



SMALL FLANGE REMOTE SEAL TYPE DIFFERENTIAL PRESSURE TRANSMITTER

DATA SHEET

FKX---4

The FCX-A II small flange remote seal type differential pressure transmitter accurately measures differential pressure, liquid level or 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

- Directly connectable to 1-1/2 in and 2in flanges The transmitter is connectable to 1-1/2 in and 2in pipes without a reducer.
- 2. Flow measurement without impulse piping ¹/₂ in and ³/₄ in flange size is also available. This differential pressure transmitter allows connection to ¹/₂ in and ³/₄ in flanges of a general size for the orifice tap, which eliminates the need of using a impulse piping. Problems with the impulse piping, such as clogging, leaks or corrosion can be solved. In addition, the following process connection is also available. Screw connection ¹/₂-14NPT, ³/₄-14NPT, Rc ¹/₂, Rc ³/₄

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

 Fuji/HART[®] bilingual communications protocol and FOUNDATION[™] fieldbus and Profibus[™] compatibility

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

5. Application flexibility

Various options that render the FCX–A II suitable for almost any process applications include:

- Analog indicator at either the electronics side or terminal side
- 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
- 6. Programmable output Linearization Function In addition to Linear and Square Root, output signal can be freely programmable.

(Up to 14 compensated points at approximation.)

Fuji Electric Systems Co., Ltd.

- Burnout current flexibility (Under Scale: 3.2 to 3.8mA, Over Scale: 20.8 to 21.6mA)
 Burnout signal level is adjustable using Model FXW Hand Held Communicator (HHC) to comply with NAMUR NE43.
- **9.** 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
Static pressure,	span, and range limit:

Туре	Static pressure	Span limit [kPa] (m bar}		Range limit [kPa] {m bar}
		Min.	Max.	
FKX□□3	1	3	32	+/- 32
FKX□□5	Up to flange rating	{ 30} 13 {130}	{ 320} 130 {1300}	{+/- 320} +/- 130 {+/- 1300}
FKX□□6	IJ	50 {500}	500 {5000}	+/- 500 {+/- 5000}

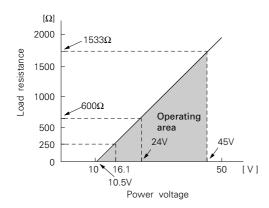
- Maximum static pressure limit for screw connction type: 4.2MPa
- Lower limit of static pressure (vacuum limit), Silicone fill sensor: See Fig. 1
 Fluorinated fill sensor: Atmospheric pressure
- The maximum span of each sensor can be converted to different units using factors as below.
 - 1MPa = 10³kPa = 10bar = 10.19716kgf/cm² = 145.0377psi
 - 1kPa=10mbar=101.976mmH₂O=4.01463H₂O

EDSX6-116k			
Date	Apr. 1, 2007		

Overrange limit:	To maximum	static pressure limit	
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Output signal:	4 to 20mA DC (linear or square root) 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 250 $\!\Omega$ is required.

Hazardous locations:

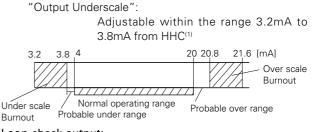
Authorities	Flameproof
ATEX	Ex II 2 GD EEx d IIC T6 IP66/67 T85°C Tamb = -40°C to +65°C EEx d IIC T5 IP66/67 T100°C Tamb = -40°C to +85°C
Factory Mutual	Class I Div.1 Groups B, C, D T6 Type 4X Class II III Div.1 Groups E, F, G T6 Type 4X Tamb max = +60°C
CSA	-
TIIS	Ex do IIB+H2 T4 Tamb max = +55°C Maximum process temp.=+120°C
IECEx Scheme /SAA	Ex d IIC T5 IP66/67 pending Tamb = -40°C to +85°C Ex d IIC T6 IP66/67 pending Tamb = -40°C to +65°C

Authorities	Intrinsic safety			
ATEX	Ex II 1 GD EEx ia IIC T5 Tamb = -40°C to +40°C EEx ia IIC T4 Tamb = -40°C to +80°C			
	Entity Parameters: Ui=28V, Ii=93.3mA, Pi=0.66W, Ci=27nF (Without Arrester), Ci=34.2nF (With Arrester), Li=1.134mH			
Factory Mutual	Class I II III Div.1 Groups A, I T4 Entity Type 4)			
	Mode	el code		
	9th digit	13th digit	Tamb	
	A,B,C,D,J	Y,G,H,S	-40°C to +85°C	
	L,P,M,1,2,3	Y,G,H,S	-20°C to +80°C	
	Q,S,N,4,5,6	Y,G,H,S	-20°C to +60°C	
	E,F,G,H,K	Y,G,H,S	-40°C to +60°C	
	-	W,A,D	-10°C to +60°C	
CSA	Vmax=42.4V, Imax=113mA, Pi=1W, Ci=34.2nF, Li=1.134mH			
USA	Class I Div.1 Groups A, B, C, D Class II Div.1 Groups E, F, G Class III Div.1 Temp Code T4 Tamb max = +40°C Temp Code T3C Tamb max = +85°C Entity Parameters: Vmax=28V, Imax=93mA, Ci=27nF (Without Arrester), Ci=34.2nF (With Arrester), Li=1.4mH			
TIIS	Ex ia IIC T4 Tamb max = +60°C Entity Parameter: Ui=28V, Ii=94.3mA, Pi=0.66W, Ci=32.6nF, Li=1.134mH			
IECEx Scheme /SAA	Ex ia IIC T4 IP66/6 Tamb = -40°C to Ex ia IIC T5 IP66/6 Tamb = -40°C to Entity Parameter: Ui=28V, Ii=93.3n Ci=0.033µF, Li=1	+70°C 57 +50°C nA, Pi=0.66W,		

