

Complies with the latest explosion protection standards

# KJ91 · 92

## Intrinsically Safe Pressure & Differential Pressure Transmitter

### Overview

This pressure/ differential pressure transmitter is an upgraded version of the existing KJ91/ KJ92, with additional explosion protection standards of each country and more electrical connection options (connector for new KJ92 and terminal box for KJ91 & KJ92). The product also complies with CE marking and RoHS directive.



KJ91



KJ92

\* 25.4mm conversion fitting supplied as option.

### Features

- Certified for "IECEX", "ATEX" and "Explosion protection standards in Japan" ("TS", "NEPSI" and "KCs" are also scheduled)
- KJ91 for high-pressure hydrogen applications
- Scaling function allows adjustment of display/ output ranges
- LED backlit LCD display for bright and clear image even in the dark
- Insulating safety barrier to substitute Type A grounding

Order separately for a recommended safety barrier. If using a barrier other than the recommended one, strictly observe the "Safety Maintenance Rating".



### Features of sensor

#### KJ91 Pressure Transmitter

##### Semiconductor-evaporated type "SS" Sensor

This widely-proven semiconductor-evaporated "SS (semiconductor strain gauge)" sensor is excellent in durability and stability with the use of the integrated structure: the semiconductor strain gauge, sensing part and connection are all welded without using adhesives or corrosive materials. Different sensor materials are available depending on the intended applications.

- SUS630 (17-4PH)
- Co-Ni alloy
- SUS316L
- SUH660 (A286)



SS Sensor

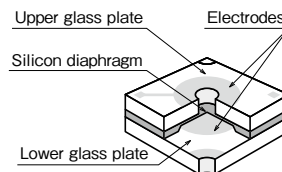


[KJ91]

#### KJ92 Differential Pressure Transmitter

##### Silicon Capacitive (SC) Sensor

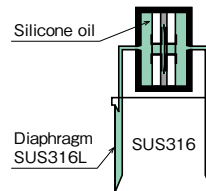
This liquid-filled, micromachined silicon capacitive (SC) sensor contained in the sensor section and the wetted part consisting of a stainless steel diaphragm makes it available for a wide variety of pressure media and fine differential pressure measurement with high reliability and sensitivity.



Actual size



SC Sensor



[KJ92]

\* 25.4mm conversion fitting supplied as option.

#### Common specification

Item	Description
Supply voltage	24V DC±10% Insulation resistance: 100MΩ or more (50V DC between joint and all input/output terminals)
Output	4 to 20mA DC (2 wire system, Output range: 3.2 to 20.8mA DC) Response time: 30ms (With no filter setting) Resolution: 0.1%F.S. Load resistance: 500Ω max.
Range of guaranteed accuracy	±1.0%F.S. or lower Operating temperature range (-10 to 60°C)
Output adjustment range	Zero point: -10 to 110% of the full span (To pressure range) Span point: -10 to 110% of the full span (To pressure range)
Display	
Numeric display	6 digits LCD (Character height: 10mm, with LED backlight) Pressure display, Linear display: 4 LCD digits maximum, Display update rate 500ms
Unit display	LCD bar display (With LED backlight) Pressure unit: kPa*1, MPa Linear unit: Arbitrary set
Setting	With internal key switches (MODE, ▲, ▼) Scaling display: Linear display / Output Holding function: Display maximum value (Peak) and minimum value (Bottom) Filter function: Moving average time, Select from 0, 2, 4, 8 and 16 Loop check function: Arbitrary setting output (4 to 20mA DC) Zero adjustment function: Pressure sensor zero adjustment
Operating temperature and humidity	-10 to 60°C / 35 to 85%RH (No freezing or condensation)
Storage temperature and humidity	-20 to 70°C / 35 to 85%RH (No freezing or condensation)
Enclosure rating	Protection class: IP65*2 Case material: ADC12
Mounting location	It is possible to install in outdoors (Avoid direct sunlight)
Memory protection	Permanently stored by nonvolatile memory
Vibration resistance	10 to 150Hz, Multi-amplitude 0.7mm (60Hz or lower) Acceleration: 50m/s <sup>2</sup> (60Hz or higher) Vibrating direction: x, y, z (2.5 hours for each)
Shock resistance	Impact acceleration: 100m/s <sup>2</sup> Impact direction: x, y, z (2.5 hours for each)

\* 1 For high pressure hydrogen, pressure unit is MPa only.

\* 2 For connector type, the cable with connector shall be in mated condition. DIN terminal type and terminal box type are warranted only when properly fitted with matching cable glands, cables, etc.

#### KJ91 Direction and weight of outlet for electric wire and pressure connection

Mounting type	Mounting system	Outlet for electric wire	Pressure connection	Cable connection	Weight
DIN type	Direct mounting	Right side (Standard), Left side	Lower side (Standard), Upper side, Right side, Left side	Cable gland: GDM3011 (Made by HIRSCHMANN) 2 wire shielded cable Applicable cable diameter 6 to 9mm (Center conductor sectional area: 0.5 to 1.25mm <sup>2</sup> ) Internal connection terminal block Number of poles : 4 poles (+, -, Ground, NC) Applicable crimp terminal: Round bare terminal, R1.25-3 (Nominal size)	Approx. 420g (Excluding cable, depending on connection)
	Panel mounting	Right side (Standard), Left side	Lower side		
Connector type	Direct mounting	Right side (Standard), Left side	Lower side (Standard), Upper side, Right side, Left side	Connector: TC1108-1A10-7F (Made by Tajimi Electronics Co., Ltd.) Cable type Shielded cable (Standard): Cable outer diameter φ6.2mm -20°C to 60°C Heat resistant cable: Cable outer diameter φ6.2mm -20°C to 105°C Cold resistant cable: Cable outer diameter φ6.0mm -40°C to 80°C	Approx. 410g (Excluding cable with connector, depending on connection)
	Panel mounting	Right side (Standard), Left side	Lower side		
Terminal box type	Panel mounting	Right side	Lower side	Cable gland: FBA21-13 G1/2 (Made by AVC Corporation of Japan) 2 wire shielded cable Applicable cable diameter 9 to 14mm (Center conductor sectional area: 0.25 to 1.65mm <sup>2</sup> )	Approx. 600g (Excluding cable, depending on connection)

**For general industrial / For high pressure hydrogen applications** KJ91 Pressure Transmitter

**For general industrial**

Connection				
Standard	Rc1/4			Pressure range 50MPa or lower
	Rc1/2 (Rc1/4 + Joint FJ10-973)			
	G3/8B (Rc1/4 + Joint FJ10-373)			
	G1/2B (Rc1/4 + Joint FJ10-473)			
	G1/4 Female screw			
	9/16-18UNF Female screw (F250C or equivalent by Autoclave)			
Option				
Wetted parts				
Application	Standard	High corrosion resistant	Corrosion resistant	
Pressure sensor	SUS630 (17-4PH)	Co-Ni alloy	SUS316L	
Fitting	SUS316	SUS316	SUS316L	

