Fuji Electric

FCX-AII

PRESSURE TRANSMITTER

DATA SHEET

FKG···5

The FKG model of the FCX-AII V5 series of pressure transmitters accurately measures gauge pressure and transmits a proportional 4-20 mA output signal.
The transmitter uses an unique micro-capacitive silicon sensor in conbination with a state-of-the-art digital signal processing to provide exceptional performances interms of accuracy and stability.

FEATURES

1. **High accuracy up to ±0.04%**
   Fuji Electric's micro-capacitive silicon sensor provides in standard ±0,065% accuracy for all elevated or suppressed calibration ranges without additional adjustments.
   ±0.04% accuracy is available in option.
2. **Minimum inventory and design**
   Electronics unit, local indicators and electronics housing are interchangeable among all FCX-AII V5 transmitters.
3. **Minimum environmental influence**
   The Advanced Floating Cell technology provides a high immunity against temperature variations and overpressure commonly found in the process industry and substantially reduces the overall measurement error.
4. **HART/Fuji Electric communication protocols**
   FCX-AII V5 series of pressure transmitters can communicate using either the universal HART or the proprietary and faster Fuji Electric communication protocol.
   By the use of Device Description files, HART compatible devices can communicate with any FCX-AII V5 transmitter.
5. **Application flexibility**
   Various options are available to address most of the process industry applications, including :
   - Full range of hazardous area approvals
   - Built-in RFI filter and lightning arrester
   - Analog or 5 digits local display with engineering units
   - Stainless steel electronics housing
   - Wide selection of wetted part materials
6. **Programmable output Linearization Function**
   The output signal can be linearized using up to 14 pair-points.
7. **Burnout current flexibility**
   The burnout current value can be adjusted in the ranges of [3.2 ; 4.0] and [20.0 ; 22.5] mA and can be compliant with NAMUR NE43 recommandations.

FUNCTIONAL SPECIFICATIONS

Type :
FKG : Smart, 4-20mA + HART/Fuji Electric communication protocols.

Service :
Liquid, gas, or vapour

Span, range and overrange limit :

Model	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.

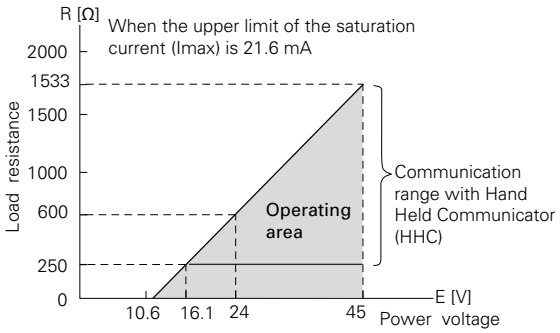
Lower range limit : (vacuum limit)
Silicone fill sensor : see fig.1
Fluorinated fill sensor :
66kPa abs (500 mmHg abs) at below 60°C

Output signal :
4-20 mA with digital signal superimposed on the analog signal.

Power supply :

10.5 to 45 V DC at transmitter terminals.
10.5 to 32 V DC with the optional arrester.
Refer to hazardous location table for specific limitations

Load limitations : see figure below



Note 1 : 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 2 : For communication with HHC (FXW model), a minimum load of 250 Ω is required.

Hazardous locations :