Authorities	Type n Nonincendive			
ATEX	Nonincendive Nonincendive Ex nL IIC T5 Tamb = -40°C to +40°C EEx nL IIC T4 Tamb = -40°C to +80°C Specific Parameters: Model without arrester: Ui=42.4V, li=113mA, Pi=1W, Ci=27nF, Li=1.134mH Model with arrester: Ui=32V, li=113mA, Pi=1W, Ci=34.2nF, Li=1.134mH EEx nAL IIC T5 Tamb = -40°C to +40°C EEx nAL IIC T5 Tamb = -40°C to +80°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, E T4 Entity Type 4> Mode 9th digit A,B,C,D,J L,P,M,1,2,3 Q,S,N,4,5,6 E,F,G,H,K		Tamb -40°C to +85°C -20°C to +80°C -20°C to +60°C -40°C to +60°C -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 T4 Tamb max = +40°C Temp Code T3C Tamb max = +85°C Entity Parameters: Vmax=28V, Ci=27nF (Without Arrester), Ci=34.2nF (With Arrester), Li=1.4mH			
TIIS IECEx Scheme /SAA	-			

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, M, Q, S, N").
Damping:	Adjustable from HHC or local adjustment
Damping.	
	unit with LCD display.
	The time constant is adjustable between
	0.12 to 32 seconds.
Zero elevation/su	
	-100% to +100% of URL
Normal/reverse a	
	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 fail-
	ure, the analog signal will be driven to ei-
	ure, the analog signal will be unven to er-
	ther "Output Hold", "Output Overscale"
	ther "Output Hold", "Output Overscale"
"Output Hold	ther "Output Hold", "Output Overscale" or "Output Underscale" modes.
"Output Hold	ther "Output Hold", "Output Overscale" or "Output Underscale" modes. J":
"Output Hold	ther "Output Hold", "Output Overscale" or "Output Underscale" modes. J": Output signal is hold as the value just be-
"Output Hold "Output Ove	ther "Output Hold", "Output Overscale" or "Output Underscale" modes. ": Output signal is hold as the value just be- fore failure happens.
	ther "Output Hold", "Output Overscale" or "Output Underscale" modes. ": Output signal is hold as the value just be- fore failure happens. rscale":
	ther "Output Hold", "Output Overscale" or "Output Underscale" modes. ": Output signal is hold as the value just be- fore failure happens.



Loop-check output:

Transmitter can be configured to provide constant signal 3.8mA through 21.6mA by HHC⁽¹⁾.

Temperature limit:

Ambient: – 15 to + 65°C

 $(-15 \text{ to } + 60^{\circ}\text{C} \text{ for arrester option})$

 $(-10 \text{ to } + 60^{\circ}\text{C} \text{ for fluorinated oil fill transmitter})$

(- 10 to + 60°C for silicone oil "H", "S")

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

Process:

Fill fluid	13th digit of "Code symbols"	Process temperature	Lower limit of static press.
Fluorinated oil	W, A and D	– 20 to 120°C	Atmospheric
Silicone oil	н	0 to 250°C	pressure
	Y and G	– 40 to 120°C	2.7kPa abs
	S	0 to 250°C	{20mmHg abs}

Storage: - 40 to +70°C

Humidity limit: 0 to 100% RH

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

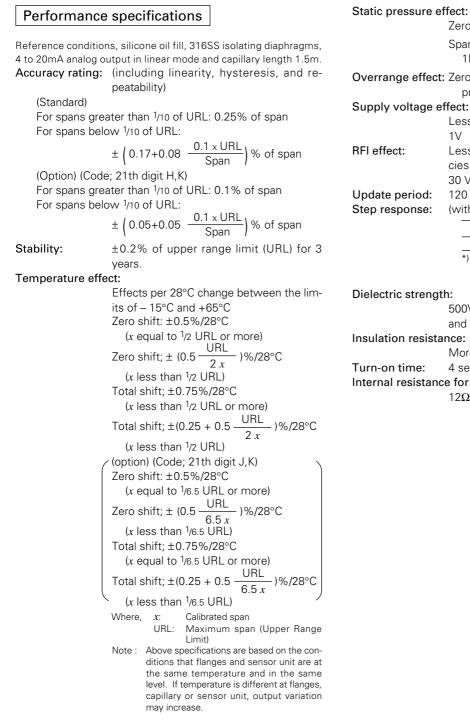
Note: HHC's version must be more than 6.0 (or FXW DDD1-D3), for FCX-A II.

l terrere e		Disalari	Cat
ltems		Display	Set
Tag No.		V	V
Model No.		V	V
Serial No.		V	—
Engineering u	nit	V	V
Range limit		V	—
Measuring rar	nge	V	V
Damping		V	V
Output mode	Linear	V	V
	Square root	V	V
Burnout direct	tion	V	V
Calibration		V	V
Output adjust		—	V
Data		V	—
Self diagnose	S	V	_
Printer			—
External switch lock		V	V
Transmitter display		V	V
Linearize		V	V
Rerange		V	V

Programmable output linearization function:

Output signal can be characterized with "14 points linear approximation function" from HHC⁽¹⁾.

