

REMOTE SEAL TYPE PRESSURE TRANSMITTER

DATA SHEET

FKB...5

The FCX-AIII pressure transmitter accurately measures gauge pressure and transmits a proportional 4 to 20mA signal.

The transmitter utilizes a unique micromachined capacitance silicon sensor with state-of-the-art microprocessor technology to provide exceptional performance and functionality.

Totally welded construction of the seals assures excellent reliability in high temperature and highly corrosive process conditions.

FEATURES

1. High accuracy

0.2% accuracy for all calibrated spans is a standard feature for all GP models covering 1.3kPa {0.013bar} range to 50000kPa {500bar} high pressure range. 0.1% accuracy is available as option. Fuji's micro-capacitance silicon sensor assures this accuracy for all elevated or suppressed calibration ranges without additional adjustment.

2. Minimum environmental influence

The "Advanced Floating Cell" design which protects the pressure sensor against changes in temperature, and overpressure substantially reduces total measurement error in actual field applications.

3. Fuji/HART® bilingual communications protocol and FOUNDATION™ fieldbus and Profibus™ compatibility

FCX-AIII series transmitter offers bilingual communications to speak both Fuji proprietary protocol and HART®. Any HART® compatible devices can communicate with FCX-AIII. Further, by upgrading electronics FOUNDATION™ fieldbus and Profibus™ are also available.

4. Application flexibility

Various options that render the FCX-AIII suitable for almost any process applications include:

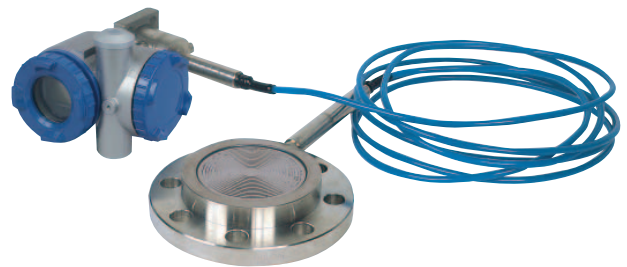
- Full range of hazardous area approvals
- Built-in RFI filter and lightning arrester
- 5-digit LCD meter with engineering unit
- Stainless steel electronics housing
- Wide selection of materials
- High temperature, high vacuum seals

5. Burnout current flexibility (Under Scale: 3.2 to 4.0mA, Over Scale: 20.0 to 21.6mA)

Burnout signal level is adjustable using Model FXW Hand Held Communicator (HHC) to comply with NAMUR NE43.

6. Dry calibration without reference pressure

Thanks to the best combination of unique construction of mechanical parts (Sensor unit) and high performance electronics circuit (Electronics unit), reliability of dry calibration without reference pressure is at equal level as wet calibration.



SPECIFICATIONS

Functional specifications

Service: Liquid, gas, or vapour
Span, range, and overrange limit:

Type	Span limit [kPa]{bar}		Range limit [kPa]{bar}	Overrange limit [MPa] {bar}
	Min.	Max.		
FKB□□1	1.3 {0.013}	130 {1.3}	-100 to +130 {-1 to +1.3}	1 {10}
FKB□□2	5 {0.05}	500 {5}	-100 to +500 {-1 to +5}	1.5 {15}
FKB□□3	30 {0.3}	3000 {30}	-100 to +3000 {-1 to +30}	9 {90}
FKB□□4	100 {1}	10000 {100}	-100 to +10000 {-1 to +100}	15 {150}
FKB□□5	500 {5}	50000 {500}	-100 to +50000 {-1 to +500}	75 {750}

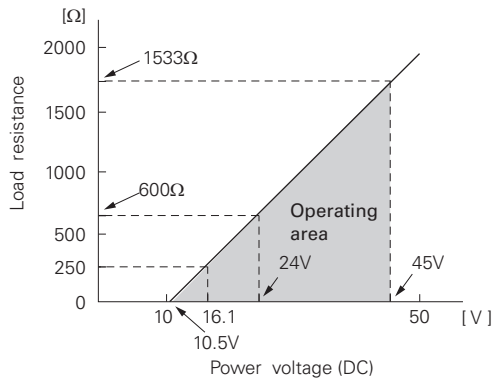
Remark: To minimize environmental influence, span should be greater than 1/40 of the max. span in most applications.

- Lower range limit (vacuum limit) ;
Silicone fill sensor: See Fig. 1, Fig. 2
Fluorinated fill sensor: Atmospheric pressure
- Conversion factors to different units;
1MPa=10³kPa=10bar=10.19716kgf/cm²=145.0377psi
1kPa=10mbar=101.9716mmH₂O=4.01463inH₂O

Output signal: 4 to 20mA DC with digital signal superimposed on the 4 to 20mA signal.

Power supply: Transmitter operates on 10.5V to 45V DC at transmitter terminals.
10.5V to 32V DC for the units with optional arrester.

Load limitations: see figure below



Note: For communication with HHC⁽¹⁾ (Model: FXW), min. of 250Ω is required.

Hazardous locations: SEE TABLE 2

Zero/span adjustment:

Zero and span are adjustable from the HHC⁽¹⁾. Zero and span are also adjustable externally from the adjustment screw (Span adjustment is not available with 9th digit code "L, P, Q, S").

Damping:

Adjustable from HHC or local adjustment unit with LCD display. The time constant is configurator between 0.06 to 32 seconds.