**KJ91 Pressure range, Maximum allowable pressure, Accuracy**

Pressure range		Standard	High corrosion resistant	Allowable maximum pressure * 1	Corrosion resistant	Allowable maximum pressure * 1	Accuracy (at 23°C)		
							Display * 2 and output		
							±0.5%F.S.	±0.25%F.S.	
Pressure range	0 to 0.3MPa	○	○	200% of pressure range	○	150% of pressure range	○	—	
	0 to 0.5MPa	○	○		○		○		
	0 to 1MPa	○	○		○		○		
	0 to 2MPa	○	○		○		○		
	0 to 3.5MPa	○	○		○		○		
	0 to 5MPa	○	○		○		○		
	0 to 10MPa	○	○	120% of pressure range	○	○	○	○	
	0 to 20MPa	○	○		○	○			
	0 to 35MPa	○	—		○	○			
	0 to 50MPa	○	—		—	○	○		
	0 to 70MPa	○	—	120% of pressure range	—	—	○	—	
	0 to 100MPa	○	—		—	—	○	—	
	0 to 120MPa	○	—		—	—	○	—	
	Pressure range	-0.1 to 0.1MPa	○	○	200% of pressure range	○	150% of pressure range	○	—
		-0.1 to 0.2MPa	○	○		○		○	
		-0.1 to 0.3MPa	○	○		○		○	
-0.1 to 0.5MPa		○	○	○		○			
-0.1 to 1MPa		○	○	○		○			
-0.1 to 1MPa		○	○	○		○			

**For high pressure hydrogen applications**

Connection	
G1/4 Female screw	
9/16-18UNF Female screw (F250C or equivalent by Autoclave)	
Wetted parts	
Application	High pressure hydrogen
Pressure sensor	SUH660 (A286)
Fitting	SUS316 (Ni equivalent material)

**KJ91 Pressure range, Maximum allowable pressure, Accuracy**

Pressure range		High pressure hydrogen	Allowable maximum pressure * 1	Accuracy (at 23°C)	
				Display * 2 and output	
				±0.5%F.S.	±0.25%F.S.
Pressure range	0 to 35MPa	○	150% of pressure range	○	○
	0 to 50MPa	○		○	○
	0 to 70MPa	○		○	—
	0 to 100MPa	○	120% of pressure range	○	—
	0 to 120MPa	○		○	—

\* 1 The maximum allowable pressure is the maximum pressure that does not affect the accuracy of the pressure range and the performance as it is applied to the temporary. Therefore, it does not allow to be subjected to repeated impermissible pressure on the pressure sensor.  
 \* 2 Display accuracy is the stated accuracy +1 digit.

### KJ92 Differential Pressure Transmitter

#### General specification 1

Item	Description
Media	Gas or Liquid (Compatible with wetted parts)
Connection fitting (Option)	25.4mm conversion fitting (Rc1/4, with Equalizing valve): SCS14 Tube conversion fitting with valve (Tube diameter 6mm): SUS316 54mm conversion fitting: SCS14
<b>Material</b>	
Wetted parts	Diaphragm: SUS316L O-ring: Fluoro rubber (JIS type 4 D) Body: SUS316 Drain seal: Alumina ceramic
Sealed liquid	Silicone oil
Supply voltage	24V DC $\pm$ 10% Insulation resistance: 100M $\Omega$ or higher (Fitting and all terminals tied 50V DC)
Output	4 to 20mA DC (2 wire system, Output range: 3.2 to 20.8mA DC) Response time: 100ms (With no filter setting) Resolution: 0.1%F.S. Load resistance: 500 $\Omega$ max.
Range of guaranteed accuracy	$\pm$ 1.0%F.S. (5kPa or higher, $\pm$ 2kPa or higher) $\pm$ 2.0%F.S. (2kPa or lower, $\pm$ 1kPa) Operating temperature range (-10 to 60°C)
Output adjustment range	Zero point : -10 to 110% of the full span (To pressure range) Span point: -10 to 110% of the full span (To pressure range)
Inclination effect	At zero point 90° in front behind the element vertical reference line: $\pm$ (0.1%F.S.+1 digit) at 23°C At zero point 90° to the right and left: $\pm$ 150Pa max. at 23°C
Mounting posture	Vertical with respect to display
<b>Display</b>	
Numeric display	6 digits LCD (Character height: 10mm, with LED backlight) Differential pressure display, Scaling display: 4 LCD digits maximum, Display update rate 500ms (Linear or instantaneous flow (Square root) scale marking is available.) Integrated volume display: 6 LCD digits maximum
Unit display	LCD bar display (With LED backlight) Pressure unit: kPa Linear unit: Arbitrary set
Setting	With internal key switches (Mode, $\blacktriangle$ , $\blacktriangledown$ ) Scaling display: Linear, Momentary flow rate / Output Filter function: Moving average time, Select from 0, 2, 4, 8 and 16 Loop check function: Arbitrary setting output (4 to 20mA DC) Zero adjustment function: Pressure sensor zero adjustment
Operating temperature range	-10 to 70°C (No freezing)
Operating temperature and humidity	-10 to 60°C / 35 to 85%RH (No freezing or condensation)
Storage temperature and humidity	-15 to 65°C / 35 to 85%RH (No freezing or condensation)
Enclosure rating	Protection class: IP65 Case material: ADC12
Mounting location	It is possible to install in outdoors (Avoid direct sunlight)
Memory protection	Permanently stored in non-volatile memory
Vibration resistance	10 to 150Hz, Multi-amplitude 0.7mm (60Hz or lower) Acceleration: 50m/s <sup>2</sup> (60Hz or higher) Vibrating direction: x, y, z (2.5 hours for each)
Shock resistance	Impact acceleration: 100m/s <sup>2</sup> Impact direction: x, y, z (2.5 hours for each)

### KJ92 Differential Pressure Transmitter

#### General specification 2

#### KJ92 Differential pressure range, Allowable maximum pressure, Accuracy, Effect by basic pressure

		Allowable maximum pressure * 1		Accuracy (at 23°C)		Effect by basic pressure			
				Indication * 2 and output					
		Double withstand pressure	Single withstand pressure	±0.5%F.S.	±1.0%F.S.	±2.0%F.S./MPa	±1.0%F.S./MPa	±0.5%F.S./MPa	
Differential pressure range	0 to 1kPa	Positive pressure side 2MPa Negative pressure side -90kPa	200kPa	—	○	○	—	—	
	0 to 2kPa			—	○	—	○	—	
	0 to 5kPa		700kPa	○	—	—	—	○	
	0 to 10kPa			○	—	—	—	○	
	0 to 20kPa			○	—	—	—	○	
	0 to 50kPa			○	—	—	—	○	
	0 to 100kPa			○	—	—	—	○	
	±1kPa			700kPa	200kPa	—	○	—	○
	±2kPa		○		—	—	—	○	
	±5kPa		○		—	—	—	○	
	±10kPa		○		—	—	—	○	
	±20kPa		○		—	—	—	○	
	±50kPa		○		—	—	—	○	

\* 1 The maximum allowable pressure is the maximum pressure that does not affect the accuracy of the pressure range and the performance as it is applied to the temporary. Therefore, it does not allow to be subjected to repeated impermissible pressure on the pressure sensor.