EMC Conformity: EN61326 €



Static pressure effect:

Zero shift; 0.2% of URL/1MPa (10 bar) Span shift: - 0.2% of calibrated span /

1MPa

Overrange effect: Zero shift; 0.1% of URL for flange nominal pressure

Less than 0.005% fo calibrated span per 1V Less than 0.2% of URL for the frequencies of 20 to 1000MHz and field strength 30 V/m when electronics covers on. 120 msec *)

nse:	(without	alactrical	damping)
nse.	(without	electrical	uamping)

Time constant (*) Dead time (*) 1.7 s 0.2 s *) Faster response is available as option

(maximum update rate: 25 times per second).

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

More than $100M\Omega$ at 500V DC.

4 sec. Internal resistance for external field indicator: 12Ω or less

Physical specifications

Electrical connec	tions:	
	$G^{1/2}$, $^{1/2}$ -14 NPT, Pg13.5, or M20 × 1.5 con-	
	duit, as specified.	
	And 1-conduit or 2-conduit, as specified.	
Process connecti	ons:	
	JIS	
	10K, 20K, 30K - 40, 50A	
	10K, 20K, 30K - 15, 20A (with Adapter)	
	ANSI/JPI	
	150LB, 300LB -11/2", 2"	
	150LB, 300LB - ¹ /2", ³ /4" (with Adapter)	
	Screw connection (with Adapter);	
	Rc ¹ /2, Rc ³ /4, ¹ /2 - 14NPT, ³ /4 - 14NPT	
Diaphragm exten		
	0, 50, 100, 150, or 200mm as specified.	
	(See model code. Extended diaphragm is	
	available only with 316L stainless steel	
Due e e e e un ette el u	diaphragm)	
Process-wetted p		
	Diaphragm: 316L stainless steel, Hastelloy-C, Monel or Tantalum	
	Flange face: 316 stainless steel, Hastelloy-	
	C lining	
	Monel lining, or Tantalum lining	
	Extension: 316 stainless steel	
Non-wetted parts		
non notica parte	Electronics housing: Low copper die-cast	
	aluminum alloy finished with epoxy/	
	polyurethane double coating (stan-	
	dard), or 316 stainless steel (SCSI4 par	
	JIS G5121), as specified.	
	Capillary: In case of 11th code "D. E. L.",	
	PVC armored stainless steel.	
	In case of 11th code "Q. R. S", stain-	
	less steel armored stainless steel.	[k
	Mounting flange: 304 stainless steel or	{r
	carbon steel.	
	Fill fluid: Silicone oil (standard) or fluori-	
	nated oil	
	Mounting bracket: 304 stainless steel	a)
Environmental p		Operating pressure
	IEC IP67 and NEMA 6/6P	ores
Mounting:	On 60.5mm (JIS 50A) pipe using mount-	p D
	ing bracket, direct wall mounting	ratir
Mass {weight}:	Transmitter approximately 15kg without	Dpe
	options.	0
	Add; 0.5kg for mounting bracket	
	0.8kg for indicator option	
	4.5kg for stainless steel housing	
	option 1 5kg per 50mm extension of diaphragm	
	1.5kg per 50mm extension of diaphragm	

Optional features

Indicator:	A plug-in analog indicator (2.5% accuracy) can be housed in the electronics compart- ment or in the terminal box of the hous- ing. An optional 5-digit LCD meter with engi- neering unit is also available.
Local adjustment	unit with LCD display:
	An optional 5-digit LCD meter with Zero/ Span adjustment function, loop-check function and damping adjustment func- tion, is available.
Arrester:	A built-in arrester protects the electronics
	from lightning surges.
	Lightning surge immunity: 4kV (1.2 x 50us).
Oxygen service:	Special cleaning procedures are followed throughout the process to maintain all pro- cess wetted parts oil-free. The fill fluid is fluorinated oil.
Chlorine service:	
	fluorinated oil for fill.
Degreasing:	Process-wetted parts are cleaned, but the fill fluid is standard silicone oil. Not for use
Vacuum service:	are applied. See Fig. 1.
Optional tag plate	
	An extra stainless steel tag for customer
Conting of calls	tag data is wired to the transmitter.

Coating of cell: Cell's ureth

Cell's surface is finished with epoxy/polyurethane double coating. Specify if environment is extremely corrosive.

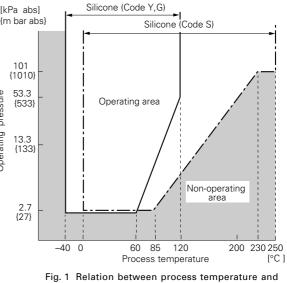


Fig. 1 Relation between process temperature and operating pressure

ACCESSORIES

Hand-held communicator:

Z/S board:

(Model FXW, refer to Data Sheet No. EDS 8-47)

Parts No.=ZZPFCX4-A070 When Z/S board is mounted on the FCX– AII amplifier unit, external adjustment screw will be available for zero and span adjustment.

