



# REMOTE SEAL TYPE DIFFERENTIAL PRESSURE TRANSMITTER

DATA SHEET FKD...4

The FCX-AII 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**

#### 1. High accuracy

0.2% accuracy for all calibrated spans is a standard feature for all DP models covering 0.32kPa {3.2mbar} range to 500kPa {5bar} high differential pressure range. 0.1% accuracy is available as option. Fuji's microcapacitance 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, 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.

#### 4. 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

#### 5. Programmable output Linearization Function

In addition to Linear and Square Root, output signal can be freely programmable.

(Up to 14 compensated points at approximation.)

 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.

#### 7. 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:

Type	Static pressure	Span lim (m l	Range limit		
. , po	Ctatio procedio	Min.	Max.	[kPa] (m bar)	
FKD□□3	1	0.32 { 3.2 }	32 { 320 }	+/- 32 {+/- 320}	
FKD□□5	Up to	1.3	130	+/- 130	
FKD□□6	flange rating	{ 13 } 5 { 50 }	{ 1300 } 500 { 5000}	{+/- 1300} +/- 500 {+/- 5000}	

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

- 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 = 10<sup>3</sup>kPa = 10bar = 10.19716kgf/cm<sup>2</sup> = 145.0377psi

 $1kPa=10mbar=101.976mmH_{2}O=4.01463H_{2}O$ 

Overrange limit: To maximum static pressure limit

Output signal: 4 to 20mA DC (linear or square root) with digital signal superimposed on the 4 to

20mA signal

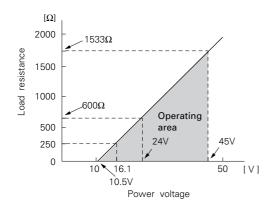
Power supply: Transmitter operates on 10.5V to 45V DC

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	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 <sub>2</sub> 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, B, C, D, E, F, G T4 Entity Type 4X					
	Model code 9th digit 13th digit Tamb					
	A,B,C,D,J Y,G,H,J,S,T,K -40°C to +85°C					
	L,P,M,1,2,3 Y,G,H,J,S,T,K -20°C to +80°C					
	Q,S,N,4,5,6 Y,G,H,J,S,T,K -20°C to +60°C					
	E,F,G,H,K Y,G,H,J,S,T,K -40°C to +60°C					
	-   W,A,D   −10°C to +60°C					
	Entity Parameters: Vmax=42.4V, Imax=113mA, Pi=1W, Ci=34.2nF, Li=1.134mH					
CSA	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 Parameters:  Ui=28V, Ii=94.3mA, Pi=0.66W,  Ci=32.6nF, Li=1.134mH					
IECEx Scheme /SAA	Ex ia IIC T4 IP66/67 Tamb = $-40^{\circ}$ C to $+70^{\circ}$ C Ex ia IIC T5 IP66/67 Tamb = $-40^{\circ}$ C to $+50^{\circ}$ C Entity Parameters: Ui=28V, Ii=93.3mA, Pi=0.66W, Ci=0.033 $\mu$ F, Li=1.034mH					

Authorities	Type n						
	Nonincendive						
ATEX	Ex II 3 GD  EEx 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, Ii=113mA, Pi=1W, Ci=27nF, Li=1.134mH  Model with arrester:  Ui=32V, Ii=113mA, Pi=1W, Ci=34.2nF, Li=1.134mH						
	EEx nAL IIC T5 Tamb = -40°C to +40°C EEx nAL IIC T4 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, B, C, D, F, G T4 Entity Type 4X  Model code 9th digit 13th digit A,B,C,D,J Y,G,H,J,S,T,K -40°C to +85°C L,P,M,1,2,3 Y,G,H,J,S,T,K -20°C to +80°C Q,S,N,4,5,6 Y,G,H,J,S,T,K -20°C to +60°C E,F,G,H,K 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 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<sup>(1)</sup>. Zero and span are also adjustable externally from the adjustment screw (span odjustment is not available with 9th

digit code "L, P, M, Q, S, N").

Damping: Adjustable from HHC or local adjustment

unit with LCD display.

The time constant is adjustable between

0.12 to 32 seconds.

## Zero elevation/suppression:

-100% to +100% of URL

#### Normal/reverse action:

Selectable from HHC<sup>(1)</sup>

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":

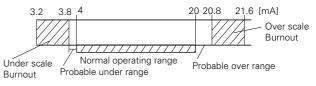
Output signal is hold as the value just before failure happens.

