



TECHNICAL GUIDANCE

FCX-AIII Series

FKG...5

PRESSURE TRANSMITTER

OUTLINE

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.

FEATURES

- High accuracy up to ±0.04%**
0.065% accuracy as standard, 0.04% accuracy as option.
- Minimum environmental influence**
The "Advance Floating Cell" design which protects the pressure sensor against changes in temperature, and overpressure substantially reduces total measurement error in actual field applications.
- HART® bilingual communications protocol**
FCX-AIII series transmitter offers bilingual communications to speak both proprietary protocol and HART®. Any HART® compatible devices can communicate with FCX-AIII.
- 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
- Burnout current flexibility (Under Scale: 3.2 to 4.0mA, Over Scale: 20.0 to 22.5mA)**
Burnout signal level is adjustable using Model FXW Hand Held Communicator (HHC) to comply with NAMUR NE43.
- 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 vapor
- 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.



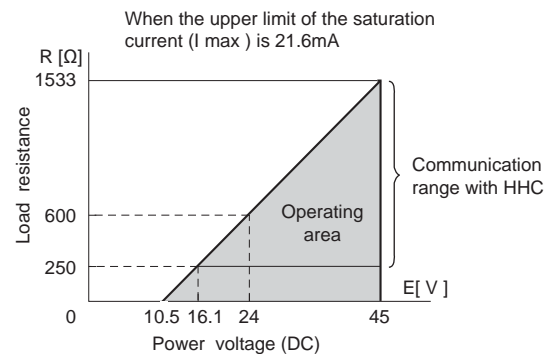
Span, range and overrange limit:

Type	Span limit [kPa] {bar}		Range limit [kPa] {bar}		Overrange limit [MPa] {bar}
	Min.	Max.	Lower limit	Upper limit	
FKG□01	1.3 {0.013}	130 {1.3}	-100 {-1}	130 {1.3}	1 {10}
FKG□02	5 {0.05}	500 {5}	-100 {-1}	500 {5}	1.5 {15}
FKG□03	30 {0.3}	3000 {30}	-100 {-1}	3000 {30}	9 {90}
FKG□04	100 {1}	10000 {100}	-100 {-1}	10000 {100}	15 {150}
FKG□05	500 {5}	50000 {500}	-100 {-1}	50000 {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
Fluorinated fill sensor: 66kPa abs (500mmHg abs) at below 60°C
- Conversion factors to different units;
1 MPa=10³ kPa=10bar=10.19716kgf/cm²= 145.0377psi
1 kPa=10mbar=101.9716mmH₂O =4.01463inH₂O

Load limitations: see figure below



Note) The load resistance varies with the upper limit of the saturation current [I max]

$$R [\Omega] = \frac{E [V] - 10.5}{(I_{max} [mA] + 0.9) \times 10^{-3}}$$

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

Hazardous locations: (Under an application) SEE TABLE2

Zero/span adjustment:

Zero and span are adjustable from the HHC⁽¹⁾. Zero and span are also adjustable externally from the adjustment screw.

Damping:

Adjustable from HHC or local configurator unit with LCD display.

The time constant is adjustable 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":

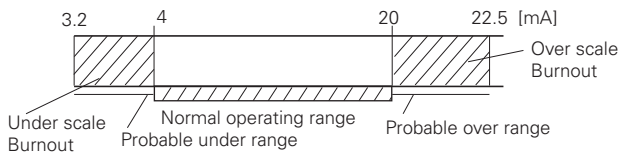
Output signal is hold as the value just before failure happens.

"Output Overscale":

Adjustable within the range 20.0mA to 22.5mA from HHC⁽¹⁾

"Output Underscale":

Adjustable within the range 3.2mA to 4.0mA from HHC



Output limits conforming to NAMUR NE43 by order.

Loop-check output:

Transmitter can be configured to provide constant signal 3.2mA through 22.5mA by HHC.

