	
	6	2B pipe mounting	Flameproof cable gland type: PF1/2	
	7	Direct mounting	Conduit type: G1/2	
	8	Surface mounting	Conduit type: G1/2	
	9	2B pipe mounting	Conduit type: G1/2	
② Connection	3	G3/8B (Diaphragm only)		
	9	Rc1/2		
③ Wetted parts	6	SCS14 + Co-Ni alloy		
④ Pressure range (MPa)	1	0 to 0.3, 0.5, 1, 2, 3.5, 5, 10, 20		
	2	-0.1 to 0.3, 0.5, 1, 2 Compound		
⑤ Accuracy	4	±0.25%F.S.		
	5	±0.5%F.S.		
	7	±1.0%F.S. (Diaphragm type)		
⑥ Power source	1	24V DC±10%		
	9	Others		
⑦ Output	1	4 to 20mA DC 2 wire system		
⑨ Treatment	0	Not required		
	1	Use no oil		
	2	Use no water		
	3	Use no oil & water		
⑩ Other additional spec.	0	Not required		
	1	Diaphragm seal type specification (Main body + Adder for diaphragm seal part) (Please refer to SC□□)		
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 Calibration test report for pressure standard Strength calculation sheet Attending inspection		

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

「Manufacturing range」
- 2 MPa or lower: IP54 for enclosure rating
- Applicable cable diameter φ7 to φ12

Treatment against wetted parts

■Use no oil
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

■Use no water
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

■Use no oil & water
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

＊Specify code "X" to refer N/A