Zero elevation/suppression:

Zero can be elevated or suppressed within the specified range limit of each sensor model.

Normal/reverse action:

Selectable from HHC⁽¹⁾.

Indication:

Analog indicator or 5-digit LCD meter, as specified.

Burnout direction: Selectable from HHC⁽¹⁾

If self-diagnostic detect transmitter failure, the analog signal will be driven to either "Output Hold", "Output Overscale" or "Output Underscale" modes.

"Output Hold":

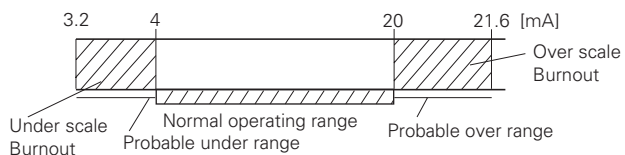
Output signal is hold as the value just before failure happens.

"Output Overscale":

Adjustable within the range 20.0mA to 21.6mA from HHC⁽¹⁾

"Output Underscale":

Adjustable within the range 3.2mA to 4.0mA from HHC⁽¹⁾



Output Limits conforming the NAMUR NE43 by order.

Loop-check output:

Transmitter can be configured to provide constant signal 3.2mA through 21.6mA by HHC⁽¹⁾.

Temperature limit:

- Ambient: -40 to +85°C
- (-20 to +80°C for LCD indicator)
- (-40 to +60°C for arrester option)
- (-10 to +60°C for fluorinated oil fill transmitter)

- (-10 to +85°C for silicone oil "H", "S", "K") *
- (+20 to +85°C for silicone oil "J", "T") *

*) In case of capillary length is more than 7m, max. temperature is +55°C.

For explosionproof units (flameproof or intrinsic safety), ambient temperature must be within the limits specified by each standard.

Process:

Fill fluid	Code in the 13th digit of "Code symbols"	Process temperature	Lower limit of static press.
Fluorinated oil	W, A and D	-20 to 120°C	Atmospheric pressure
Silicone oil	H	-15 to 250°C	
	J	20 to 300°C	
	Y and G	-40 to 180°C	2.7kPa abs (20mmHg abs)
	S	-15 to 250°C	
	T	20 to 300°C	
	K	-15 to 200°C	0.13kPa abs (1mmHg abs) or more

Storage: -40 to +90°C

Humidity limit: 0 to 100% RH

Communication: With HHC⁽¹⁾ (Model FXW, consult Data Sheet No. EDS8-47), following items can be remotely displayed or configured.

Note: HHC's version must be higher than 7.0 (or FXW □□□□1-□4), for FCX-AIII.

Local configurator with LCD display (option):

Local configurator with 3 push button and LCD display can support following items.

Items	By communication with FXW		By local configurator (with 3 push button)	
	Display	Set	Display	Set
Tag No.	✓	✓	✓	✓
Model No.	✓	✓	✓	✓
Serial No. & Software Version	✓	—	✓	—
Engineering unit	✓	✓	✓	✓
Range limit	✓	—	✓	—
Measuring range	✓	✓	✓	✓
Damping	✓	✓	✓	✓
Output mode	✓	—	✓	—
Burnout direction	✓	✓	✓	✓
Calibration	✓	✓	✓	✓
Output adjust	—	✓	—	✓
Data	✓	—	✓	—
Self diagnoses	✓	—	✓	—
Printer (In case of FXW with printer option)	✓	—	—	—
External switch lock	✓	✓	✓	✓
Transmitter display	✓	✓	✓	✓
Linearize	✓	✓	—	—
Rerange	✓	✓	✓	✓
Saturate current	✓	✓	✓	✓
Write protect	✓	✓	✓	✓
History				
- Calibration history	✓	✓	✓	✓
- Ambient temperature history	✓	—	✓	—

EMC Conformity: EN61326-1: 2006 **CE**

(Note) (1) HHC: Hand Held Communicator

Performance specifications

Reference conditions, silicone oil fill, 316SS isolating diaphragms, 4 to 20mA analog output in linear mode.

Accuracy rating: (including linearity, hysteresis, and repeatability)

(Standard)

For spans greater than 1/10 of URL: $\pm 0.2\%$ of span

For spans below 1/10 of URL:

$$\pm \left(0.1 + 0.1 \frac{0.1 \times \text{URL}}{\text{Span}} \right) \% \text{ of span}$$

(Option) (Code; 21th digit H,K)

Not available for Max span 50000kPa model.

For spans greater than 1/10 of URL: $\pm 0.1\%$ of span

For spans below 1/10 of URL:

$$\pm \left(0.05 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right) \% \text{ of span}$$

Stability: $\pm 0.2\%$ of upper range limit (URL) for 10 years.

Temperature effect:

Effect per 28°C change between the limits of -40°C and +85°C

(Standard) Zero shift: $\pm \left(0.35 \frac{\text{URL}}{x} \right) \%$

Total effect: $\pm \left(0.5 \frac{\text{URL}}{x} \right) \%$

(Option) (Code; 21th digit J,K)

Zero shift:

$$\pm 0.3\% \quad (x \geq 1/4 \text{ URL})$$

$$\pm \left(0.1 + 0.2 \frac{0.25 \times \text{URL}}{x} \right) \% \quad (x < 1/4 \text{ URL})$$

Total effect:

$$\pm 0.4\% \quad (x \geq 1/4 \text{ URL})$$

$$\pm \left(0.2 + 0.2 \frac{0.25 \times \text{URL}}{x} \right) \% \quad (x < 1/4 \text{ URL})$$

Overrange effect: Zero shift; 0.2% of URL for any overrange to maximum limit

Supply voltage effect:

Less than 0.005% of calibrated span per 1V

Update rate: 60 msec

Step response: Time constant: 0.3s (at 23°C)

Dead time: 0.12s

(without electrical damping)

Dielectric strength:

500V AC, 50/60Hz 1 min., between circuit and earth.