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)

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

Process: -40 to +100°C for silicone fill sensor

-20 to +80°C for fluorinated oil fill sensor

Storage: -40 to +90°C

Humidity limit: 0 to 100% RH

Communication: With HHC⁽¹⁾ (Model FXW), 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

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)

Max span below 10000kPa model:

For spans greater than 1/10 of URL:

±0.065% of span or

±0.04% of span (15th digit: H, T)

For spans below 1/10 of URL:

$$\pm \left(0.015 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right) \% \text{ of span}$$

Max span 5000kPa model:

For spans greater than 1/10 of URL: ±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:

±0.1% of upper range limit (URL) for 10 years.

Temperature effect:

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

$$\text{Zero shift: } \pm(0.075 + 0.0125 \frac{\text{URL}}{\text{span}}) \%$$

$$\text{Total effect: } \pm(0.095 + 0.0125 \frac{\text{URL}}{\text{span}}) \%$$

Overrange effect: Zero shift; 0.2% of URL for any over-range to maximum limit

Supply voltage effect:

Less than 0.005% of calibrated span per 1V

Update rate: 60 msec

Step response: Time constant: 0.08s (at 23°C)

Dead time: approximately 0.12s (without electrical damping)

(Note) (1) HHC: Hand Held Communicator

Mounting position effect:

Zero shift, less than 0.1kPa {1m bar} for a 10° tilt in any plane.
 No effect on span. This error can be corrected by adjusting Zero.

Dielectric strength:

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

Insulation resistance:

More than 100MΩ at 500V DC.

Internal resistance for external field indicator:

12Ω or less

Physical specifications

Electrical connections:

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

Process connections:

1/4-18 NPT or Rc1/4 on 54mm centers, as specified.
 Meet DIN 19213

Process-wetted parts material:

Material code (7th digit in "Code symbols")	Process cover	Diaphragm	Wetted sensor body	Vent/drain
V	316 stainless steel	316L stainless steel	316 stainless steel	316 stainless steel
W	316 stainless steel	Hastelloy-C	316 stainless steel	316 stainless steel
J	316 stainless steel	316L stainless steel +Au coating	316 stainless steel	316 stainless steel
H	316 stainless steel	Hastelloy-C	Hastelloy-C lining	316 stainless steel
M	316 stainless steel	Monel	Monel lining	316 stainless steel
T	316 stainless steel	Tantalum	Tantalum lining	316 stainless steel

Remark: Availability of above material design depends on ranges. 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, as specified.

Bolts and nuts: Cr-Mo alloy (standard), 316 stainless steel (660 stainless steel for 50MPa unit).

Fill fluid: Silicone oil (standard) or fluorinated oil

Mounting bracket: 304 or 316 stainless steel

Environmental protection:

IEC IP67 and NEMA 6/6P

Mounting:

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

Mass (weight):

Transmitter approximately 2.9 to 3.4kg without options.
 Add; 0.5kg for mounting bracket
 4.5kg for stainless steel housing option

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:

The fill fluid is fluorinated oil.

Degreasing:

Process-wetted parts are cleaned, but the fill fluid is standard silicone oil. Not for use on oxygen or chlorine measurement.

Vacuum service:

Special silicone oil and filling procedure are applied.

See Fig.1.

Optional tag plate:

An extra stainless steel tag with customer tag data is wired to the transmitter.