#### "Output Overscale":

Adjustable within the range 20.8mA to 21.6mA from HHC<sup>(1)</sup>

#### "Output Underscale":

Adjustable within the range 3.2mA to 3.8mA from HHC(1)



#### Loop-check output:

Transmitter can be configured to provide constant signal 3.8mA 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")

For explosion proof units (flame proof or intrinsic safety),

ambient temperature must be within the limits specified in 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	Н	– 15 to 250°C			
	J	85 to 300°C	]		
	Y and G	– 40 to 120°C	2.7kPa abs		
	S	– 15 to 250°C	{20mmHg abs}		
	Т	85 to 300°C			
	К	– 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 information can be remotely displayed or recon-

figured.

Note: HHC's version must be more than 6.0 (or FXW □□□□1-□3), for FCX-

ΔΠ

ΑШ.					
Items		Display	Set		
Tag No.		٧	V		
Model No.		٧	٧		
Serial No.		٧	_		
Engineering u	nit	٧	٧		
Range limit		٧	_		
Measuring ran	nge	٧	٧		
Damping		V	V		
Output mode	Linear	٧	٧		
- Cutput mode	Square root	٧	V		
Burnout direct	tion	V	V		
Calibration		٧	٧		
Output adjust			V		
Data		٧	_		
Self diagnoses	S	<b>V</b>	_		
Printer		_	_		
External switch lock		٧	٧		
Transmitter di	splay	V	V		
Linearize		٧	٧		
Rerange		٧	V		

#### Programmable output linearization function:

Output signal can be characterized with "14 points linear approximation function"

from HHC<sup>(1)</sup>.

(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: 0.2% of span

For spans below 1/10 of URL:

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

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

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

For spans below 1/10 of URL:

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

Stability:  $\pm 0.2\%$  of upper range limit (URL) for 3

years.

Temperature effect (\*):

Effects per 28°C change between the lim-

its of – 40°C and +85°C

(Standard) Zero shift: ±0.35% of URL

Total effect: ±0.5% of URL

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

Zero shift: ±0.3% of URL Total effect: ±0.4% of URL

Note: \* Excluding effect by temperature difference

between the seals.

Static pressure effect:

Zero shift; 0.2% of URL for flange rating

pressure

Span shift: - 0.2% of calibrated span for

flange rating pressure

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

pressure

Supply voltage effect:

Less than 0.005% fo calibrated span per

1V

RFI effect: Less than 0.2% of URL for the frequen-

cies of 20 to 1000MHz and field strength 30 V/m when electronics covers on.

(Classification: 2-abc: 0.2% span per

SAMA PMC 33.1)

Update period: 120 msec \*)

Step response: (without electrical damping)

Range code	Time constant (*)	Dead time (*)
"3"	2 s	
"5"	1.7 s	0.2 s
"6"	1.7 s	

\*) Faster response is available as option (maximum update rate: 25 times per second).

Dielectric strength:

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

and earth.

Insulation resistance:

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

Turn-on time: 4 sec.

Internal resistance for external field indicator:

 $12\Omega$  or less

## Physical specifications

#### Electrical connections:

 $G^{1/2}$ ,  $^{1/2}$ -14 NPT, Pg13.5, or M20  $\times$  1.5 conduit, as specified.

And 1-conduit or 2-conduit, as specified.

#### Process connections:

JIS, ANSI, or DIN raised face flanges.
JIS: 10K80A, 10K100A, 30K80A, or 30K100A

ANSI: 150LB 3", 150LB 4", 300LB 3", or

300LB 4"

DIN: PN40 DN80 or PN16 DN100

See OUTLINE DIAGRAM for detailed di-

mensions.

#### Diaphragm extension:

0, 50, 100, 150, or 200mm as specified. (See model code. Extended diaphragm is available only with 316L stainless steel or Hastelloy-C diaphragm)

#### Process-wetted parts material:

Diaphragm: 316L stainless steel, Hastelloy-

C,

Monel, Tantalum, Titanium or

Zirconium

Flange face: 316 stainless steel, Hastelloy-

C lining

Monel lining, or Tantalum lin-

ing

Extension: 316 stainless steel or Hastelloy-

C

#### Non-wetted parts material:

Electronics housing: Low copper die-cast aluminum alloy finished with epoxy/polyurethane double coating (standard), or 316 stainless steel (SCS14 per JIS G5121), as specified.

Capillary: In case of 11th code "D, E, F, L, M, N, P", PVC armored stainless steel. In case of 13th code "Q, R, S, T, V, W, X", stainless steel armored stainless steel.

Mounting flange: 304 stainless steel or

carbon steel

Fill fluid: Silicone oil (standard) or fluori-

nated oil

Mounting bracket: 304 stainless steel

#### Environmental protection:

IEC IP67 and NEMA 6/6P

Mounting: On 60.5mm (JIS 50A) pipe using mount-

ing bracket, direct wall mounting

Mass {weight}: Transmitter approximately 15kg without

options.