Insulation resistance:

More than 100M Ω /500V DC.

Internal resistance for external field indicator:

12 Ω or less

Physical specifications

Electrical connections:

G1/2, 1/2-14 NPT, Pg13.5, or M20 \times 1.5 conduit, as specified.

Process connections:

JIS, ANSI, or DIN raised face flanges or screw connection JIS/ISO G1 external thread.

Refer to "Code symbols."

Process-wetted parts material:

Diaphragm: 316L stainless steel, Hastelloy-C Monel, Tantalum, Titanium or Zirconium

Flange face: 316 stainless steel, Hastelloy-C Monel, Tantalum, Titanium or Zirconium

Extension: 316 stainless steel, Hastelloy-C (Refer to "Code symbols")

Non-wetted parts material:

Electronics housing: Low copper die-cast aluminum alloy finished with polyester coating (standard), or 316 stainless steel (ASTM CF8M), as specified.

Capillary: In case of 11th code "D, E, L, F, M, N, P"; PVC armored stainless steel. In case of 11th code "Q, R, S, T, V, W, X", stainless steel armored stainless steel.

Mounting flange: 304 stainless steel or carbon steel, as specified

Fill fluid: Silicone oil (standard) or fluorinated oil

Mounting bracket: 304 stainless steel

Environmental protection:

IEC IP67 and NEMA 6/6P

Mounting:

On 60.5mm (JIS 50A) pipe using mounting bracket, direct wall mounting

Mass {weight}:

Transmitter approximately 8.2 to 11.2kg without options.

Add; 0.5kg for mounting bracket

4.5kg for stainless steel housing option

1.5kg per 50mm extension of diaphragm

Optional features

- Indicator:** A plug-in analog indicator (2.5% accuracy).
An optional 5-digit LCD meter with engineering unit is also available.
- Local configurator with LCD display:** An optional 5 digits LCD meter with 3 push buttons can support items as using communication with FXW.
- Arrester:** A built-in arrester protects the electronics from lightning surges.
Lightning surge immunity:
4kV (1.2 × 50μs)
- Oxygen service:** Special cleaning procedures are followed throughout the process to maintain all process wetted parts oil-free.
The fill fluid is fluorinated oil.
- Chlorine service:** Oil-free procedures as above. Includes fluorinated oil for fill.
- Degreasing:** Process-wetted parts are cleaned, but the fill fluid is standard silicone oil. Not for use on oxygen or chlorine measurement.
- Vacuum and high temperature service:** Special silicone oil and filling procedure are applied.
See Fig.1 and Fig.2.
- Optional tag plate:** An extra stainless steel tag for customer tag data is wired to the transmitter.
- Coating of cell:** Cell's surface is finished with epoxy/polyurethane double coating. Specify if environment is extremely corrosive.

ACCESSORIES

Hand-held communicator:
(Model FXW, refer to Data Sheet No. EDS8-47)

ORDERING INFORMATION

When ordering this instrument, specify.

1. CODE SYMBOLS
2. Measuring range.
3. Output orientation (burnout direction) when abnormality is occurred in the transmitter.
Hold / Overscale / Underscale
Unless otherwise specified, output hold function is supplied.
4. Indication method (indicated value and unit) in case of the actual scale (code D, H, P, S on 9th digit).
5. Tag No. (up to 14 alphanumerical characters), if required.