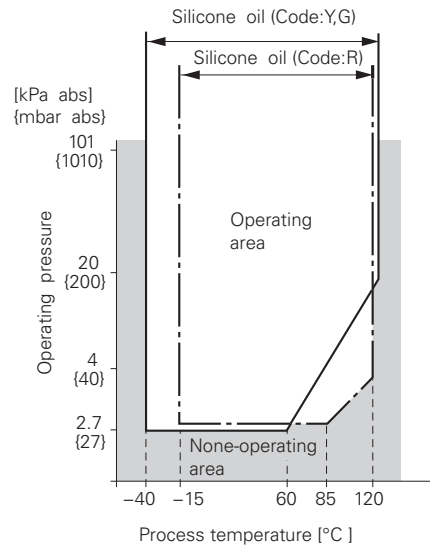


Fig. 1 Relation between process temperature and operating pressure

CODE SYMBOLS

Digit	Description	Note	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	← Digit No. of code														
			F	K	G	0	5	-	-	-	-	-	-	-	-	-	-		-													
4	<Connections>				Note 1 Note 1 Note 1 Note 1 Note 1 Note 1	5 6 7 8 9 S T V W X																										
	Process connection	Oval flange screw	Conduit connection	Case type																												
	Rc1/4	7/16-20UNF	G1/2	T type																												
	1/4-18NPT	7/16-20UNF	1/2-14NPT	T type																												
	1/4-18NPT	M10 (or M12)(*1)	Pg13.5	T type																												
	1/4-18NPT	M10 (or M12)(*1)	M20×1.5	T type																												
	1/4-18NPT	7/16-20UNF	Pg13.5	T type																												
	Rc1/4	7/16-20UNF	G1/2	L type																												
	1/4-18NPT	7/16-20UNF	1/2-14NPT	L type																												
	1/4-18NPT	M10 (or M12)(*1)	Pg13.5	L type																												
	1/4-18NPT	M10 (or M12)(*1)	M20×1.5	L type																												
	1/4-18NPT	7/16-20UNF	Pg13.5	L type																												
	6, 7						Note 2																									
		Span limit [kPa]{bar}{*2}	Process cover	Diaphragm																		Wetted cell body										
1.3...130 {0.013...1.3}		316 stainless steel	316L stainless steel	316 stainless steel	1V																											
		316 stainless steel	Hastelloy-C	SUS316	1W																											
		316 stainless steel	316L stainless steel	316 stainless steel	1J																											
		316 stainless steel	Hastelloy-C	Hastelloy-C lining	1H																											
		316 stainless steel	Monel	Monel lining	1M																											
		316 stainless steel	Tantalum	Tantalum lining	1T																											
5...500 {0.05...5}		316 stainless steel	316L stainless steel	316 stainless steel	2V																											
		316 stainless steel	Hastelloy-C	SUS316	2W																											
		316 stainless steel	316L stainless steel	316 stainless steel	2J																											
		316 stainless steel	Hastelloy-C	Hastelloy-C lining	2H																											
		316 stainless steel	Monel	Monel lining	2M																											
		316 stainless steel	Tantalum	Tantalum lining	2T																											
30...3000 {0.3...30}		316 stainless steel	316L stainless steel	316 stainless steel	3V																											
		316 stainless steel	Hastelloy-C	SUS316	3W																											
		316 stainless steel	316L stainless steel	316 stainless steel	3J																											
		316 stainless steel	Hastelloy-C	Hastelloy-C lining	3H																											
		316 stainless steel	Monel	Monel lining	3M																											
		316 stainless steel	Tantalum	Tantalum lining	3T																											
100...10000 {1...100}		316 stainless steel	316L stainless steel	316 stainless steel	4V																											
		316 stainless steel	Hastelloy-C	SUS316	4W																											
		316 stainless steel	316L stainless steel	316 stainless steel	4J																											
		316 stainless steel	Hastelloy-C	Hastelloy-C lining	4H																											
		316 stainless steel	Monel	Monel lining	4M																											
		316 stainless steel	Tantalum	Tantalum lining	4T																											
500...50000 {5...500}		316 stainless steel	316L stainless steel	316 stainless steel	5V																											
		SCS14	Hastelloy-C	SUS316	5W																											
	316 stainless steel	316L stainless steel	316 stainless steel	5J																												
	316 stainless steel	Hastelloy-C	Hastelloy-C lining	5H																												
	316 stainless steel	Monel	Monel lining	5M																												
	316 stainless steel	Tantalum	Tantalum lining	5T																												
9	<Indicator and arrester>																															
	<u>Indicator</u>		<u>Arrester</u>																													
	None		None																									A				
	Analog, 0 to 100% linear scale		None																									B				
	Analog, custom scale		None																									D				
	None		Yes																									E				
	Analog, 0 to 100% linear scale		Yes																									F				
	Analog, custom scale		Yes																									H				
	Digital, 0 to 100% linear scale		None																									L				
	Digital, custom scale		None																									P				
	Digital, 0 to 100% linear scale		Yes																									Q				
	Digital, custom scale		Yes																									S				
	Digital, 0 to 100% linear scale		(Local configurator unit with LCD display)																									1				
	Digital, custom scale		(Local configurator unit with LCD display)																									2				
	Digital, 0 to 100% linear scale		(Local configurator unit with LCD display)																									4				
	Digital, custom scale		(Local configurator unit with LCD display)																									5				

Note 1 : (*1) For 50MPa {500bar} units, M12 is provided rather than M10.
 Note 2 : (*2) 100: 1 turn down is possible, but should be used at the span greater than 1/40 of the maximum span for better performance.