Marking (Digit 10 =)		Protection type
ATEX		Intrinsic Safety "i" :
		Ex II 1G/D
		Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +70°C)
		Ex ia IIC T5 Ga (-40°C ≤ Ta ≤ +50°C)
	(K)	Ex ia IIIC T135°C Da (-40°C ≤ Ta ≤ +70°C)
		Ex ia IIIC T100°C Da (-40°C ≤ Ta ≤ +50°C)
		IP 66/67
		Electrical Parameters :
		Ui ≤ 28 Vdc, Ii ≤ 94.3 mA, Pi ≤ 0.66 W
		Ci = 26 nF(1) / 36 nF(2), Li = 0.6 mH(3) / 0.7mH(4)
		Flameproof Enclosure "d":
		Ex II 2G/D
		Ex d IIC T5 Gb (-40°C ≤ Ta ≤ +85°C)
	(X)	Ex d IIC T6 Gb (-40°C ≤ Ta ≤ +65°C)
		Ex tb IIIC T100°C Db (-40°C ≤ Ta ≤ +85°C)
		Ex tb IIIC T85°C Db (-40°C ≤ Ta ≤ +65°C)
		45 Vdc max
		Increased Safety "e" :
		Ex II 3G/D
	(P)	Ex ec IIC T5 Gc (-40°C ≤ Ta ≤ +70°C)
		Ex tc IIIC T100°C Dc (-40°C ≤ Ta ≤ +70°C)
		45 Vdc max
	(M)	Combination (K) + (X)
IECEx		Intrinsic Safety "i":
		Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ +70°C)
		Ex ia IIC T5 Ga (-40°C ≤ Ta ≤ +50°C)
		Ex ia IIIC T135°C Da (-40°C ≤ Ta ≤ +70°C)
	(T)	Ex ia IIIC T100°C Da (-40°C ≤ Ta ≤ +50°C)
		IP 66/67
		Electrical Parameters :
		Ui ≤ 28 Vdc, Ii ≤ 94.3 mA, Pi ≤ 0.66 W
		Ci = 26 nF(1) / 36 nF(2), Li = 0.6 mH(3) / 0.7mH(4)
		Flameproof Enclosure "d":
		Ex d IIC T5 Gb (-40°C ≤ Ta ≤ +85°C)
	(R)	Ex d IIC T6 Gb (-40°C ≤ Ta ≤ +65°C)
		Ex tb IIIC T100°C Db (-40°C ≤ Ta ≤ +85°C)
		Ex tb IIIC T85°C Db (-40°C ≤ Ta ≤ +65°C)
		45 Vdc max
		Increased Safety "e" :
	(Q)	Ex ec IIC T5 Gc (-40°C ≤ Ta ≤ +70°C)
		Ex tc IIIC T100°C Dc (-40°C ≤ Ta ≤ +70°C)
		45 Vdc max
	(N)	Combination (T) + (R)
cCSAus		Intrinsic safety / Non Incendive / Class 1 Division 2 :
		IS Class I Division 1, Groups ABCD Ex ia
		Class II Groups EFG; Class III
		NI Class I Division 2, Groups ABCD
	(J)	(Per control drawing TC522873)
		Class I Division 2, Groups ABCD
		T4 (-40°C ≤ Ta ≤ +70°C)
		T5 (-40°C ≤ Ta ≤ +50°C)
		Ui ≤ 28 Vdc, Ii ≤ 94.3 mA, Pi ≤ 0.66 W
		Ci = 26 nF(1) / 36 nF(2), Li = 0.6 mH(3) / 0.7mH(4)
		Explosion proof
		XP Class I Division 1, Groups CD
	(E)	Class II Groups EFG; Class III
		T5 (-40°C ≤ Ta ≤ +85°C)
		T6 (-40°C ≤ Ta ≤ +65°C)
		Vmax = 42.4 Vdc
	(L)	Combination (J) + (E)
ATEX IECEx cCSAus	(W)	Combination (K) + (X) + (T) + (R) + (J) + (E)

(1) Without optional arrester
(2) With optional arrester
(3) Without analog indicator
(4) With analog indicator

Configuration :

Configuration of the FCX-AII V5 series of pressure transmitters can be carried out by either using a Hand Held Communicator (ie. Fuji Electric FXW or third party HART terminal) or the 3 push-buttons optional indicator.

A third party HART hand held communicator can be used in combination with Fuji Electric FCX-AII V5 HART Device Description files (https://fieldcommgroup.org).

Functions		Fuji Electric FXW		Third party HART HHC		3 push buttons optional indicator	
		Display	Set	Display	Set	Display	Set
Tag Nb		*v*	*v*	*v*	*v*	*v*	*v*
Model Nb		*v*	*v*	*v*	*v*	*v*	*v*
Serial Nb & Software revision		*v*	—	*v*	—	*v*	—
Engineering units		*v*	*v*	*v*	*v*	*v*	*v*
Upper Range Value		*v*	—	*v*	—	*v*	—
Measuring Range		*v*	*v*	*v*	*v*	*v*	*v*
Damping		*v*	*v*	*v*	*v*	*v*	*v*
Output signal type	Linear	*v*	*v*	*v*	*v*	*v*	*v*
	Square Root	*v*	*v*	*v*	*v*	*v*	*v*
Burnout current		*v*	*v*	*v*	*v*	*v*	*v*
Calibration		*v*	*v*	*v*	*v*	*v*	*v*
Output Adjust		—	*v*	—	*v*	—	*v*
Measuring Value		*v*	—	*v*	—	*v*	—
Self Diagnosis		*v*	—	*v*	—	*v*	—
Printer (option)		*v*	—	—	—	—	—
External Adj Screw Lock		*v*	*v*	*v*	*v*	*v*	*v*
Transmitter Display		*v*	*v*	*v*	*v*	*v*	*v*
Linearization		—	—	*v*	*v*	*v*	*v*
Rerange		*v*	*v*	*v*	*v*	*v*	*v*
Saturation Current		*v*	*v*	*v*	*v*	*v*	*v*
Write Protect		*v*	*v*	*v*	*v*	*v*	*v*
History – Calibration History – Ambient T° History		 *v* *v*	 *v* —	 *v* *v*	 *v* —	 *v* *v*	 *v* —