\* 2 Indication accuracy is the stated accuracy +1digit.

#### KJ92 Direction and weight of outlet for electric wire and pressure connection

Mounting type	Mounting system	Outlet for electric wire	Pressure connection	Cable connection	Weight
DIN type	Direct mounting	Right side (Standard), Left side	Lower side, Upper side	Cable gland: GDM3011 (Made by HIRSCHMANN) 2 wire shielded cable Applicable cable diameter 6 to 9mm (Center conductor sectional area: 0.5 to 1.25mm <sup>2</sup> ) Internal connection terminal block Number of poles : 4 poles (+, -, Ground, NC) Applicable crimp terminal: Round bare terminal, R1.25-3 (Nominal size)	Approx. 560g (Excluding cables, Conversion fitting and Bracket)
	Panel mounting				
	2B pipe mounting				
Connector type	Direct mounting	Right side (Standard), Left side	Lower side, Upper side	Connector: TC1108-1A10-7F (Made by Tajimi Electronics Co., Ltd.) Cable type Shielded cable (Standard): Cable outer diameter φ6.2mm -20°C to 60°C Heat resistant cable: Cable outer diameter φ6.2mm -20°C to 105°C Cold resistant cable: Cable outer diameter φ6.0mm -40°C to 80°C	Approx. 550g (Cable with connector, Conversion fitting and Bracket)
	Panel mounting				
	2B pipe mounting				
Terminal box type	Panel mounting	Right side	Lower side, Upper side	Cable gland: FBA21-13 G1/2 (Made by AVC Corporation of Japan) 2 wire shielded cable Applicable cable diameter 9 to 14mm (Center conductor sectional area: 0.25 to 1.65mm <sup>2</sup> )	Approx. 740g (Excluding cables, Conversion fitting and Bracket)
	2B pipe mounting				

### KJ91·KJ92 common

#### Specification of intrinsically safe construction

##### Hazardous area

Explosion-proof standard	IECEX (International)	ATEX (Europe)	Japan
Approval number	IECEX CML 20.0165X	CML 20ATEX2289X	CML 21JPN2867X
Hazardous location classification	Zone0	Category 1 G	Zone0
Applicable Standard	IEC 60079-0:2017 Ed. 7 IEC 60079-11:2011 Ed. 6	EN IEC 60079-0:2018 EN 60079-11:2012	JNIO SH-TR-1:2015 JNIO SH-TR-46-6:2015
Applicable directive	2014/34/EU (ATEX Directive)		
Explosion-proof indication			
Safety maintenance rating	Allowable voltage of intrinsically safe circuit (Ui): 28V Allowable current of intrinsically safe circuit (Ii): 93mA Allowable power of intrinsically safe circuit (Pi): 651mW Internal capacitance of intrinsically safe circuit (Ci): 0.049 μF Internal inductance of intrinsically safe circuit (Li): 0mH Ambient temperature: -10 to 60°C		
External transmission cable	$L_i + L_c \leq L_o$ $C_i + C_c \leq C_o$ Lc: Inductance of external transmission cable Cc: Capacitance of external transmission cable (Varies depending on the barrier used.)		
Withstand voltage	500V AC, 1min.		

##### Combination of conditions related to safety rating

Safety maintenance rating of KJ91	Combination condition	Safety maintenance rating of safety barrier
Allowable voltage of intrinsically safe circuit (Ui)	$\geq$	Maximum voltage of intrinsically safe circuit (Uo)
Allowable current of intrinsically safe circuit (Ii)	$\geq$	Maximum current of intrinsically safe circuit (Io)
Allowable power of intrinsically safe circuit (Pi)	$\geq$	Maximum power of intrinsically safe circuit (Po)

##### Combination of conditions on parameters

Parameters of the proposed device and wiring	Combination condition	Parameters of safety barrier
Input inductance of KJ92 (Li) + Inductance of the wiring (Lc)	$\leq$	Allowable inductance intrinsically safe circuit (Lo)
Input capacitance of KJ92 (Ci) + Capacitance of the wiring (Cc)	$\leq$	Allowable capacitance intrinsically safe circuit (Co)

#### Recommended safety barrier

The safety barrier can be selected by the customer.

##### Insulated type

Item	Description	
Manufacturer Type	• Pepperl + Fuchs K.K. KFD2—STC4—Ex1	• Cooper Industries Japan K.K. MTL5541
Type approval number (Japan)	No. TC16232	No. TC19435
Intrinsically safe construction type	Exia II C	Exia II C
	*No test report can be issued for this product.	

※Earth of intrinsically safe regulation is unnecessary because an insulated barrier is isolated from intrinsically safe circuit.

### Group classification

The types of explosion-proof electrical equipment are classified into Group I and Group II according to where they are used. This product belongs to Group II, and falls under the category of equipment used in hazardous locations in factories or offices, excluding hazardous locations in mine shafts.