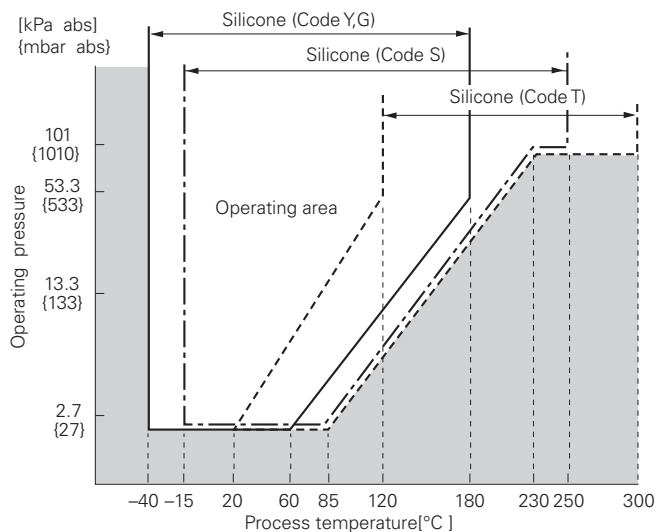


Fig. 1 Relation between process temperature and operating pressure

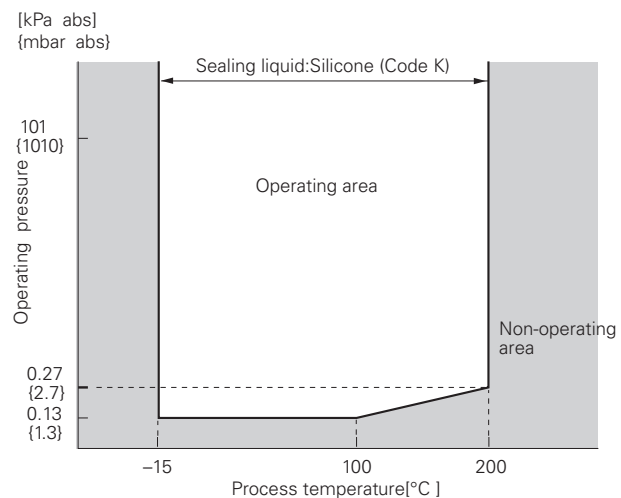


Fig. 2 Relation between process temperature and operating pressure

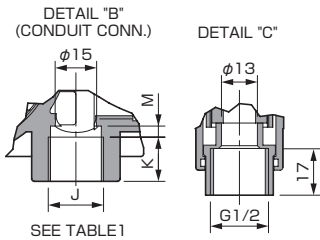
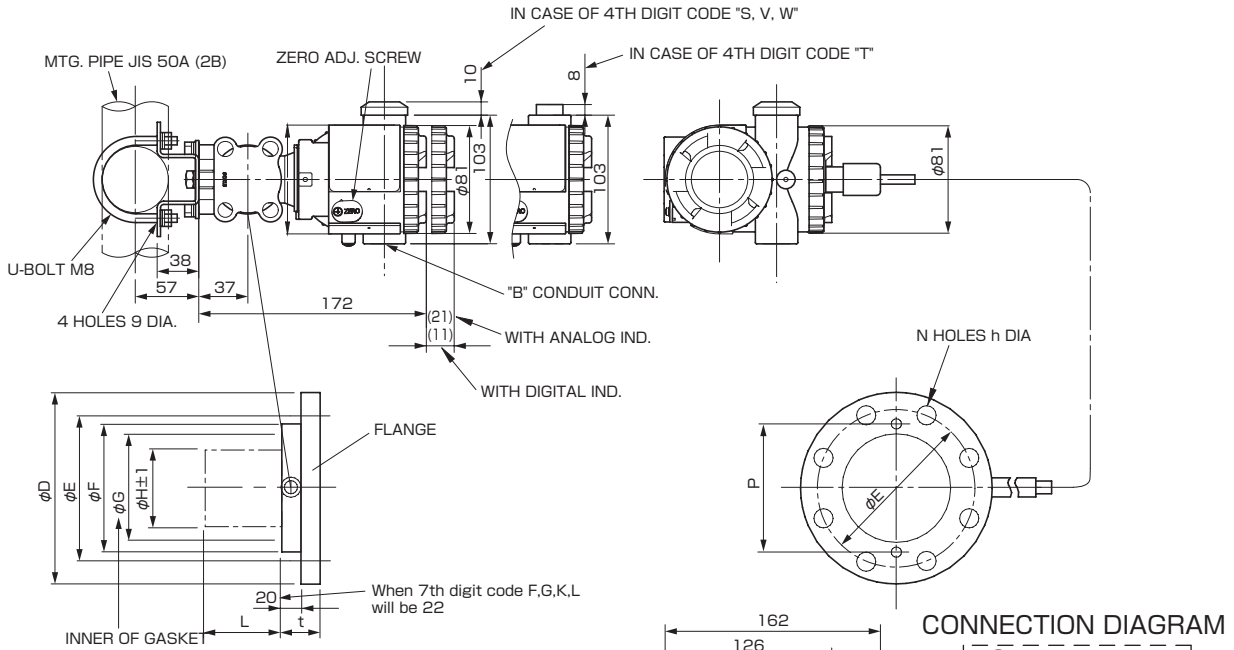
OUTLINE DIAGRAM (Unit:mm)

< CODE SYMBOLS : FKB

S	V	0	4	D	P	1
T	W	1	A	E	Q	2
		3	B	K		3

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< Flange type >



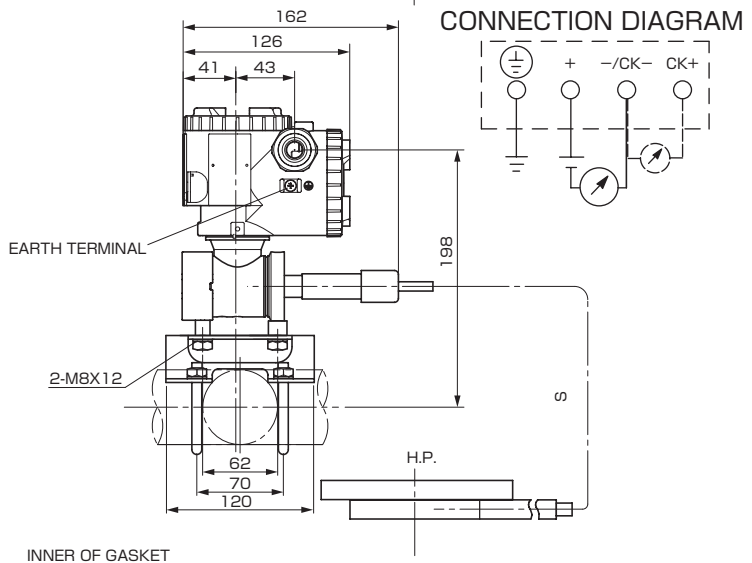
11th digit of the code symbols	S(m)
D, Q	1.5
E, R	3
L, S	5
F, T	6
M, V	7
N, W	8
P, X	10