CODE SYMBOLS

Dist		Description	Nata	12345 FKX	56		14 15 16 17 18 19 20 21	
Digit 4	<conduit conne<="" td=""><td>Description</td><td>Note</td><td></td><td>┦┦</td><td>4 -</td><td></td><td>of code</td></conduit>	Description	Note		┦┦	4 -		of code
4	$G^{1/2}$ (×1			А				
	¹ / ₂ - 14NPT (×1			В				
	Pg13.5 (×1			c				
	M20 × 1.5 (×1			D				
	G ¹ /2 (×2							
	¹ / ₂ - 14NPT (×2			T				
	Pg13.5 (×2			V				
	M20 × 1.5 (×2			W				
5	<flange></flange>				T I			
	Material	Size and rating						
	304 stainless	JIS 10K 40A		0	o i			
	steel	JIS 10K 50A		· ·	1			
		JIS 20K 40A			2			
		JIS 20K 50A		3	3			
		JIS 30K 40A		4	4			
		JIS 30K 50A		E	5			
		JIS 63K 40A		e	6			
		JIS 63K 50A			7			
		ANSI/JPI 150LB 1 ¹ /2"		ļ	4			
		ANSI/JPI 150LB 2"		E	в			
		ANSI/JPI 300LB 1 1/2"		0				
		ANSI/JPI 300LB 2"		0				
		ANSI/JPI 600LB 1 ¹ /2B			E			
		ANSI/JPI 600LB 2B		F	E I			
	Carbon steel	JIS 10K 40A		0	G			
		JIS 10K 50A		ŀ	-			
		JIS 20K 40A			J			
		JIS 20K 50A		ŀ	ĸ			
		JIS 30K 40A			니 :			
		JIS 30K 50A			N			
		JIS 63K 40A			N			
		JIS 63K 50A			P			
		ANSI/JPI 150LB 1 ¹ /2"			ן ב			
		ANSI/JPI 150LB 2"			R			
		ANSI/JPI 300LB 1 ¹ /2"			S			
		ANSI/JPI 300LB 2"			Г			
		ANSI/JPI 600LB 1 ¹ /2B		l l	J			
	News	ANSI/JPI 600LB 2B			V			
	None	40A, 1 ¹ /2B			M			
	(Wafer type)	50A, 2B	Note 1	/	X Y			
6	Span limit [kPa	Direct mounting adapter connection (* 1)	Note 1	<u> </u>	+			-
0	<span [kpa<br="" limit="">332(3032		Note 2		3			
	13130(130		NOLE Z		3 5			
	50500(500				5 6			
7		aragm extension>			0	1		-
'	Diaphragm	Flange face Diaphragm extension(mm)						
	316L stainless s	teel 316 stainless steel 0			,	v		
						Å		
		100	Note 3			В		
		150 (*3)				c		
		200				D		
	316L stainless s					J		
	+Au coating					- -		
	Hastelloy-C	Hastelloy-C 0				H		
	Monel	Monel 0				м		
	Tantalum	Tantalum 0				т		
L	I	unting adapter type is enseified at 16th to 20th digit	1			1		1

Note 1: (*1) Direct mounting adapter type is specified at 16th to 20th digit. Direct mounting adapter is available only for 7th digit code "V".

Note 2: (*2) 100:1 turn down is possible for model FKX, but should be used within indicated span for better performance.

Note 3: (*3) Diaphragm extension is available only for 2" (50A) flanges.