• **Applicable group classification and classification of gas or steam**

Gas or steam classification	Applicable groups		
A	II A	II B	II C
B	—	II B	II C
C	—	—	II C

• **Ignition point of gas or steam which T4 can apply (Within bold-line rectangle)**

Ignition point of gas or steam	Applicable temperature class					
Higher than 450°C	T1	T2	T3	<b>T4</b>	T5	T6
Higher than 300°C	—	T2	T3	T4	T5	T6
Higher than 200°C	—	—	T3	T4	T5	T6
Higher than 135°C	—	—	—	<b>T4</b>	T5	T6
Higher than 100°C	—	—	—	—	T5	T6
Higher than 85°C	—	—	—	—	—	T6

• **Example of gas or steam which can apply Exia II C T4 (Within bold-line rectangle)**

Group	Temperature class	T1	T2	T3	<b>T4</b>	T5	T6
II A		Acetone Ammonia Ethane Acetic acid Ethyl acetate Toluene Benzene Methane	1-butanol Butane Propane Methanol	Hexane	Acetaldehyde		Ethyl nitrite
II B		Carbon monoxide	Ethylene Ethylene oxide Ethanol		Ethyl methyl Ether		
II C		Hydrogen	Acetylene				Carbon bisulfide

### Equipment protection level (EPL) classification symbol

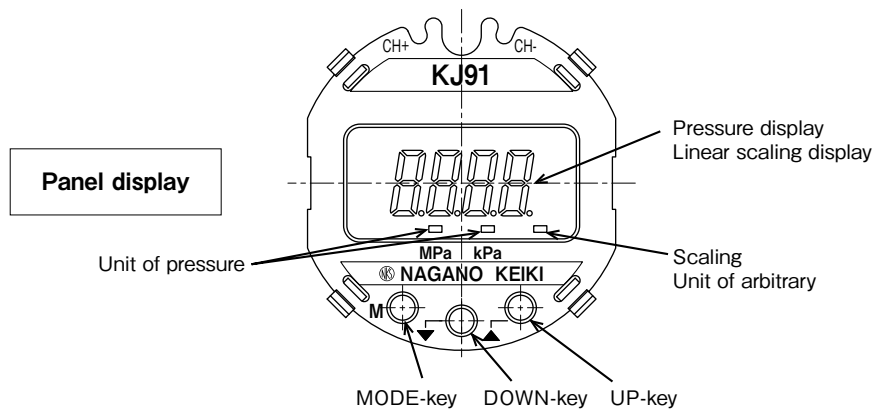
Ga: Equipment with an extremely high level of protection, which is used in an explosive gas atmosphere and which, during normal operation, will not become an ignition source in the event of an unexpected or rare malfunction. In the event of a malfunction during normal operation, in the event of an anticipated malfunction, or in the event of a rare malfunction.

Gb: Equipment with a high level of protection that is used in an explosive gas atmosphere and that does not serve as an ignition source during normal operation or in the event of an unexpected malfunction. Equipment with a high level of protection.

Gc: Equipment with an enhanced level of protection that is used in an explosive gas atmosphere and has some additional protection that prevents it from being an ignition source during normal operation and also prevents it from being an ignition source in the event of a normally expected malfunction, such as lamp failure.

### Function

#### KJ91 Pressure Transmitter



① **LCD display**

The bright and clear LED backlight ensures excellent visibility in a dark place and night time.

② **Scaling**

Pressure linearly converted to an arbitrary physical quantity and displayed/output.

③ **Zero adjustment**

The zero point at 4 to 20mA DC can be adjusted by key operation.

④ **Loop check**

Without applying pressure, 4 to 20 mA DC can be output arbitrarily. This makes maintenance easy.

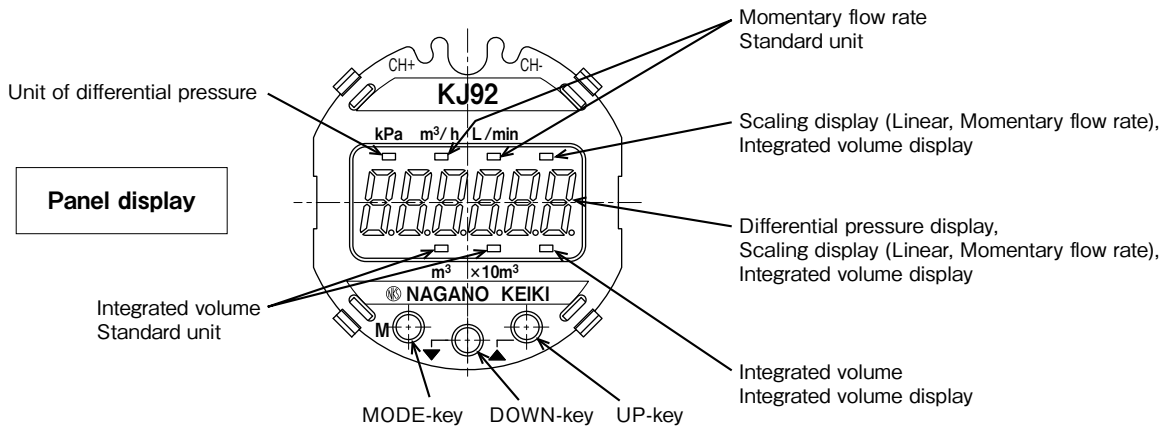
⑤ **Filter**

Pulsations and other pressure changes can be smoothened by moving averages to reduce display fluctuations.

⑥ **Holding display**

Both the maximum value (Peak) and the minimum value (Bottom) can be indicated.

#### KJ92 Differential Pressure Transmitter



① **LCD display**

The bright and clear LED backlight ensures excellent visibility in a dark place and night time.

② **Scaling**

Differential pressure linearly converted to an arbitrary physical quantity and displayed/output.

The square root of the differential pressure is extracted and the instantaneous flow is displayed and output.

③ **Zero adjustment**

The zero point at 4 to 20mA DC can be adjusted by key operation.

④ **Loop check**

Without applying pressure, 4 to 20 mA DC can be output arbitrarily. This makes maintenance easy.

⑤ **Filter**

Pulsations and other differential pressure changes can be smoothened by moving averages to reduce display fluctuations.

⑥ **Integrated volume display**

The integrated volume is displayed form independently from or alternately with the scaling.



# KJ91·92

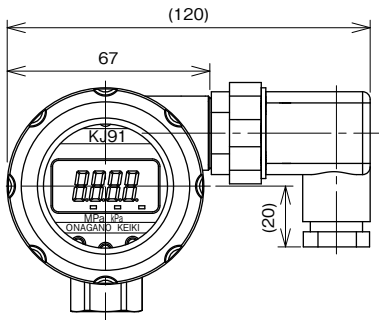
Intrinsically Safe Pressure & Differential Pressure Transmitter

## For general industrial KJ91 Pressure Transmitter

### Dimensions 1

Unit: mm

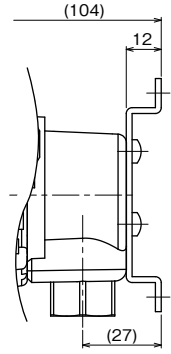
#### DIN terminal type



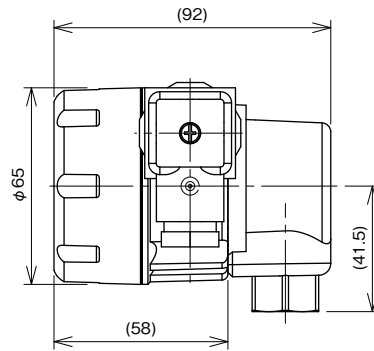
Pressure inlet  
 Rc1/4 (Standard)    KJ91-□7□  
 G1/4 (Female option)    KJ91-□P□  
 9/16-18UNF (Option)    KJ91-□U□  
 Other connections are with fittings.