4th digit of the code symbols	Conduit conn.			7th digit of the code symbols	L	MASS.APPROX(kg)
	J	K	M			
S	G 1/2	18	2	V, J, H, M, T, P, R	0	8.2
T	1/2-14NPT	16	4	A, F	50	9.2
V	Fig.13.5	10.5	4.5	B, G	100	10.2
W	M20x1.5	16	4	C, K	150	10.7
				D, L	200	11.2

TABLE 1

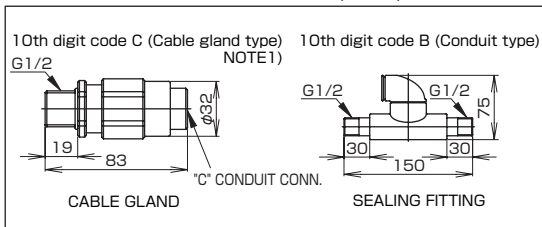
NOTE) The measurements "t" will be added 2mm to each measurements in case of 7th digit of F,G,L,K.

5th digit of the code symbols	φD	φE	φF	φG	φH±1	(NOTE) t	P	N-φh	FLANGE
0, A	185	150	126	100	73	38	116	8-19	JIS-10K-80A
9	200	160	126	100	73	42	116	8-23	JIS-20K-80A
M	210	170	126	100	73	48	116	8-23	JIS-30K-80A
1, B	210	175	151	103	96	38	141	8-19	JIS-10K-100A
3, D, V	191	152.5	126	100	73	44	116	4-20	ANSI 150LB 3B
S, X	210	168	126	100	73	49	116	8-23	ANSI 300LB 3B
T, U	210	168	126	100	73	52	116	8-23	ANSI 600LB 3B
4, E, W	229	190.5	151	103	96	44	141	8-20	ANSI 150LB 4B
Y	254	200	151	103	96	52	141	8-23	ANSI 300LB 4B
6, G	200	160	126	100	73	44	116	8-18	DIN PN40 DN80
7, H	220	180	151	103	96	40	141	8-18	DIN PN16 DN100



< WAFER TYPE >	
80A, 3B	116
100A, 4B	141

OPTION PARTS FOR FLAMEPROOF OF TIIS (JAPAN)



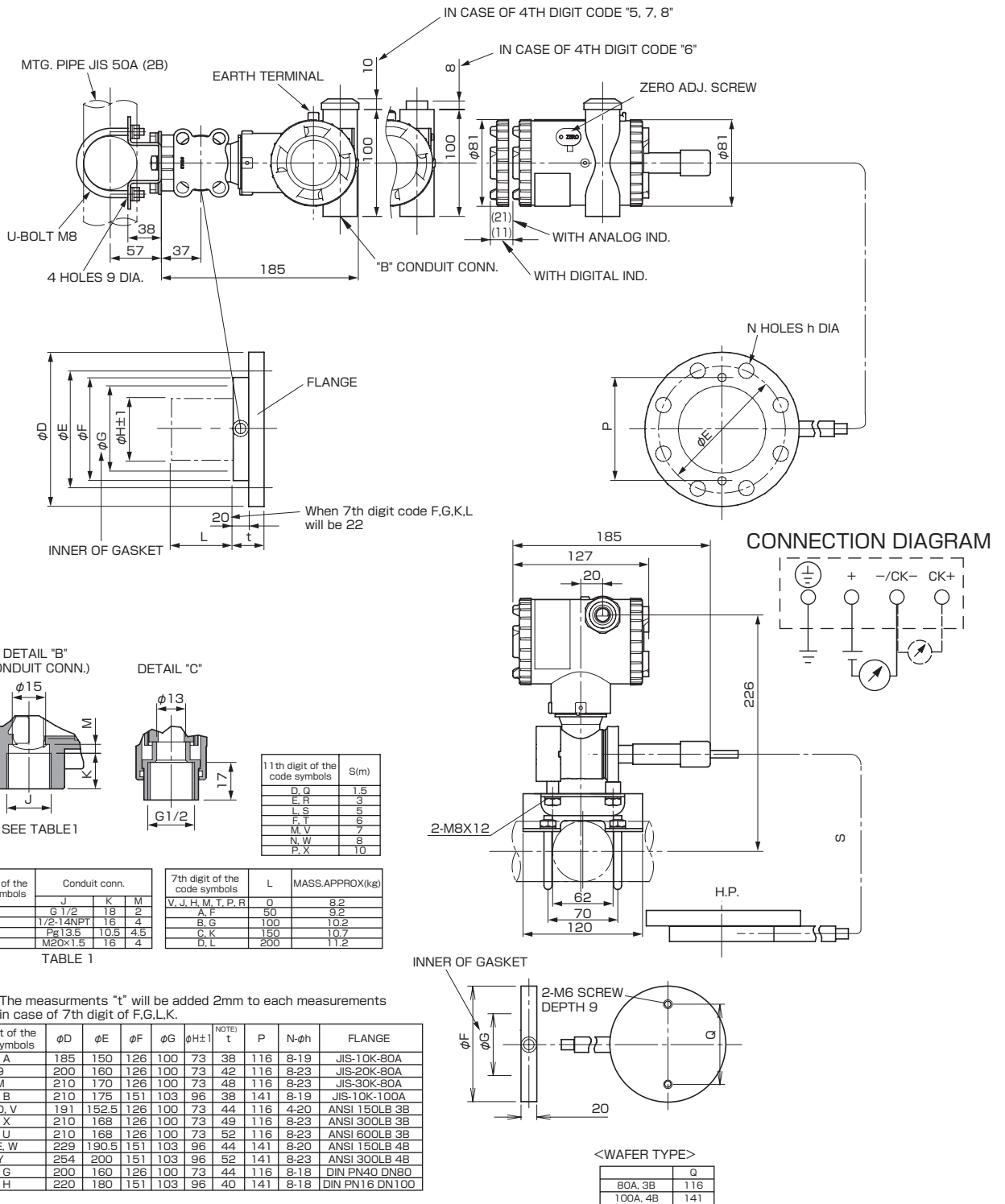
NOTE1) IN CASE OF 10TH CODE "C", φ11 CABLE IS SUITBLE.