Digit	Description	Note	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	← Digit No. of code						
10	<Approvals for hazardous locations> None (for ordinary locations) TIIS, Flameproof (Cable gland seal) (*3) TIIS, Intrinsic safety FM, Flameproof (or explosionproof) (*4) FM, Intrinsic safety and nonincensive FM Combined of flameproof and intrinsic safety (*4) ATEX Flameproof (*5) ATEX Intrinsic safety ATEX Type n ATEX Combined of flameproof and intrinsic safety (*5) IECEX Scheme, Flameproof (*5) IECEX Scheme, Intrinsic safety CSA, Flameproof (or explosionproof) (*4) CSA, Intrinsic safety and nonincensive	Note 3 Note 4 Note 4 Note 5 Note 5 Note 5 Note 5 Note 4	F	K	G	0	5																	
11	<Vent/ drain and mounting bracket> Vent/drain Mounting bracket Standard None Standard Yes, 304L stainless steel Standard Yes, 316L stainless steel Side None Side Yes, 304L stainless steel Side Yes, 316L stainless steel											A	C	K	D	F	L							
12	<Options> Extra SS tag plate Stainless steel elec. housing None None Yes None None Yes } (*6) Yes Yes } (*7)	Note 6 Note 7 Note 7											Y	B	C	E								
13	<Special applications and fill fluid> Treatment Fill fluid Standard Silicone oil Standard Fluorinated oil Degreasing Silicone oil Oxygen service Fluorinated oil (7th digit code "V", "W", "J" only) Chlorine service Fluorinated oil (7th digit code "H", "T") Vacuum service Silicone oil for vacuum use													Y	W	G	A	D	R					
14	<Gasket> <Bolt/nut> (*8, 9) Teflon Cr-Mo alloy hexagon socket head cap screw/carbon steel nut (M10) Teflon 316 stainless steel bolt/nut (M10) Teflon Cr-Mo alloy hexagon bolt/nut (M12) Teflon 660 stainless steel bolt/nut (M10) Teflon 660 stainless steel bolt/nut (M12)	Note 8,9																C	G	H	J	K		
15	<Fixed code> (*10)	Note 10																						*

Note 3: (*3) Available for 4th digit code "S".
 Note 4: (*4) Available for 4th digit code "6", "T".
 Note 5: (*5) Available for 4th digit code "6", "8", "T", "W".
 Note 6: (*6) Customer tag number can be engraved on standard stainless steel name plate. If extra tag plate is required, select "Yes".
 Note 7: (*7) Not available for 4th digit code "5" to "9", and 10th digit code "C".
 Note 8: (*8) In case of tropical use, select stainless bolts and nuts.

Note 9: (*9) See the following table for possible combinations with 6th digits.

14th digits	6th digits	
	FKG*01 - 04	FKG*05
C	O	x
G	O	x
H	x	O
J	(special option)	x
K	x	O

Note 10: (*10) In case of hazardous location type, tagplate is made by Fuji Electric Co., Ltd.