Note 1 : The FXW firmware revision must be higher than 7.0 in order to address FCX-AII V5 "Saturation Current", "Write Protect" and "History" functions.

Note 2 : The "Linearization" function is not accessible throught the 3 puh-buttons optional indicator.

Zero and span adjustment :

Zero and span are adjustable with a Hand Held Communicator or locally with the external adjustment screw.

Damping :

The damping time constant can be adjusted within the range of [0.06 to 32] seconds.

Zero elevation/suppression :

Zero can be adjusted within the range of -1 bar to +100% of the URL of the sensor.

Normal/reverse action :

Selectable from a Hand Held Communicator.

Local indicator :

One optional analog or 5-digits digital indicator.

Burnout direction and saturation currents :

If the self-diagnostic functions detect a transmitter a failure, the burnout function will drive the output signal to either “Output Hold”, “Output Overscale” or “Output Underscale” modes.

When “Output Hold” :

The output signal is held as the last value just before the failure happens.

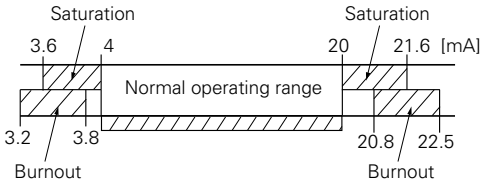
When “Output Overscale” :

The output signal is set within the range of [20.0 to 22.5] mA

When “Output Underscale” :

The output signal is set within the range of [3.2 to 4.0] mA

Both burnout and saturation current can be adjusted within the range of [3.2 ; 4.0] and [20.0 ; 22.5] mA



Loop-check / fixed output current :

The transmitter can be configured to provide a constant output signal from 3.2 up to 22.5 mA.

Temperature limit :

Ambient :

- 40 to +85°C
- 20 to +80°C (with optional LCD unit)
- 40 to +60°C (with optional arrester)

Please refer to the hazardous locations table for ambient temperature limitations according to the standard and type of protection.

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 (Relative Humidity)

PERFORMANCE SPECIFICATIONS

Reference conditions, silicone oil filling, SS 316 isolating diaphragms, 4-20 mA analog output.

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

For models up to 10000 kPa :

For spans > 1/10 of URL :

± 0.065% (standard) of span or

± 0.04% (option) of span

For < 1/10 of URL :

$$\pm (0.015 + 0.005 \frac{URL}{Span}) \text{ \% of span}$$

For 50000 kPa model :

For spans > 1/10 of URL :

±0.1% of span

For spans < 1/10 of URL :

$$\pm (0.05 + 0.005 \frac{URL}{Span}) \text{ \% of span}$$

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

Zero shift :

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

Total effect :

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

Double the effects for material code (7th digit in model code) “H”, “M”, “T”

Overrange effect :

Zero shift :

0.2% of URL for any overrange to maximum limit (< overange max. admissible)

Supply voltage effect :

Less than 0.005% of calibrated span per 1 V

Update rate :

60 msec

RFI effect :

< 0.2% of the URL for the frequencies from 20 up to 1000 MHz with an electrical field strength of 10 V/m and housing covers in place. (Classification : 2-abc : 0.2% of span according SAMA PMC 33.1).

Response time : (63.3% of output signal without damping)

Time constant :

0.08 sec (at 23°C)

Dead time :

Approximately 0.12 sec

Response time = time constant + dead time

Mounting position effect :

Zero shift :

Less than 0.12 kPa {1.2 m bar} for a 10° tilt in any position. This error can be corrected by adjusting zero. (Double the effect for fluorinated filling fluid).

No effect on span.

Vibration effect :

< ±0.25% Of spans for spans greater than 1/10 of URL. Frequency 10 to 150 Hz, acceleration 39.2 m/sec^2

Material fatigue :

Please consult Fuji Electric.