KJ91-N□□

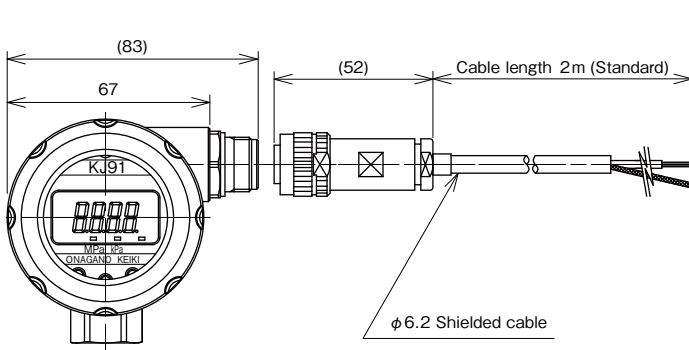
#### For panel mounting



KJ91-P□□

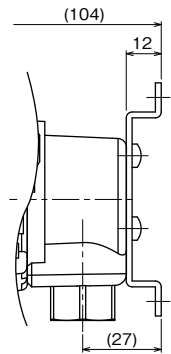


#### Connector type

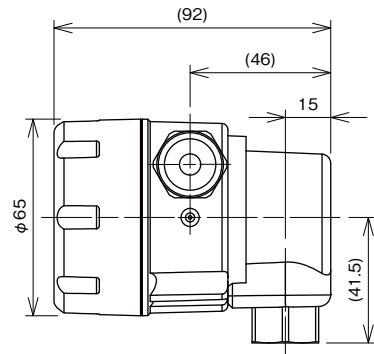


KJ91-Q□□

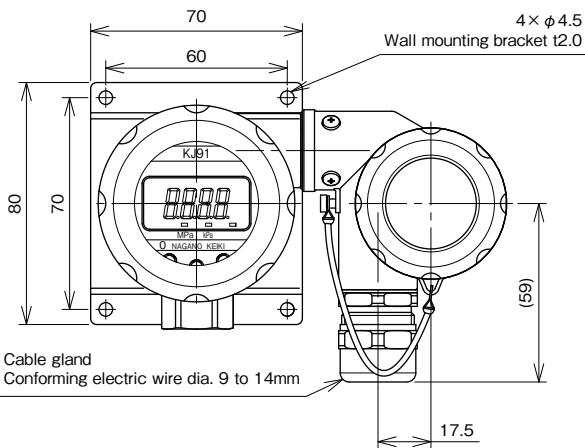
#### For panel mounting



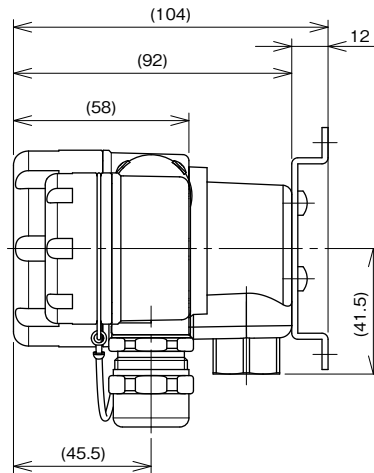
KJ91-U□□



#### Terminal box type



KJ91-T□□



# KJ91·92

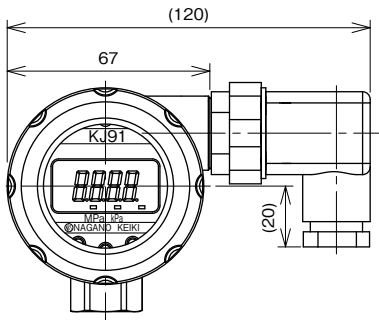
Intrinsically Safe Pressure & Differential Pressure Transmitter

**For high pressure hydrogen applications** KJ91 Pressure Transmitter

## Dimensions 2

Unit: mm

### DIN terminal type

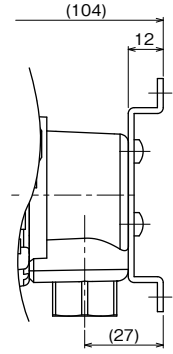


Pressure inlet  
G1/4 (Female option)  
9/16-18UNF (Option)