< CODE SYMBOLS : FKB

5	7	0	4	D	P	1
6	8	1	A	E	Q	2
		3	B	K		3

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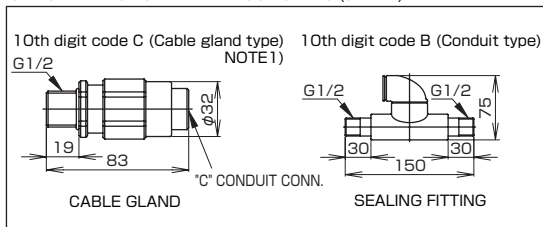
< Flange type >



NOTE) The measurements "t" will be added 2mm to each measurements in case of 7th digit of F,G,L,K.

5th digit of the code symbols	φD	φE	φF	φG	φH±1	NOTE 1 t	P	N-φh	FLANGE
0, A	185	150	126	100	73	38	116	8-19	JIS-10K-80A
9	200	160	126	100	73	42	116	8-23	JIS-20K-80A
M	210	170	126	100	73	48	116	8-23	JIS-30K-80A
1, B	210	175	151	103	96	38	141	8-19	JIS-10K-100A
3, D, V	191	152.5	126	100	73	44	116	4-20	ANSI 150LB 3B
S, X	210	168	126	100	73	49	116	8-23	ANSI 300LB 3B
T, U	210	168	126	100	73	52	116	8-23	ANSI 600LB 3B
4, E, W	229	190.5	151	103	96	44	141	8-20	ANSI 150LB 4B
Y	254	200	151	103	96	52	141	8-23	ANSI 300LB 4B
6, G	200	160	126	100	73	44	116	8-18	DIN PN40 DN80
7, H	220	180	151	103	96	40	141	8-18	DIN PN16 DN100

OPTION PARTS FOR FLAMEPROOF OF TIIS (JAPAN)



NOTE1) IN CASE OF 10TH CODE "C", φ11 CABLE IS SUITBLE.