ACCESSORIES

Hand-held communicator: Model FXW

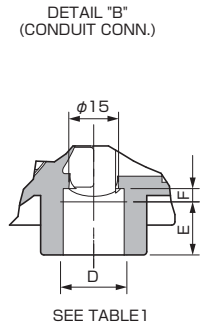
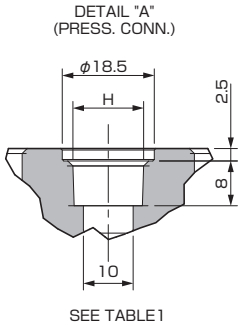
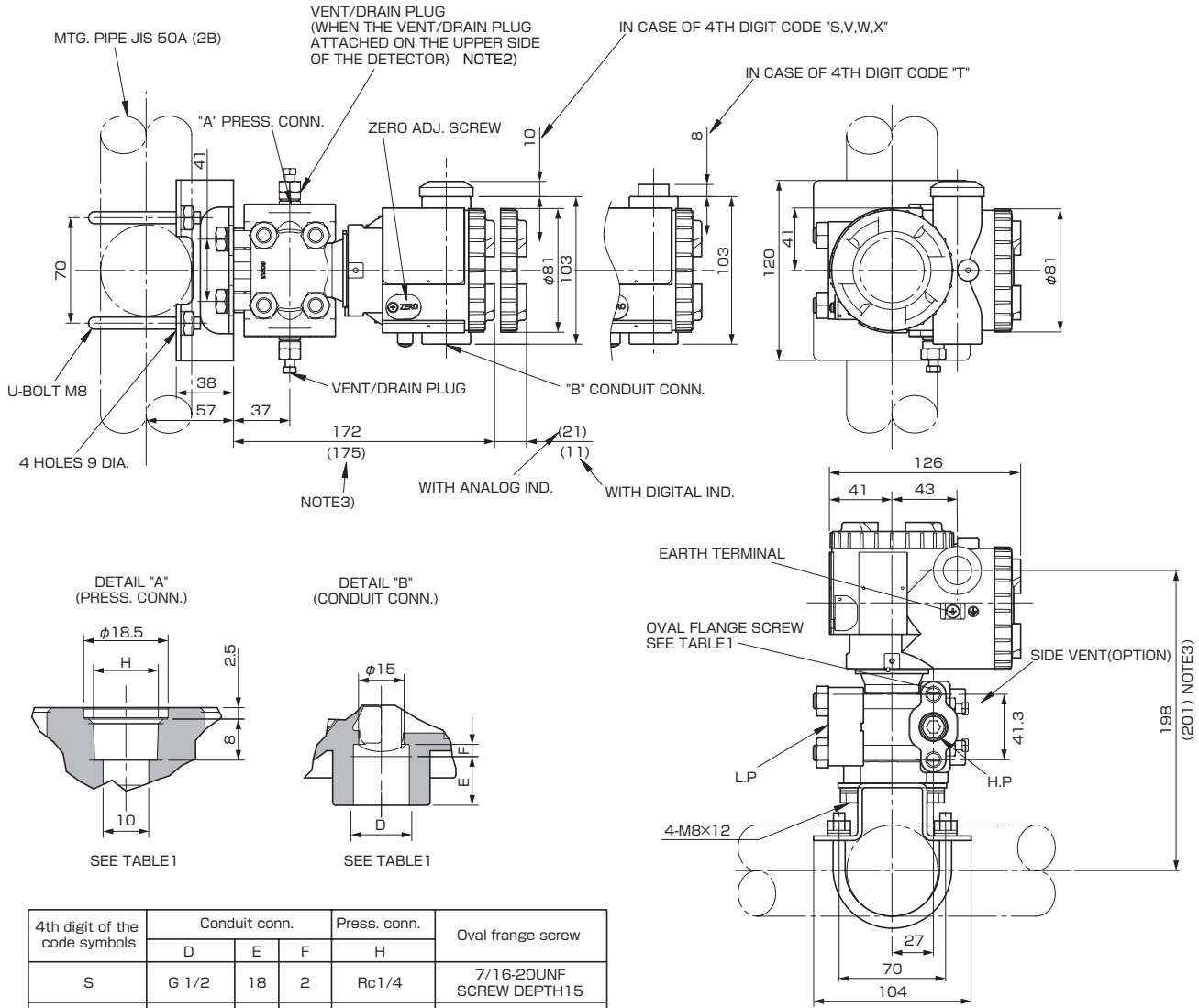
ORDERING INFORMATION

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 alphanumeric characters), if required.