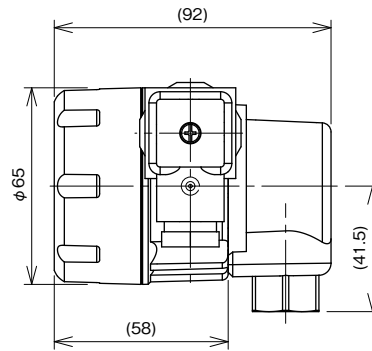
KJ91-□PH  
KJ91-□UH

KJ91-N□H

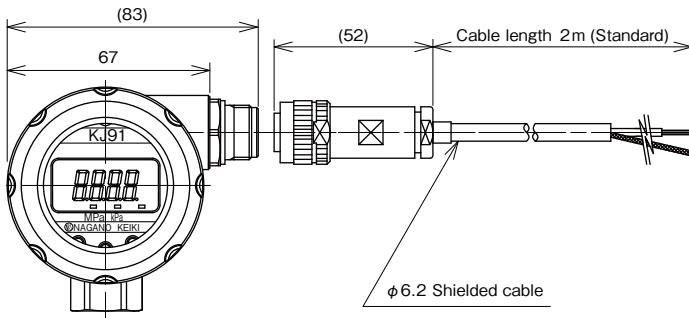
### For panel mounting



KJ91-P□H

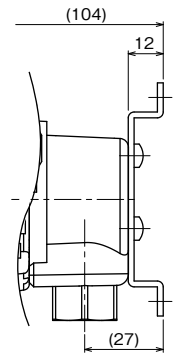


### Connector type

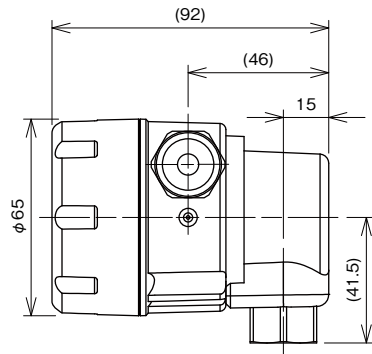


KJ91-Q□H

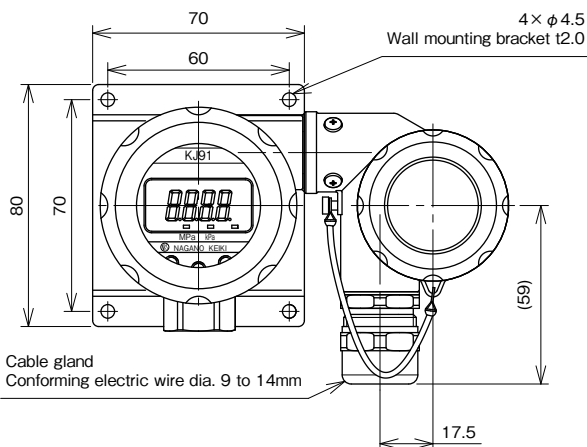
### For panel mounting



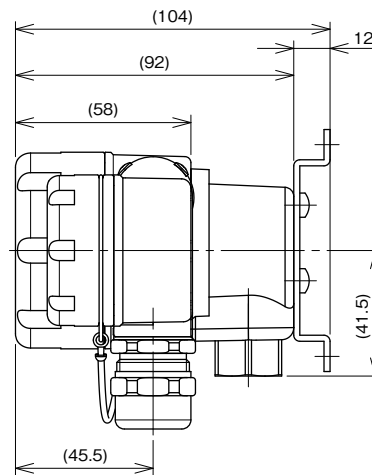
KJ91-U□H



### Terminal box type



KJ91-T□H



# KJ91·92

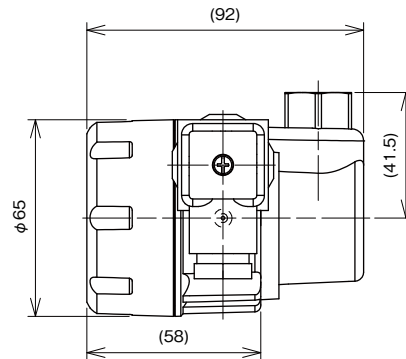
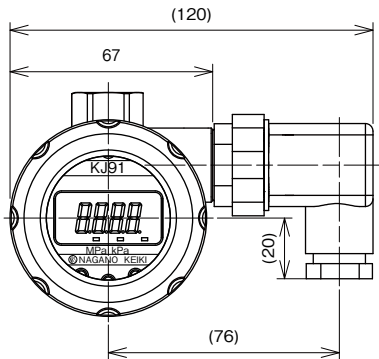
Intrinsically Safe Pressure & Differential Pressure Transmitter

## KJ91 Pressure Transmitter

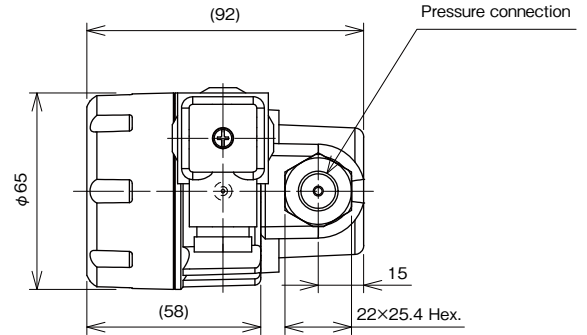
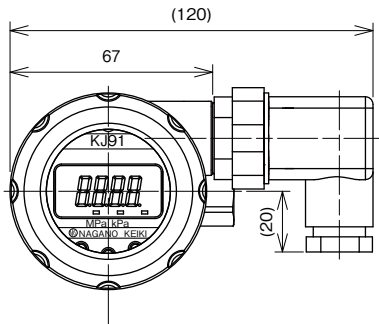
### Dimensions 3

Unit: mm

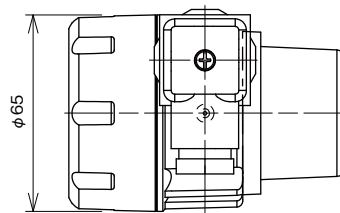
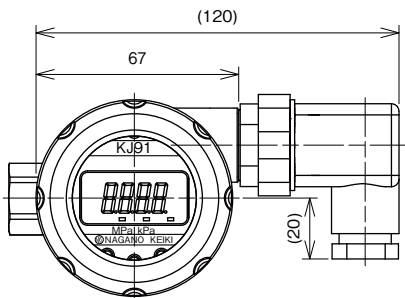
#### Pressure Connection: Upper



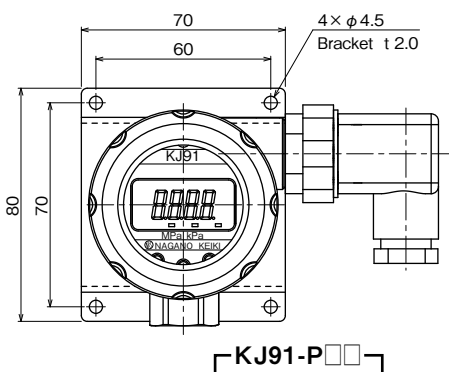
#### Pressure Connection: Right



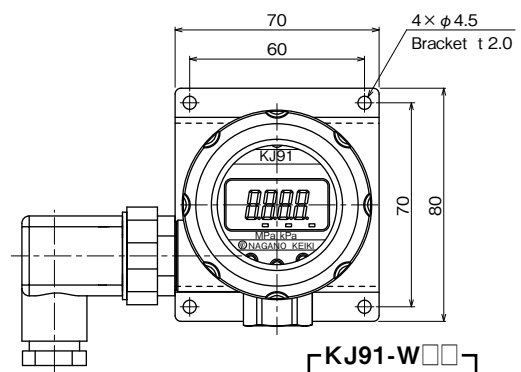
#### Pressure Connection: Left



#### 《Panel mounting》Outlet for electric wire Right side



#### 《Panel mounting》Outlet for electric wire Left side



# KJ91·92

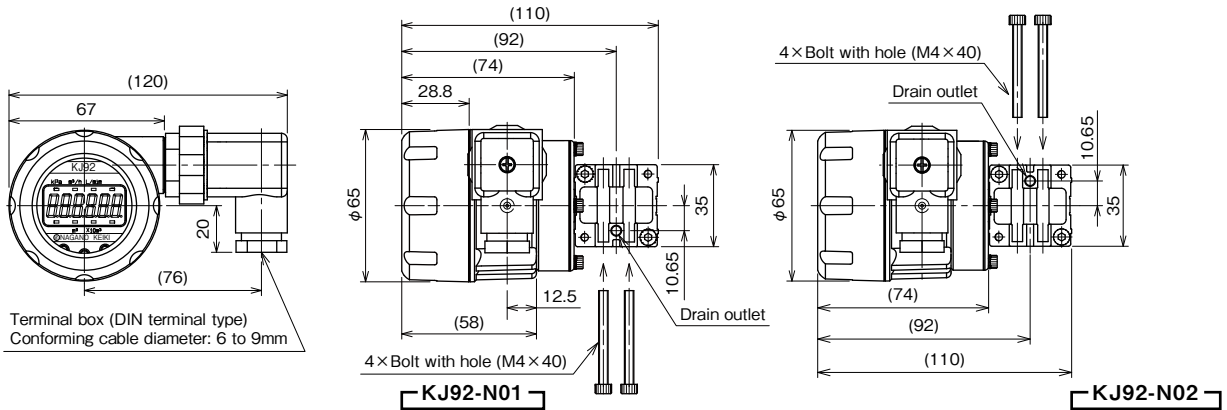
Intrinsically Safe Pressure & Differential Pressure Transmitter