< CODE SYMBOLS : FKB

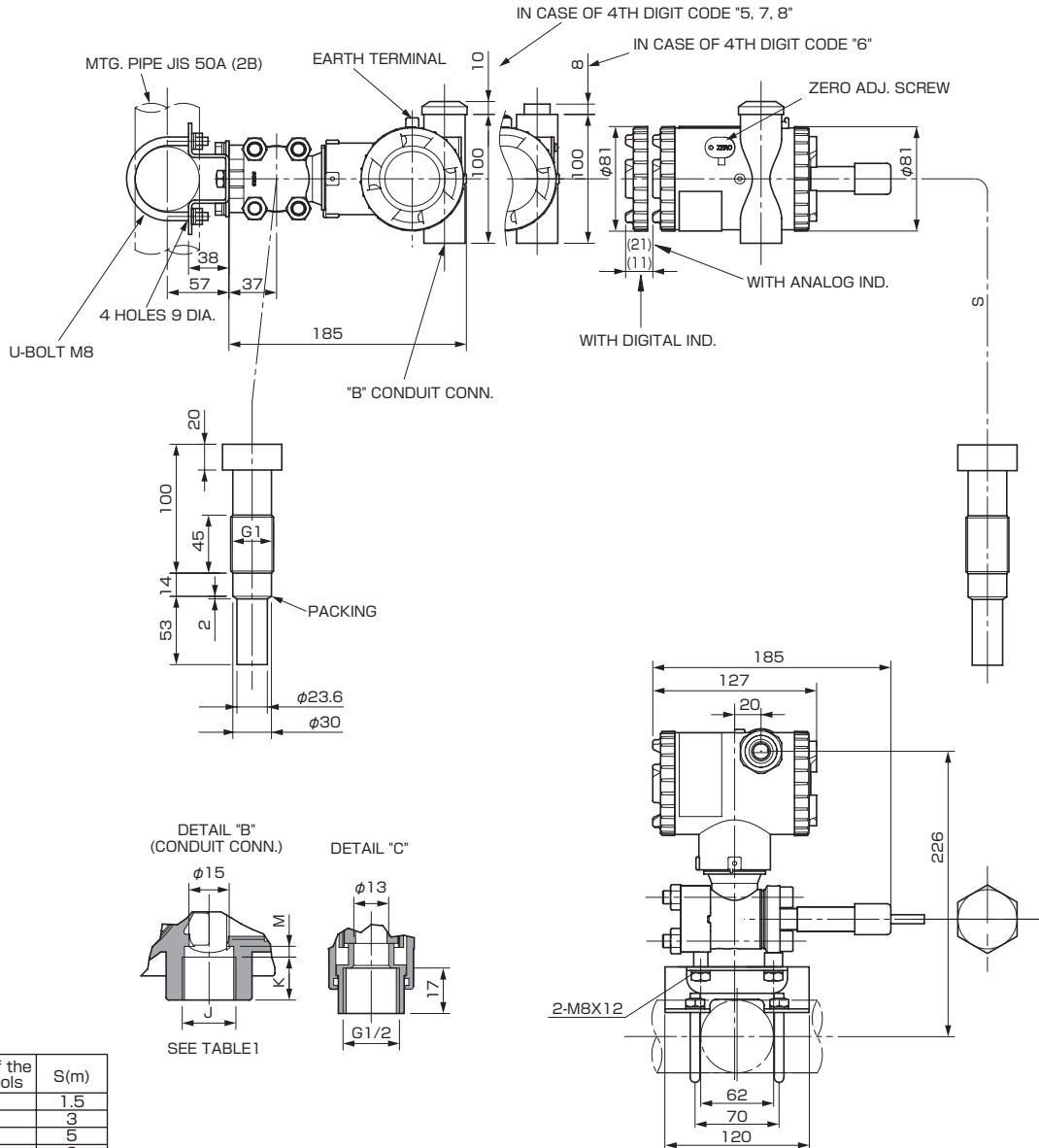
5	7
6	8

 K

4
5

 V5-□□□□□□-□□□□ >

< Screw type >

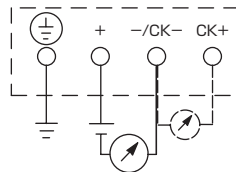


11th digit of the code symbols	S(m)
D, Q	1.5
E, R	3
L, S	5
F, T	6
M, V	7
N, W	8
P, X	10

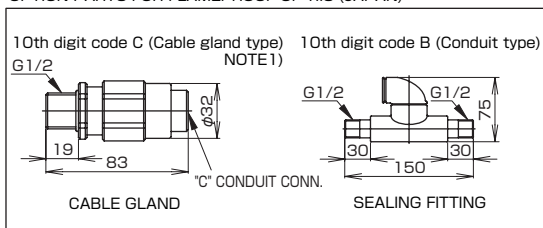
4th digit of the code symbols	Conduit conn.		
	J	K	M
5	G 1/2	18	2
6	1/2-14NPT	16	4
7	Pg13.5	10.5	4.5
8	M20X1.5	16	4

TABLE 1

CONNECTION DIAGRAM



OPTION PARTS FOR FLAMEPROOF OF TIIS (JAPAN)



NOTE1) IN CASE OF 10TH CODE "C", φ11 CABLE IS SUITABLE.

TABLE 2

Authorities	Intrinsic safety																					
ATEX	Ex II 1 G Ex ia IIC T5 Tamb = -40°C to +50°C Ex ia IIC T4 Tamb = -40°C to +70°C Entity Parameters: Ui=28V, Ii=94.3mA, Pi=0.66W, Ci=26nF (Without Arrester), Li=0.6mH (Without analog indicator), Ci=36nF (With Arrester), Li=0.7mH (With analog indicator)																					
Factory Mutual (pending)	Class I II III Div.1 Groups A, B, C, D, E, F, G T4 Entity Type 4X <table border="1"> <thead> <tr> <th colspan="2">Model code</th> <th>Tamb</th> </tr> <tr> <th>9th digit</th> <th>13th digit</th> <th></th> </tr> </thead> <tbody> <tr> <td>A,B,D</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +85°C</td> </tr> <tr> <td>L,P,1,2</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +80°C</td> </tr> <tr> <td>Q,S,4,5</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +60°C</td> </tr> <tr> <td>E,F,H</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +60°C</td> </tr> <tr> <td>-</td> <td>W,A,D</td> <td>-10°C to +60°C</td> </tr> </tbody> </table> Entity Parameters: Vmax=42.4V, Imax=113mA, Pi=1W, Ci=35.98nF, Li=0.694mH	Model code		Tamb	9th digit	13th digit		A,B,D	Y,G,H,J,S,T,K	-40°C to +85°C	L,P,1,2	Y,G,H,J,S,T,K	-20°C to +80°C	Q,S,4,5	Y,G,H,J,S,T,K	-20°C to +60°C	E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C	-	W,A,D	-10°C to +60°C
Model code		Tamb																				
9th digit	13th digit																					
A,B,D	Y,G,H,J,S,T,K	-40°C to +85°C																				
L,P,1,2	Y,G,H,J,S,T,K	-20°C to +80°C																				
Q,S,4,5	Y,G,H,J,S,T,K	-20°C to +60°C																				
E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C																				
-	W,A,D	-10°C to +60°C																				
CSA	Class I Div.1 Groups A, B, C, D Class II Div.1 Groups E, F, G Class III Div.1 Temp Code T5 Tamb max = +50°C Temp Code T4 Tamb max = +70°C Entity Parameters: Vmax=28V, Imax=94.3mA, Ci=25nF (Without Arrester), Ci=36nF (With Arrester), Li=0.6mH (Without analog meter), Li=0.7mH (With analog meter)																					
TIIS	Ex ia IIC T4 Tamb max = +60°C Entity Parameters: Ui=28V, Ii=94.3mA, Pi=0.66W, Ci=38.4nF, Li=0.694mH																					
IECEX Scheme	Ex ia IIC T4 Tamb = -40°C to +70°C Ex ia IIC T5 Tamb = -40°C to +50°C Entity Parameters: Ui=28V, Ii=94.3mA, Pi=0.66W, Ci=26nF (Without Arrester), Li=0.6mH (Without analog indicator), Ci=36nF (With Arrester), Li=0.7mH (With analog indicator)																					
NEPSI	Ex ia IIC T4 Ex d IIB+H ₂ T6 / Ex ia IIC T4 <table border="1"> <thead> <tr> <th colspan="2">Model code</th> <th>Tamb</th> </tr> <tr> <th>9th digit</th> <th>13th digit</th> <th></th> </tr> </thead> <tbody> <tr> <td>A,B,D</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +85°C</td> </tr> <tr> <td>L,P,1,2</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +80°C</td> </tr> <tr> <td>Q,S,4,5</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +60°C</td> </tr> <tr> <td>E,F,H</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +60°C</td> </tr> <tr> <td>-</td> <td>W,A,D</td> <td>-10°C to +60°C</td> </tr> </tbody> </table> Entity Parameters: Ui=42.4V, Ii=113mA, Pi=1W, Ci=35.98nF, Li=0.694mH	Model code		Tamb	9th digit	13th digit		A,B,D	Y,G,H,J,S,T,K	-40°C to +85°C	L,P,1,2	Y,G,H,J,S,T,K	-20°C to +80°C	Q,S,4,5	Y,G,H,J,S,T,K	-20°C to +60°C	E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C	-	W,A,D	-10°C to +60°C
Model code		Tamb																				
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E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C																				
-	W,A,D	-10°C to +60°C																				