OUTLINE DIAGRAM (Unit:mm)

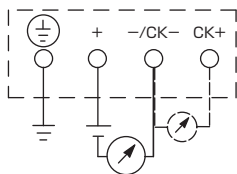
AMP. case: L type



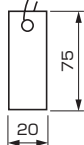
4th digit of the code symbols	Conduit conn.			Press. conn.	Oval flange screw
	D	E	F	H	
S	G 1/2	18	2	Rc1/4	7/16-20UNF SCREW DEPTH15
T	1/2-14NPT	16	4	1/4-18NPT	7/16-20UNF SCREW DEPTH15
V	Pg13.5	10.5	4.5	1/4-18NPT	M10 SCREW DEPTH15
W	M20x1.5	16	4	1/4-18NPT	M10 SCREW DEPTH15
X	Pg13.5	10.5	4.5	1/4-18NPT	7/16-20UNF SCREW DEPTH15

TABLE 1

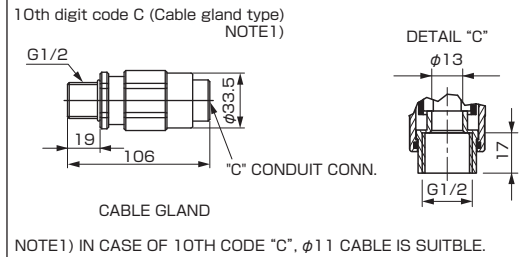
CONNECTION DIAGRAM



<SS TAG PLATE>



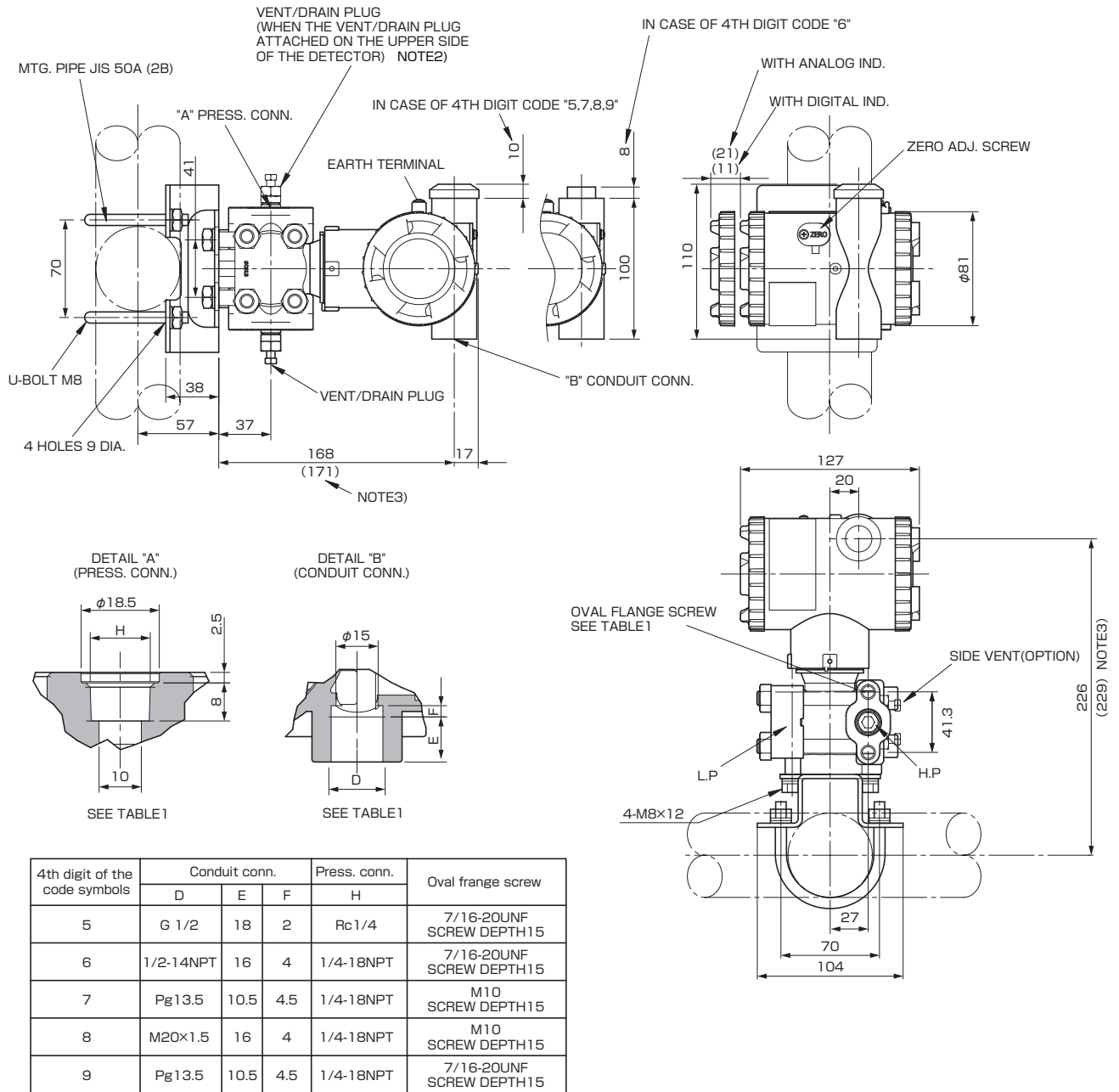
OPTION PARTS FOR FLAMEPROOF OF TIIS (JAPAN)