## KJ92 Differential Pressure Transmitter

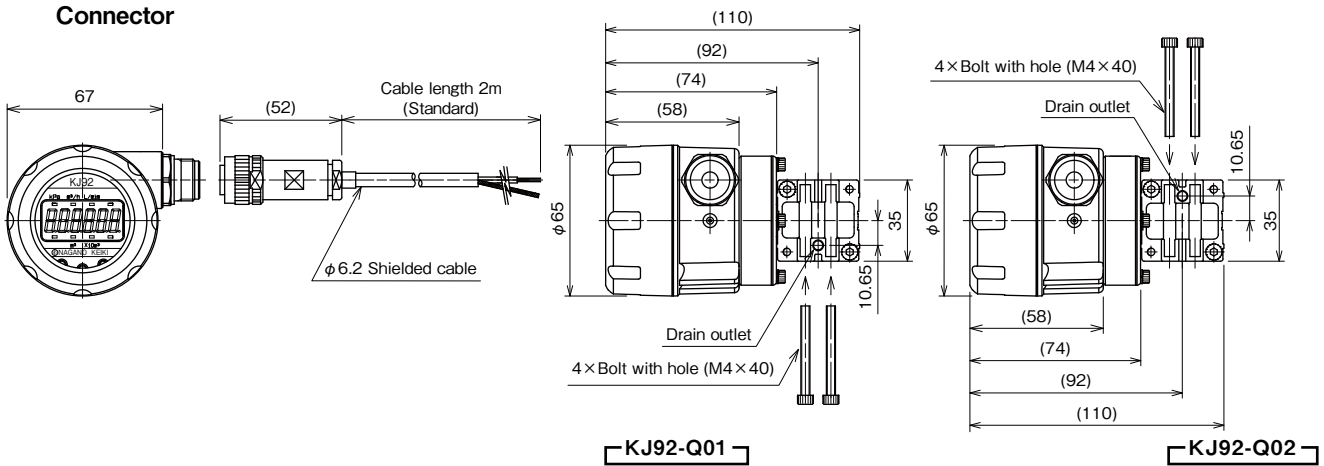
### Dimensions 4

Unit: mm

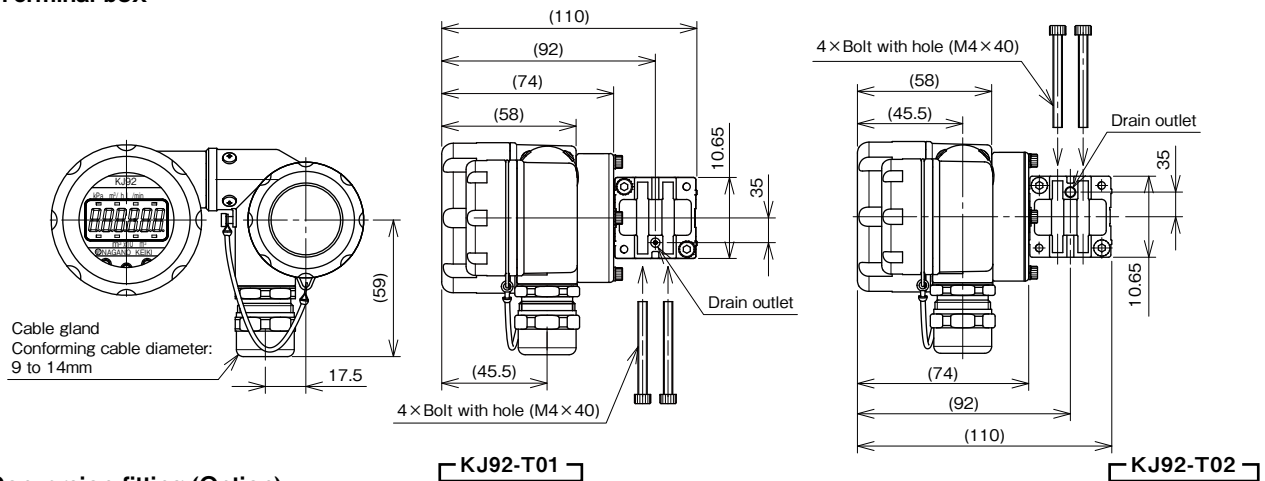
#### DIN



#### Connector

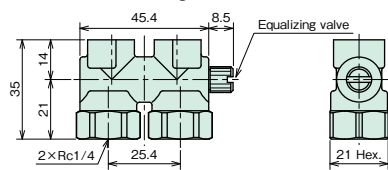


#### Terminal box

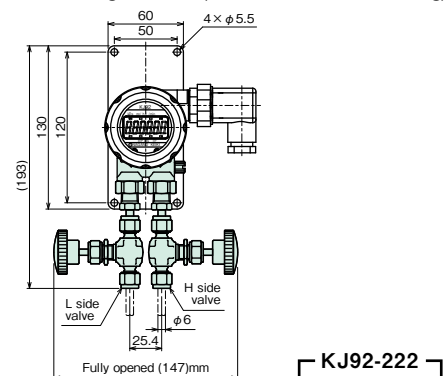


#### ◎ Conversion fitting (Option)

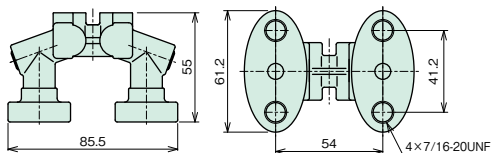
● With 25.4mm conversion fitting



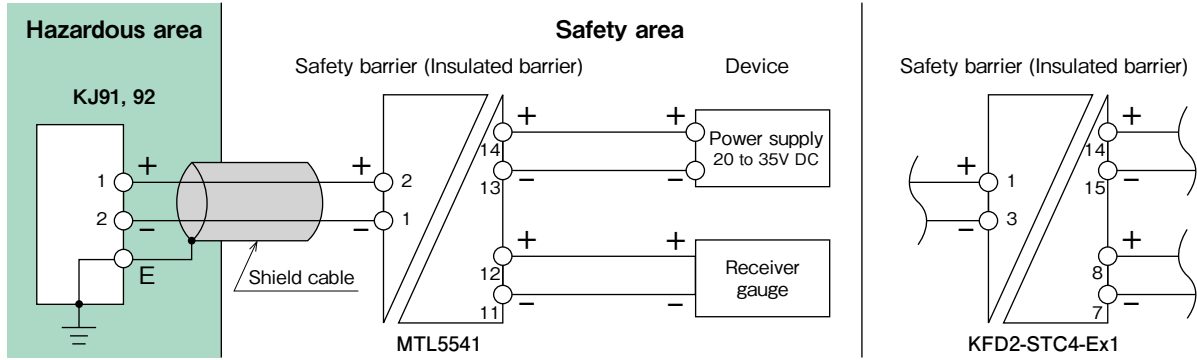
● Tube conversion fitting with valve (With 25.4mm conversion fitting)



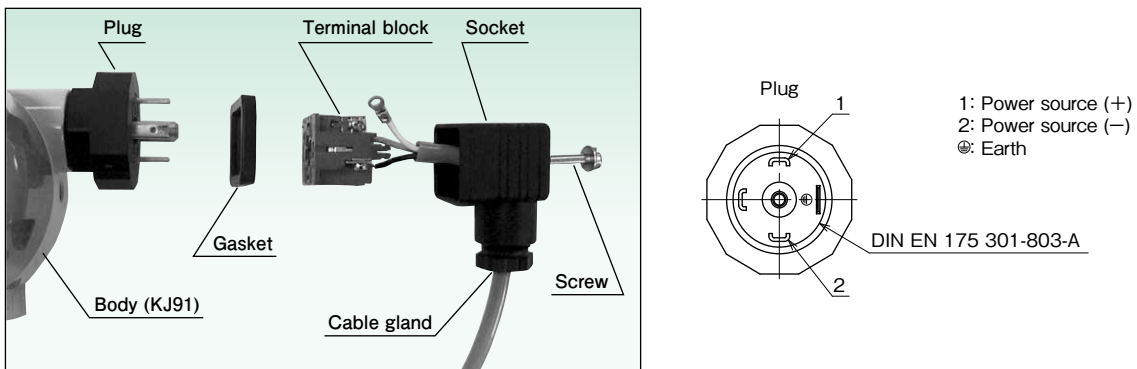
● With 54mm conversion fitting (Mounting system: Direct mounting only)



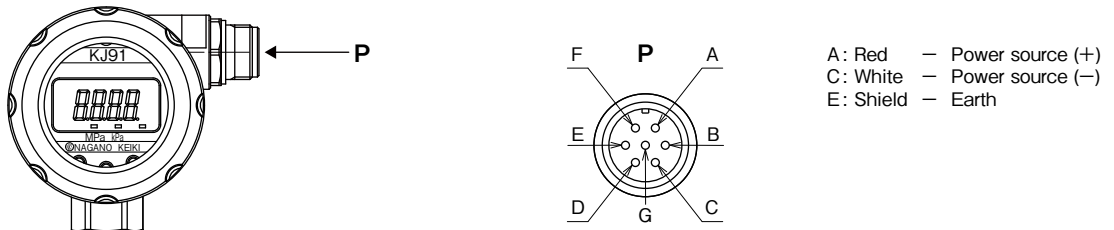
### Wiring



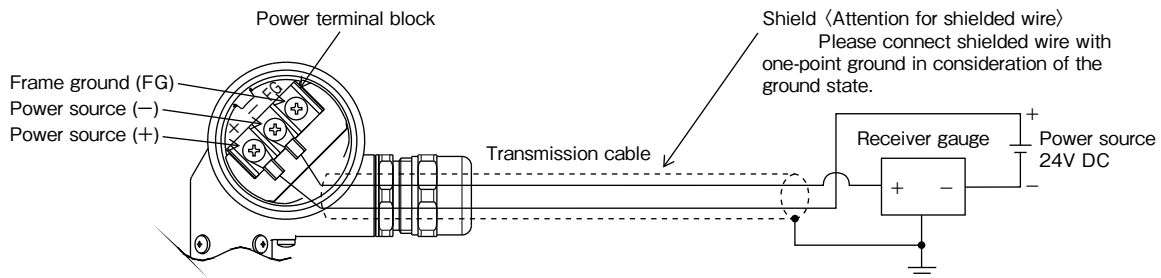
### DIN type terminal



### Connector



### Terminal box



#### ⚠ CAUTION

- Please use the transmission cable after routing it independently away from the high current electrical line and confirm that there is no malfunction due to noise.
- If the cable outer diameter does not conform to specification, water and dust will enigrate because no sealing effect is obtained. Please be sure to use a cable with suitable outer diameter.
- Transmission cable installed into the cable gland must be slacked at the position lower than the cable gland connection in order to prevent the infiltration of water into the unit inside.