Diale			Description				TTT.		10 11		, 1_Г	4 15 16	TTT	آ_آ		Digit No of code
Digit 9	<indicator and="" arres<="" td=""><td></td><td>Description</td><td></td><td></td><td></td><td></td><td>4 -</td><td>-</td><td></td><td>i-ŀ</td><td>0</td><td></td><td></td><td>-</td><td>UI CODE</td></indicator>		Description					4 -	-		i-ŀ	0			-	UI CODE
	Indicator			Arreste	er											
	None			None	<u>)</u>	Note		A			11					
	Analog, 0 to 100% li	near scale		None				В			11					
	Analog, 0 to 100% s	q. root scale)	None	Z/S board			С			1 1					
	Analog, custom sca	le		None	attached.			D								
	Analog, double scal	e(Linear and	l sq.root)	None	attacheu.		 	J			11					
	None			Yes				E			11					
	Analog, 0 to 100% li			Yes				F			1 1					
	Analog, 0 to 100% s	•	;	Yes				G								
	Analog, custom sca			Yes				H								
	Analog, double scal Digital, 0 to 100%	e(Linear and	i sq.root)	Yes None)		 	·····			11					
	Digital, custom scale	0		None				P			1 1	-				
	Digital, 0 to 100% sc			None				M								
	Digital, 0 to 100%	144101001		Yes				Q			11					
	Digital, custom scale	е		Yes				S			11					
	Digital, 0 to 100% so			Yes				N			1 1	-				
ľ	Digital, 0 to 100%						 	1			1 1					
	(Local adjustment u	nit with LCD) display)	None												
	Digital, custom scale	e						2			11					
	(Local adjustment u) display)	None												
	Digital, 0 to 100% so							3			H	1				
	(Local adjustment u	nit with LCD) display)	None												
	Digital, 0 to 100%			N.				4								
	(Local adjustment u		(alsplay)	Yes											1	
	Digital, custom scale (Local adjustment u		dicplay	Yes				5								
	Digital, 0 to 100% sc		uispiay)	res				6			1 1					
	(Local adjustment u	•) display)	Yes				ľ								
	Approvals for haza		1 7						Ť						-	
	None (for ordinary I								A		11					
	TIIS, Flameproof (Co	nduit seal) (A	vailable for 4th	digit cod	e "A", "S")				в		1 1					
	TIIS, Flameproof (Cal	ble gland sea	al) (Available for	4th digit	code "A", "S")				С							
	FM, Flameproof (or ex	plosionproof)	(Available for 4th	n digit cod	e "B", "T")				D		11					
	ATEX, Flameproof								Х							
	IECEx Scheme/SAA,		f (Approval per	ıding)			 		R							
	TIIS, Intrinsic safety								G							
	FM, Intrinsic safety		endive						н к		11					
	ATEX, Intrinsic safe ATEX, Type n	ly							P							
	IECEx Scheme/SAA,	Intrinsic sa	fetv						τ		1 1					
	FM, Combined of FI			etv			 		v							
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	mounting bracket	Capillary	armor of capil	llary							1 1					
		1.5m	PVC	`	1				D							
	Stainless steel				} (*5)	Note5			E		11					
		3m				110100			1-		11					
		5m			J		 		L		i i	- i				
		5m 1.5m	Stainless stee	4	J		 		L							
		5m 1.5m 3m	Stainless stee	 	J		 		L Q R							
	Stainless steel	5m 1.5m	Stainless stee		J		 		L Q R S							
12	Stainless steel	5m 1.5m 3m 5m			ing of cell		 		L Q R						-	
12	Stainless steel <options> Extra ss tag plate</options>	5m 1.5m 3m 5m Stainless	Stainless stee	ing Coat	•		 		L Q R	~					-	
12	Stainless steel <options> Extra ss tag plate None</options>	5m 1.5m 3m 5m Stainless None		ing Coat None	e		 		L Q R	Y					_	
12	Stainless steel <options> Extra ss tag plate None Yes</options>	5m 1.5m 3m 5m Stainless None None		ing Coat None None	e e		 		L Q R	Y B C					-	
12	Stainless steel <options> Extra ss tag plate None</options>	5m 1.5m 3m 5m Stainless None		ing Coat None	e e e	Note4	 		L Q R	Y B C E					_	
12	Stainless steel <options> Extra ss tag plate None Yes None</options>	5m 1.5m 3m 5m Stainless None None Yes		ing Coat None None None	e e e		 		L Q R	Y B C E M					_	
12	Stainless steel <options> Extra ss tag plate None Yes None Yes Yes (*4)</options>	5m 1.5m 3m 5m Stainless None None Yes Yes		ing Coat None None None None	e e e		 		L Q R	Y B C E M N					_	
12	Stainless steel COptions> Extra ss tag plate None Yes None Yes (*4) None	5m 1.5m 3m 5m Stainless None None Yes Yes None		ing Coat None None None None Yes	e e e		 		L Q R	Y B C E M N P					_	
12	Coptions> Extra ss tag plate None Yes None Yes None Yes None Yes None Yes	5m 1.5m 3m 5m Stainless None Yes Yes None None Yes Yes Yes		ing Coat None None None None Yes Yes	e e e		 		L Q R	Y B C E M N P Q					_	