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

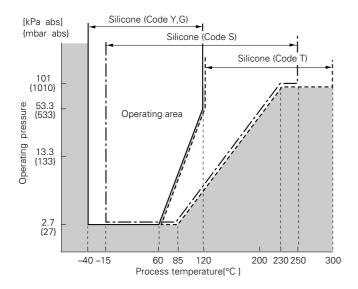


Fig. 1 Relation between process temperature and operating pressure

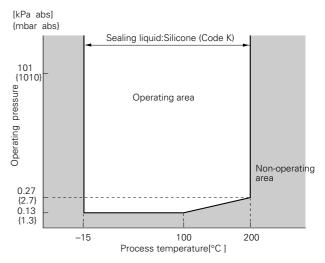


Fig. 2 Relation between process temperature and operating pressure

## Optional features

Indicator: A plug-in analog indicator (2.5% accuracy)

can be housed in the electronics compartment or in the terminal box of the hous-

ıng.

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  $(1.2 \times 50 \mu s)$ 

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: 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 service: Special silicone oil and filling procedure

are applied.

See Fig. 1, 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/poly-

urethane double coating. Specify if envi-

ronment is extremely corrosive.

# **ACCESSORIES**

Hand-held communicator:

(Model FXW, refer to Data Sheet No. EDS

8-47)

**Z/S board:** 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**

					1 2 3	4 5 (	6 7 8 9 10 11 12 13 14 1	<u>5</u> <u>21</u> <del>←</del> Digit No.
Digit			cription	Note	FKD		4 -       -	of code
4	<conduit connec<="" td=""><td>ction&gt;</td><td></td><td></td><td></td><td></td><td></td><td></td></conduit>	ction>						
	G <sup>1</sup> /2 (×1)	Camabinatian with	n 12th digit code "C, E, P, Q" are not			Α :		
	<sup>1</sup> /2-14NPT (×1)	available.			В			
	Pg13.5 (×1) available. M20 × 1.5 (×1) $G^{1/2}$ (×2)					C		
						D S		
	1/2-14NPT (×2)					T		
	Pg13.5 (×2)					v		
	M20 × 1.5 (×2)					w		
5	<flange></flange>					ΤÌ		
	Mounting flange	Flange size an	d rating				1 1	
	304 stainless	JIS 10K 80A				0		
	steel	JIS 10K 100A				1		
		JIS 30K 80A				2		
		JIS 30K 100A				3		
		ANSI/JPI 150L				4		
		ANSI/JPI 150L				5		
		ANSI/JPI 300L ANSI/JPI 300L				6		
		DIN PN16/40 D				8		
		DIN PN16 DN1				9		
		JIS 20K 80A				М		
		ANSI/JPI 600L	B 3B			R		
	Carbon steel	JIS 10K 80A				Ā		
		JIS 10K 100A				В		
		JIS 30K 80A				C		
		JIS 30K 100A				D	i i	
		ANSI/JPI 150L				E		
		ANSI/JPI 150L				F		
		ANSI/JPI 300L				G		
		ANSI/JPI 300L DIN PN16/40 D				H	i i	
		DIN PN16 DN1				K		
	316 stainless	JIS 10K 80A				s		
	steel	ANSI/JPI 150L	B 3B			T		
		ANSI/JPI 150L				U		
		ANSI/JPI 300L	B 3B			V		
		ANSI/JPI 300L	B 4B			W		
		ANSI/JPI 600L	B 3B			X		
	None	3 inch wafer				P	1 1 1 1 1 1 1 1 1 1	
	(wafer type)	4 inch wafer		N . 4		Q	11	
6	<span (*1)<br="" limit="">0.32 32</span>	[KPa]{m bar}>		Note 1		.	3	
	{3.2 320}						3	
	1.3 130						5	
	{13 1300}							
	5 500						6	
	{50 5000}							
7	<material diaphr<="" td=""><td>agm extension&gt;</td><td></td><td></td><td></td><td></td><td></td><td></td></material>	agm extension>						
	Diaphragm	Flange face	Diaph. extension [mm]					
	316L stainless	316 stainless	0				V	
	steel	steel	50				A	
			100 (*2)	Note 2			В	
			150 200				C D	
	Hastelloy-C	Hastelloy-C	0				V   H	
	nasterioy-C	l lastelloy-C	50				F	
			100				G	
			150				K	
			200					
	316L stainless	316 stainless stell					L   J	
	+Au coating							
	Monel	Monel	0				M	
	Tantalum	Tantalum	0				T	
	Titanium	Titanium	0 (*3)	Note 3			P	
	Zirconium	Zirconium	0 5 (*3)				R	

Note 1: (\*1) 100: 1 turn down is possible, but should be used at a span greater than

100. It till down is possible, but should be used at a span greater than
1/40 of the maximum span for better performance.