Authorities	Flameproof																					
ATEX	Ex II 2 GD Ex d IIC T6 IP66/67 T85°C Tamb = -40°C to +65°C Ex d IIC T5 IP66/67 T100°C Tamb = -40°C to +85°C																					
Factory Mutual (pending)	Class I Div.1 Groups B, C, D T6 Type 4X Class II III Div.1 Groups E, F, G T6 Type 4X Tamb max = +60°C																					
CSA	Class I Div.1 Groups C, D Class II Div.1 Groups E, F, G Class III Div.1 (Note) "Seal Not Required" enclosure is allowed.																					
TIIS	Ex do IIB+H ₂ T4 Tamb max = +60°C Maximum process temp. = +120°C																					
IECEX Scheme	Ex d IIC T5 IP66/67 Tamb = -40°C to +85°C Ex d IIC T6 IP66/67 Tamb = -40°C to +65°C																					
NEPSI	Ex d IIB+H ₂ T6 Tamb = -40°C to +60°C																					
Authorities	Type n Nonincendive																					
ATEX	Ex II 3 GD EEx nL IIC T5 Tamb = -40°C to +50°C EEx nL IIC T4 Tamb = -40°C to +70°C Specific Parameters: Model without arrester: Ui=42.4V, Ii=113mA, Pi=1W, Ci=25.18nF, Li=0.694mH Model with arrester: Ui=32V, Ii=113mA, Pi=1W, Ci=35.98nF, Li=0.694mH EEx nAL IIC T5 Tamb = -40°C to +50°C EEx nAL IIC T4 Tamb = -40°C to +70°C Specific Parameters: Model without arrester: Umax=42.4V, Imax=113mA, Pmax=1W Model with arrester: Umax=32V, Imax=113mA, Pmax=1W																					
Factory Mutual (pending)	Class I II III Div.2 Groups A, B, C, D, F, G T4 Entity Type 4X <table border="1"> <thead> <tr> <th colspan="2">Model code</th> <th>Tamb</th> </tr> <tr> <th>9th digit</th> <th>13th digit</th> <th></th> </tr> </thead> <tbody> <tr> <td>A,B,D</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +85°C</td> </tr> <tr> <td>L,P,1,2</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +80°C</td> </tr> <tr> <td>Q,S,4,5</td> <td>Y,G,H,J,S,T,K</td> <td>-20°C to +60°C</td> </tr> <tr> <td>E,F,H</td> <td>Y,G,H,J,S,T,K</td> <td>-40°C to +60°C</td> </tr> <tr> <td>-</td> <td>W,A,D</td> <td>-10°C to +60°C</td> </tr> </tbody> </table>	Model code		Tamb	9th digit	13th digit		A,B,D	Y,G,H,J,S,T,K	-40°C to +85°C	L,P,1,2	Y,G,H,J,S,T,K	-20°C to +80°C	Q,S,4,5	Y,G,H,J,S,T,K	-20°C to +60°C	E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C	-	W,A,D	-10°C to +60°C
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E,F,H	Y,G,H,J,S,T,K	-40°C to +60°C																				
-	W,A,D	-10°C to +60°C																				
CSA	Class I Div.2 Groups A, B, C, D Class II Div.2 Groups E, F, G Class III Div.2 Temp Code T5 Tamb max = +50°C Temp Code T4 Tamb max = +70°C Entity Parameters: Vmax=28V, Ci=25.18nF (Without Arrester), Ci=35.98nF (With Arrester), Li=0.694mH																					

 Caution on Safety

*Before using this product, be sure to read its instruction manual in advance.

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