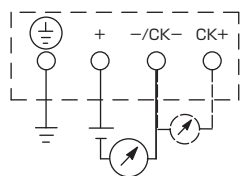
NOTE1) IN CASE OF 10TH CODE "C", $\phi 11$ CABLE IS SUITBLE.

NOTE2) THE PRESSURE CONNECTOR IS LOCATED ON THE DOWN SIDE SURFACE OF THE DETECTOR, WHEN THE VENT/ DRAIN PLUG IS ATTACHED ON THE UPPER SIDE OF THE DETECTOR (WHEN THE 15ST DIGIT OF THE CODE SYMBOLS : C.P).
NOTE3) WHEN THE 7TH DIGIT OF THE CODE SYMBOLS "H,M,T"

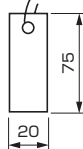
<AMP. case: T type>



CONNECTION DIAGRAM



<SS TAG PLATE>



NOTE2) THE PRESSURE CONNECTOR IS LOCATED ON THE DOWN SIDE SURFACE OF THE DETECTOR, WHEN THE VENT/ DRAIN PLUG IS ATTACHED ON THE UPPER SIDE OF THE DETECTOR (WHEN THE 15ST DIGIT OF THE CODE SYMBOLS : C,P).

NOTE3) WHEN THE 7TH DIGIT OF THE CODE SYMBOLS : H,M,T

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, li=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	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,R</td> <td>-40°C to +85°C</td> </tr> <tr> <td>L,P,1,2</td> <td>Y,G,R</td> <td>-20°C to +80°C</td> </tr> <tr> <td>Q,S,4,5</td> <td>Y,G,R</td> <td>-20°C to +60°C</td> </tr> <tr> <td>E,F,H</td> <td>Y,G,R</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=28V, Imax=94.3mA, Pi=0.66W, Ci=35.98nF, Li=0.694mH	Model code		Tamb	9th digit	13th digit		A,B,D	Y,G,R	-40°C to +85°C	L,P,1,2	Y,G,R	-20°C to +80°C	Q,S,4,5	Y,G,R	-20°C to +60°C	E,F,H	Y,G,R	-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,R	-40°C to +85°C																				
L,P,1,2	Y,G,R	-20°C to +80°C																				
Q,S,4,5	Y,G,R	-20°C to +60°C																				
E,F,H	Y,G,R	-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, li=94.3mA, Pi=0.66W, Ci=40.92nF, 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, li=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)																					

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	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																					
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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, li=113mA, Pi=1W, Ci=25.18nF, Li=0.694mH Model with arrester: Ui=32V, li=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	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,R</td> <td>-40°C to +85°C</td> </tr> <tr> <td>L,P,1,2</td> <td>Y,G,R</td> <td>-20°C to +80°C</td> </tr> <tr> <td>Q,S,4,5</td> <td>Y,G,R</td> <td>-20°C to +60°C</td> </tr> <tr> <td>E,F,H</td> <td>Y,G,R</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,R	-40°C to +85°C	L,P,1,2	Y,G,R	-20°C to +80°C	Q,S,4,5	Y,G,R	-20°C to +60°C	E,F,H	Y,G,R	-40°C to +60°C	-	W,A,D	-10°C to +60°C
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* Specification is subject to change without notice.



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