### For high pressure hydrogen applications KJ91 Pressure Transmitter

#### Model number configuration

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

Model: **K J 9 1** — **H** — **1 1** **0 3** **X**

① Mounting system: Right (N, P, Q, U, T) / Left (V, W, X, Y)

② Connection fitting: P (G1/4 Female), U (9/16-18UNF (Option) F250C or equivalent by Autoclave)

③ Wetted parts: H (Diaphragm: SUH660 (A286), Fitting: SUS316 (Ni equivalent material))

④ Pressure range (MPa): R (0 to 35MPa), S (0 to 50MPa), T (0 to 70MPa), U (0 to 100MPa), V (0 to 120MPa)

⑤ Accuracy: 4 (±0.25%F.S. at 23°C), 5 (±0.5%F.S. at 23°C)

⑥ Supply voltage: 1 (24V DC ±10%)

⑦ Output: 1 (4 to 20mA DC (2 wire system))

⑧ Outlet for electric wire: 1 (DIN terminal type), 0 (Terminal box type), 0 (Connector type)

⑨ Cable type: 0 (Shielded cable), 2 (Heat resistant cable), 3 (Cold resistant cable)

⑩ Additional spec.: 0 (Not required)

⑪ Treatment: 3 (Use no oil & water)

⑫ Application: 7 (Standard Air tightness test report), A (Proof pressure, leak test report)

⑬ Mounting posture: 1 (Left), 2 (Right), 3 (Upper), 4 (Lower)

⑮ Documents: 0 (Not required), 1 (Required)

**Order separately for recommended safety barrier. If using a barrier other than recommended barrier, strictly observe the "Safety Maintenance Rating".**

\* Panel mounting only for pressure connection: Lower.

**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