Dielectric strength :

500 V AC, 50/60Hz 1 min., between circuit and earth (except with the optional arrester)

Insulation resistance :

More than 100 MΩ at 500 V DC.

Internal resistance for external field indicator :

12 Ω max (connected to test terminal CK+ and CK-)

Pressure equipment directive (PED) 97/23/EC

Digit 6 code 1, 2, 3, 4 and 9 according to Article 4.3

Digit 6 code 5 : Category III Model H1

PHYSICAL SPECIFICATIONS

Conduit connections :

1/2”-14 NPT, Pg13.5, or M20×1.5

Process connections :

Standard :

1/4”-18 NPT

Option :

1/2”-14 NPT with oval flanges.

Remark : the codifiction doesn’t include the oval flange accessories.

Process-wetted parts material :

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

Remark :

Gasket : Viton o-ring or PTFE square section gasket.

Availability of above material design depends on ranges and static pressure.

Refer to “Model codes”.

Non-wetted parts material :

Electronics housing :

Low copper die-cast aluminum alloy finished with polyester coating (standard) or SS 316 (option)

Bolts and nuts :

Standard :

Cr-Mo alloy

Option :

SS 316 (L) or SS 660 for 50 MPa unit

Filling fluid :

Standard :

Silicone oil

Option :

Fluorinated oil

Mounting bracket :

SS 304L or 316L (option)

Environmental protection :

IEC IP66/IP67 and Type 4X

Mounting :

Without mounting bracket :

Direct mounting

With optional mounting bracket :

For 50 mm (2”) pipe or direct wall mounting.

Mass {weight} :

Transmitter : 2.9 to 3.4 kg without options.

Add : 0.3 kg for indicator

0.5 kg for mounting bracket

2 kg for stainless steel housing (option)

ACCESSORIES

Oval flanges :

Converts process connection to 1/2”-14 NPT.

Hand Held Communicator :

FXW Model, refer to datasheet n° EDS8-47

OPTIONAL FEATURES

Local indicator :

A plug-in analog indicator (2.5% accuracy) can be mounted into the electronics compartment or the terminal box of the housing.

An optional 5 digit indicator with engineering units is also available.

Local configuration with the 3 push-buttons indicator :

A local configuration can be carried out with the optional 3 push-buttons 5-digits indicator.

Arrester :

A built-in arrester protects the electronics from lightning surges.

Lightning surge immunity :

±4 kV (1.2 × 50 µs)

Oxygen service :

Special cleaning procedures are applied during the manufacturing process to maintain oil free all process wetted part. The filling fluid is fluorinated oil.

Chlorine service :

Same procedures and filling fluid as for oxygen service.

Degreasing :

Process-wetted parts are cleaned and the filling fluid is standard silicone oil. Not for use with oxygen or chlorine presence.

NACE specification :

Metallic materials for all pressure boundary parts comply with NACE MR 0175/ISO 15156.

SS 660 or SS 660/660 bolts and nuts comply with NACE MR 0175/ISO 15156.

Optional tag plate :