12	Coptions> Extra ss tag plate None Yes None Yes None Yes None Yes Creatment/Fill fluid	5m 1.5m 3m 5m Stainless None Yes Yes None Yes Yes Yes Yes		ing Coat None None None Yes Yes Yes Yes	e e e		 		L Q R						_	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes None Yes Stainless steel Comparison	5m 1.5m 3m 5m Stainless None None Yes Yes Yes Yes I> Fill fluid	steel elec. housi	ing Coat None None None Yes Yes Yes Yes	e e e		 		L Q R						_	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes C(*4) None Yes CTreatment/Fill fluid Treatment Standard	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Yes Is Fill fluid Silicone	steel elec. housi	ing Coat None None None Yes Yes Yes Yes	e e e		 		L Q R						_	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes C(*4) None Yes CTreatment/Fill fluic Treatment Standard Standard	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Yes Is Fill fluid Silicone Fluorinate	steel elec. housi oil (for general ad oil	ing Coat None None None Yes Yes Yes Yes	e e e		 		L Q R	Q Y W					_	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes None Yes Carreatment/Fill fluid Treatment Standard Degreasing	5m 1.5m 3m 5m Stainless None None Yes Yes None None Yes Yes Fill fluid Silicone Fluorinate Silicone	steel elec. housi oil (for general oil	ing Coat None None None Yes Yes Yes Yes Yes Yes use)			 		L Q R						_	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes None Yes Creatment/Fill fluid Treatment Standard Degreasing Oxygen service	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Ves Ves Fill fluid Silicone Fluorinate Fluorinate	oil (for general d oil oil 2011	ing Coat None None Yes Yes Yes Yes Yes use)	e e e ", "B", "C" and "D")				L Q R	Q Y M G					_	
12	Stainless steel COptions> Extra ss tag plate None Yes None Yes None Yes C(*4) None Yes Creatment/Fill fluid Treatment Standard Degreasing Oxygen service Chlorine service	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Yes Silicone Fill fluid Silicone Filuorinate Fluorinate Fluorinate	s steel elec. housi oil (for general ad oil oil ad oil (7th digit co ad oil (7th digit co	ing Coat None None Yes Yes Yes Yes Yes use) use)	e e e ", "B", "C" and "D") and "T")		 		L Q R	Q Y M G D					-	
12	Stainless steel COptions> Extra ss tag plate None Yes None Yes None Yes CTreatment/Fill fluid Treatment Standard Standard Degreasing Oxygen service Chlorine service High temp. 250°C	5m 1.5m 3m 5m Stainless None None Yes Yes None None Yes Yes Silicone Fill fluid Silicone Fluorinate Silicone	oil (for general ad oil oil (7th digit co ad oil (7th digit co oil (7th digit code	ing Coat None None Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	e e e a ", "B", "C" and "D") and "T") ", "C", "D" and "H")		 		L Q R	Q Y M G A D H					_	
12	Stainless steel COptions> Extra ss tag plate None Yes None Yes Contemporation Con	5m 1.5m 3m 5m Stainless None None Yes Yes Yes Yes Silicone Fluorinate Silicone Fluorinate Silicone Fluorinate Silicone	oil (for general ad oil oil (7th digit co ad oil (7th digit co oil (7th digit code	ing Coat None None Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	e e e a ", "B", "C" and "D") and "T") ", "C", "D" and "H")				L Q R	Q Y M G D					-	
12	Stainless steel COptions> Extra ss tag plate None Yes None Yes None Yes CTreatment/Fill fluid Treatment Standard Standard Degreasing Oxygen service Chlorine service High temp. 250°C	5m 1.5m 3m 5m Stainless None None Yes Yes Yes Yes Silicone Fluorinate Silicone Fluorinate Silicone Fluorinate Silicone	oil (for general ad oil oil (7th digit co ad oil (7th digit co oil (7th digit code	ing Coat None None Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	e e e a ", "B", "C" and "D") and "T") ", "C", "D" and "H")				L Q R	Q Y M G A D H					-	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes Cite the service Chlorine service High temp. 250°C High temp. and vacuum (250 Catentic temp. 250°C Catentic temp. and vacuum (250) Catentic temp. 250°C Catentic temp. and vacuum (250) Catentic temp. and vacuum (25	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Yes Silicone Fluorinate Silicone Fluorinate Silicone Silicone	oil (for general ad oil oil 27th digit co ad oil (7th digit co ad oil (7th digit cod oil (7th digit cod oil (7th digit cod	ing Coat None None Yes Yes Yes Yes Yes use) use)	e e e a ", "B", "C" and "D") and "T") ", "C", "D" and "H")				L Q R	Q Y M G A D H		Y 0			-	
12	Stainless steel Coptions> Extra ss tag plate None Yes None Yes None Yes Creatment/Fill fluid Treatment Standard Degreasing Oxygen service High temp. 250°C High temp. 250°C High temp. and vacuum (250 Chlorine service None Yes (Available for 7	5m 1.5m 3m 5m Stainless None None Yes Yes None Yes Yes Is Fill fluid Silicone Fluorinate Fluorinate Silicone Silicone	oil (for general ad oil oil 27th digit co ad oil (7th digit co ad oil (7th digit cod oil (7th digit cod oil (7th digit cod	ing Coat None None Yes Yes Yes Yes Yes use) use) use) and "T".	e e e e and "T") and "T") ", "C", "D" and "H") "B", "C" and "D")				L Q R	Q Y M G A D H		Y C			-	