Note 2: (\*2) Available for 13th digit code "S", "T", "K" and 5th digit
code "1", "3", "5", "7", "B", "D", "F", "H", "K", "Q", "U", "W".

Note 3: (\*3) Available for 6th code "2", "3" and 5th code "0", "2", "4", "6", "8", "A", "C", "E", "G", "J", "P", "M", "R", "S", "T", "W".

Digit			Descrip	tion		Note	FKD 4-	9 10 11	- 0 -
9	<indicator and="" arrester=""></indicator>								
	Indicator			Arreste	<u>r</u>				
	None	1000/ 1:	ماء	None				A B	
		100% linear so		None None				C	
	Analog, cust	•	oodio	None				D D	
		ble scale (linea	r and sq. ro	,	Z/S board attached.			J	
	None			Yes				E	
		100% linear so		Yes				F	
	Analog, 0 to Analog, cust	100% sq. root	scale	Yes Yes				G H	
		ble scale (linea	r and sq. ro					K	
	Digital, 0 to			None					
	Digital, custo	om scale		None				P	
	, ,	100% square ro	oot	None				M	
	Digital, 0 to			Yes				Q	
	Digital, custo	om scale 100% square ro	oot	Yes Yes				S	
	Digital, 0 to			169				11	
		tment unit with	LCD displa	y) None					
	Digital, custo		·	•				2	
		tment unit with		y) None					
		100% square ro		, ,				3	
	Digital, 0 to	tment unit with	i LCD displa	y) None				4	
		tment unit with	LCD displa	v) Yes					
	Digital, custo		. 202 4.0p.4	,,				5	
	(Local adjust	tment unit with	LCD displa	y) Yes					
		100% square ro						6	
10		tment unit with		y) Yes					
10		for hazardous l dinary locatior						A	
		roof (Conduit		(Available for 4	th digit code "A", "S"	)		В	
		roof (Cable gla			th digit code "A", "S"	1		c	
	FM, Flamepi	oof (or explos	ionproof)	(Available for 4	th digit code "B", "T"	)		D	
			sionproof)	(Available for 4	th digit code "B", "T"	)		E	
	ATEX, Flame	•		ll:\				X	
	TIIS, Intrinsi	ne/SAA, Flame	proof (Appr	ovai pending)				R	
		safety and no	nincendive					Н	
		ic safety and no						J	
	ATEX, Intrin	•						K	
	ATEX, Type							P	
		ne/SAA, Intrins						T   V	
11		nd mounting b		isic salety				I V	
''	Capillary	Mounting bra		armor of capil	ary				
	1.5 m	304 Stainless	steel	PVC	(*4)	Note 4		D	
	3	304 Stainless		PVC	(*4)	Note 4		E	
	5	304 Stainless		PVC	(*4)	Note 4		L	
	6 7	304 Stainless 304 Stainless		PVC PVC	(*4)	Note 4 Note 4		<u>Е</u> . М	'
	8	304 Stainless		PVC	(*4)	Note 4		N	l 1
	10	304 Stainless		PVC	(*4)	Note 4		Р	
	1.5	304 Stainless		Stainless stee	(*5)	Note 5		Q	
	3	304 Stainless		Stainless stee	l , -,	Note 5		R	
	5	304 Stainless		Stainless stee		Note 5 Note 5		S	1
	6  7	304 Stainless 304 Stainless		Stainless stee Stainless stee		Note 5		<u>T</u>  V	
	8	304 Stainless		Stainless stee		Note 4		w	
	10	304 Stainless		Stainless stee	' '	Note 4		X	
12	<options></options>								
	Extra SS tag	g plate		teel elec. housi	<u> </u>				
	None Yes		None None		None None				Y
	None		Yes		None				B C
	Yes (*6)	)	Yes		None	Note 6			Ē.
	None		None		Yes	1			M
	Yes		None		Yes				N
	None		Yes		Yes				P
	Yes		Yes		Yes	1			Q

Note 4: (\*4) Available for 13th digit code "Y, W, G, A, D". Inquire about in case of 13th other code.

Available for all 13th digit code.

Note 5: (\*5) Note 6: (\*6) Customer tag number can be engraved on standard stainless steel name plate. If extra tag plate is required, select "Yes".