name plate. If extra tag plate is required, select "Yes". Note 5: (*5) Available for 13th digit code "Y", "W", "G", "A" and "D".

FKX---4

Specifications of Direct Mounting Adapter {for 15, 20A (1/2, 3/4") connection} and others

- Note 1. When odering the instrument with direct mounting adapter, specify "Y" in the 5th digit of Code Symbol, and specify 16th digit to 20th digit.
 - When odering the instrument without direct mounting adapter, nothing should be filled in the 16th to 20th digit. 2. Unless otherwise described in the specifications, leave the 21st digit blank.

					10 11 12 13 14 15 1	6 17 18 1	9 20	21 -	– Digit No.
Digit	D	escription	Note	FKX 4-	- 0		-		of code
16, 17	<process (direct="" connection="" mou<="" td=""><td>nting adapter)></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></process>	nting adapter)>							
	JIS 10K 15A				1	1			
	JIS 10K 20A				1	2			
	JIS 20K 15A				2	2 1			
	JIS 20K 20A				2	2			
	JIS 30K 15A				3	8 1			
	JIS 30K 20A				3	2			
	ANSI/JPI 150LB ¹ /2"				1	H			
	ANSI/JPI 150LB ³ /4"				1	T			
	ANSI/JPI 300LB ¹ /2"				2	2 H			
	ANSI/JPI 300LB ³ /4"					T			
	Screw connection Rc1/2					R			
	Screw connection Rc ³ /4					32			
	Screw connection Rc ¹ /2 - 14NPT				5	S N			
	Screw connection Rc ³ /4 - 14NPT				5	S T			
18	<material (direct="" adapt<="" mounting="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></material>								
	Adapter Bolts/nut		Note 6						
		eel/carbon steel				W			
19	<vent (for="" direct="" drain="" mounting<="" td=""><td>adapter)></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></vent>	adapter)>							
	Standard					1	4		
	Long type					1	۱.		
20	<gasket (for="" ada<="" direct="" mounting="" td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></gasket>								
	Standard (Teflon) (Only Y, W, G, A						1		
	For high temperature (spiral gasl	ket) (Only H and S can be					2		
	specified on 13th digit).								
21	<other options=""> (*7)</other>		Note 7						
	High accuracy type	Instruction manual attached						н	
	Low temperature effect type	Instruction manual attached						J	
	H+J	Instruction manual attached						K	
	Instruction manual unattached							L	
	High accuracy type	Instruction manual unattached						Т	
	Low temperature effect type	Instruction manual unattached						U	
	T+U	Instruction manual unattached						V	

Note 6: (*6) For connection of transmitter receiving pressure unit and direct mounting adapter

Note 7: (*7) If other option is not necessary, 21st digit code is blank.

In case of 21st digit code is blank, instruction manual attached.

The product conforms to the requirements of the Electromagnetic compatibility Directive 94/9/EC as detailed within the technical construction file number TN513035. The applicable standards used to demonstrate compliance are :

EMI (Emission)	EN61326 : 1997 Class A (standard for Industrial Location)						
Frequency range MHz	Limits	Reference standard					
30 to 230	40dB (μ V/m) quasi peak, measured at 10m distance	CISPR16-1 and CISPR16-2					
230 to 1000	47dB (μ V/m) quasi peak, measured at 10m distance						

EMI (Immunity) EN61326: 1997

Annex A (standard for Industrial Location								
Phenomenon	Test value	Basic standard	Performance criteria					
Electrostatic discharge	4kV (Contact) 8kV (Air)	EN61000-4-2	В					
Electromagnetic field	80 to 1000MHz 10V/m 80%AM (1kHz)	EN61000-4-3	А					
Rated power frequency magnetic field	30A/m 50Hz	EN61000-4-8	A					
Burst	2kV 5kHz	EN61000-4-4	В					
Surge	1.2μs/50μs 1kV (Line to line) 2kV (Line to ground)	EN61000-4-5	В					
Conducted RF	0.15 to 80MHz 3V 80%AM (1kHz)	EN61000-4-6	А					

Note) Definition of performance criteria

A: During testing, normal performance within the specification limits.

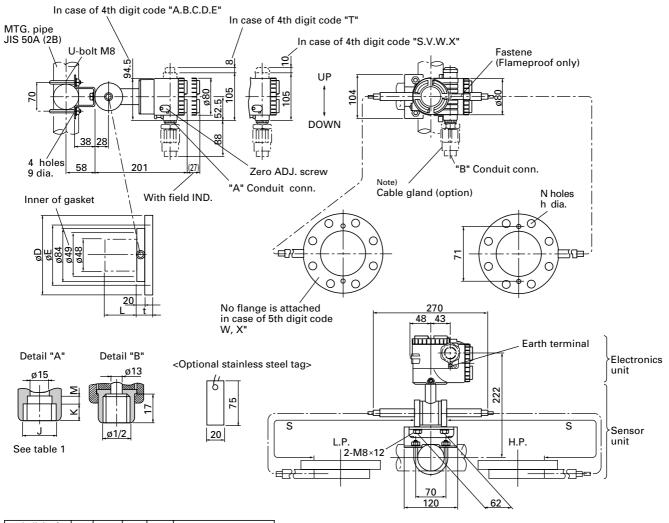
B: During testing, temporary degradation, or loss of function or performance which is self-recovering.

ORDERING INFORMATION

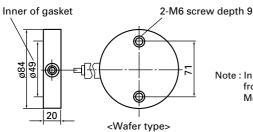
When ordering this instrument, specify:

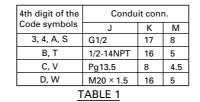
- 1. CODE SYMBOLS
- 2. Measuring range
- Output orientation (burnout direction) when abnormality is occurred in the transmitter. Hold / Overscale (21.6mA) / Underscale (3.2mA)
- Unless otherwise specified, output hold function is supplied. 4. Output mode (linear or square root output)
- Unless otherwise specified, output mode is linear.5. Indication method (indicated value and unit) in case of the actual scale (code D, H, P, S on 9th digit).
- 6. Tag No. (up to 26 alphanumerical characters), if required.

OUTLINE DIAGRAM (Unit:mm)



5th digit of code symbols	øD	øE	t	N-øh	(Flange)
0, G	140	105	36	4-19	JIS-10K-40A
1, H	155	120	36	4-19	JIS-10K-50A
2, J	140	105	38	4-19	JIS-20K-40A
3, K	155	120	38	8-19	JIS-20K-50A
4, L	160	120	42	4-23	JIS-30K-40A
5, M	165	130	42	8-19	JIS-30K-50A
6, N	175	130	52	4-25	JIS-63K-40A
7, P	185	145	54	8-23	JIS-63K-50A
A, Q	127	98.4	37.5	4-16	ANSI/JPI-150LB-1 1/2B
B, R	152	120.6	39.5	4-20	ANSI/JPI-150LB-2B
C, S	156	114.3	41	4-23	ANSI/JPI-300LB-1 1/2B
D, T	165	127	42.5	8-20	ANSI/JPI-300LB-2B
E, U	156	114.3	42.5	4-23	ANSI/JPI-600LB-1 1/2B
F, V	165	127	45.5	8-20	ANSI/JPI-600LB-2B





Capillary length [mm]
1500
3000
5000

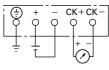
 7th digit of Code symbols
 L
 Mass approx. [kg]

 V, H, M, T, J
 0
 14
 to 19.5

V, H, M, I, J	0	14 to 19.5
A	50	15 to 30.5
В	100	15.5 to 31
С	150	16 to 31.5
D	200	16.5 to 32

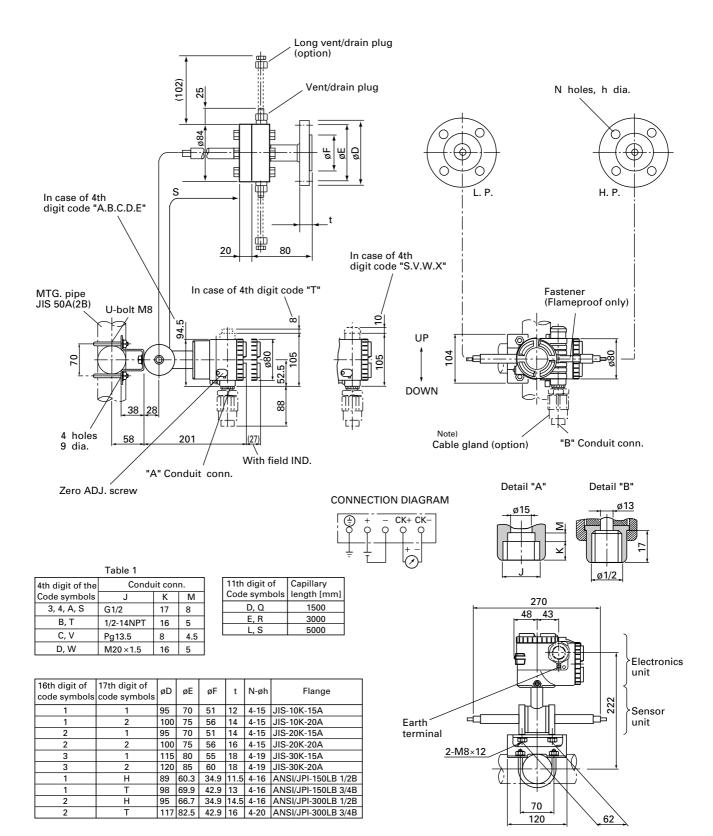
Note : In case of wafer type, flange is excluded from the scope of supply. Mount flange, referring to the view.

CONNECTION DIAGRAM



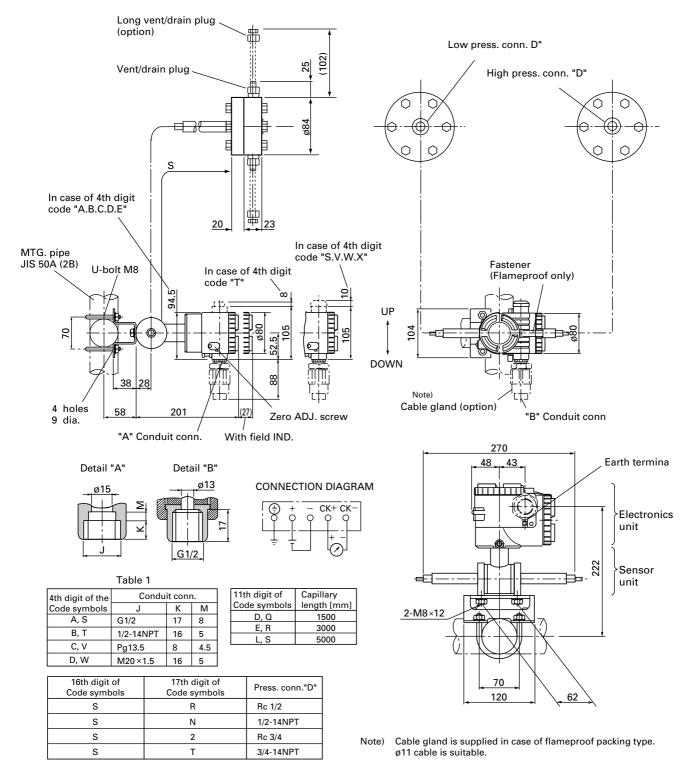
Note) Cable gland is supplied in case of flameproof packing type. ø11 cable is suitable.

<With direct mount adaptor>



Note) Cable gland is supplied in case of flameproof packing type. ø11 cable is suitable.

<With direct mount adaptor (screw connection type)>



▲ Caution on Safety

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

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