Digit No. of code

					1 2 3 4	5 6 7 8	9 10 11 12	213	14 15	21	_	- Digit No.
Digit		Description		Note	FKD	4 -		-	0 -	· 🔲	1	of code
13	<special and<="" applications="" td=""><td colspan="4"><special and="" applications="" fill="" fluid=""></special></td><td></td><td></td><td></td><td></td><td>П</td><td></td><td></td></special>	<special and="" applications="" fill="" fluid=""></special>								П		
	Treatment	Fill fluid									1	
	Standard	Silicone oil						Y			1	
	Standard	Fluorinated oil		L				W			1	
	Degreasing	Silicone oil						G				
	Oxygen service	Fluorinated oil (7th digit code "V", "A", "B", "C", "D"a	nd "J")					A				
	Chlorine service	Fluorinated oil (7th digit code "H", "F", "G", "K", "L"a	nd"T")					D			1	
	High temp. 250°C	Silicone oil 7th digit code "V", "A", "B", "C", "D", "H", "F", "G", "K" and	'L" )					H				
	High temp. 300°C	Silicone oil	(*7)					J			1	
	High temp. and vacuum (250°C)		- }' '	Note 7				S			1	
		Silicone oil 7th digit code "V", "A", "B", "C", and "I	)"					T			1	
	High temp. and high vacuum	Silicone oil	J					K			1	
14	<teflon membrane=""></teflon>									$\parallel \parallel$		
	None								Y	$\parallel \parallel$	1	
		code "0", "2", "4", "6", "8", "A", "C", "E", "G", "J								$ \cdot $	1	
		"X" and 7th digit code "V", "H", "M", "T", "P"	', "R".							$ \cdot $	1	
		13th digit code "H", "J", "S", "T", "K".)							1	$\perp$	1	
21	<other options=""> (*8)</other>			Note 8							1	
	High accuracy type	Instruction manual attached								H	1	
	Low temperature effect ty	·								IJ	1	
	H+J	Instruction manual attached								[K]	1	
	Instruction manual unatta										1	
	High accuracy type	Instruction manual unattached								T	1	
	Low temperature effect ty	•								U	1	
	T+U	Instruction manual unattached								V		

Treatment; Standard
If other option is not necessary, 21st digit code is blank.
In case of 21st digit code is blank, instruction manual attached. Note 7: (\*7) Note 8: (\*8)

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	4 / 1 /	CISPR16-1 and CISPR16-2
230 to 1000	to 1000 47dB (μV/m) quasi peak, measured at 10m distance	

#### EMI (Immunity) EN61326: 1997

Annex A (standard for Industrial Location)

Phenomenon	Test value	Test value Basic Perfor standard crit			
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	А		
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:

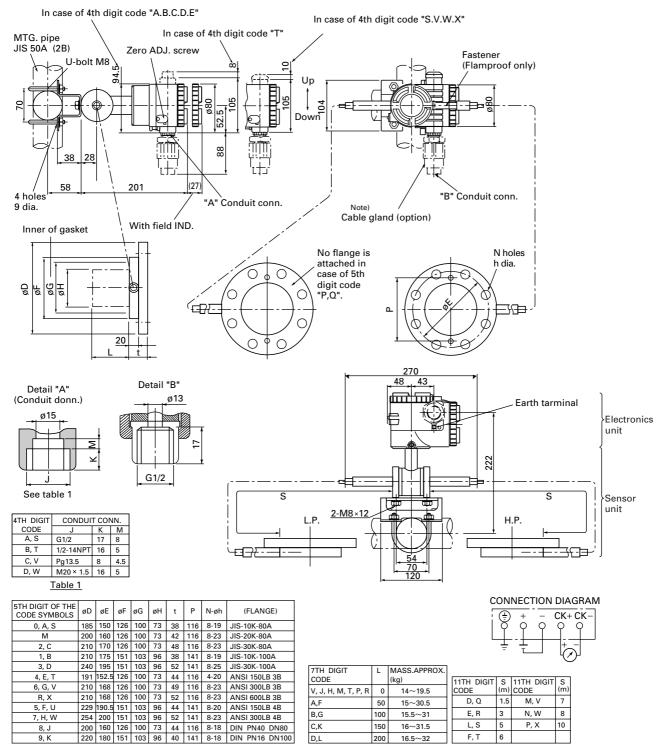
- 1. CODE SYMBOLS
- 2. Measuring range
- 3. Output orientation (burnout direction) when abnormality is occurred in the transmitter. Hold / Overscale (21.6mA) / Underscale (3.2mA)

Unless otherwise specified, output hold function is sup-

plied.

- 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)



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

▲ Caution on Safety

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

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