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

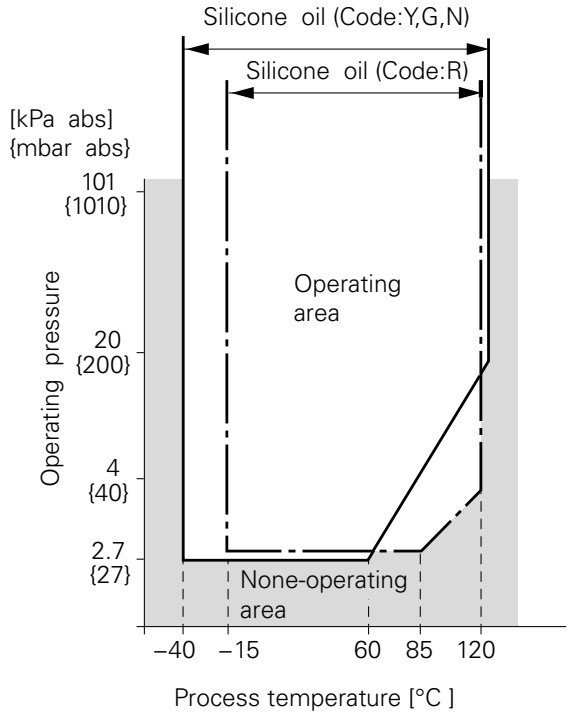


Fig.1

Relation between process temperature and operating pressure

MODEL CODE SYMBOLS

1	2	3	4	5	6	7	8		9	10	11	12	13		14	15		16
F	K	G					5	-						-			-	

DESCRIPTION

Type

Gauge pressure - Smart, 4-20 mA + HART/Fuji Electric communication protocols

Connections

Code (4)	Note	Process connection	Oval flange threading	Conduit connection	Enclosure type
R		1/4 - 18 NPT	7/16 - 20 UNF	M20 x 1,5	"L" shape
T				1/2 -14 NPT	
V	(*1)		M10 or M12	Pg13,5	
W	(*1)			M20 x 1,5	
X			7/16 - 20 UNF	Pg13,5	
5		Rc 1/4	7/16 - 20 UNF	G 1/2	"T" shape
6		1/4 - 18 NPT		1/2 - 14 NPT	
7	(*1)		M10 or M12	Pg13,5	
8	(*1)			M20 x 1,5	
9			7/16 - 20 UNF	Pg13,5	

Range & Materials (*2)

Code (5 6 7)	Note	Measuring ranges	Process cover	Diaphragm	Wetted cell body
0 1 V		13 to 1300 mbar	SS 316L	SS 316L	SS 316L
0 1 W				Hastelloy C	
0 1 H					Hastelloy C
0 1 M				Monel	Monel lining
0 1 J	(*3)			Gold coat	SS 316L
0 1 T				Tantalum	Tantalum lining
9 1 H	(*4)		PVDF insert	Hastelloy C	Hastelloy C
9 1 M	(*4)			Monel	Monel lining
9 1 T	(*4)			Tantalum	Tantalum lining
0 2 V		0,05 to 5 bar	SS 316L	SS 316L	SS 316L
0 2 W				Hastelloy C	
0 2 H					Hastelloy C
0 2 M				Monel	Monel lining
0 2 J	(*3)			Gold coat	SS 316L
0 2 C	(*3)			Gold / ceramic	Gold / ceramic
0 2 T				Tantalum	Tantalum lining
9 2 H	(*4)		PVDF insert	Hastelloy C	Hastelloy C
9 2 M	(*4)			Monel	Monel lining
9 2 T	(*4)			Tantalum	Tantalum lining
0 3 V		0,3 to 30 bar	SS 316L	SS 316L	SS 316L
0 3 W				Hastelloy C	
0 3 H					Hastelloy C
0 3 M				Monel	Monel lining
0 3 J	(*3)			Gold coat	SS 316L
0 3 C	(*3)			Gold / ceramic	Gold / ceramic
0 3 T				Tantalum	Tantalum lining
9 3 H	(*4)		PVDF insert	Hastelloy C	Hastelloy C
9 3 M	(*4)			Monel	Monel lining
9 3 T	(*4)			Tantalum	Tantalum lining
0 4 V		1 to100 bar	SS 316L	SS 316L	SS 316L
0 4 W				Hastelloy C	
0 4 H					Hastelloy C
0 4 M				Monel	Monel lining
0 4 J	(*3)			Gold coat	SS 316L
0 4 C	(*3)			Gold / ceramic	Gold / ceramic
0 4 T				Tantalum	Tantalum lining
0 5 V		5 to 500 bar	SS 316L	SS 316L	SS 316L
0 5 W				Hastelloy C	
0 5 H					Hastelloy C
0 5 J	(*3)			Gold coat	SS 316L

Code (8 - 9)	Note	Indicator	Arrester
5 - A		None	None
5 - B	(*8)	Analog, 0-100% linear scale	
5 - D	(*8)	Analog, Custom scale	
5 - J	(*8)	Analog, double scale	
5 - E		None	Yes
5 - F	(*8)	Analog, 0-100% linear scale	
5 - H	(*8)	Analog, Custom scale	
5 - K	(*8)	Analog, double scale	
5 - L		digital, 0-100%	None
5 - P		digital, Custom scale	
5 - Q		digital, 0-100%	Yes
5 - S		digital, Custom scale	
5 - 1		digital, 0-100% with push buttons	None
5 - 2		digital, Custom scale with push buttons	
5 - 4		digital, 0-100% with push buttons	Yes
5 - 5		digital, Custom scale with push buttons	

Hazardous location approvals

Code (10)	Note	Description
A		None
X	(*7)	ATEX - Flameproof
K		ATEX - Intrinsic Safety
P		ATEX - Increased Safety
M	(*7)	ATEX - Combination Flameproof and Intrinsic Safety
E	(*7)	cCSAus - Explosion proof
J		cCSAus - Intrinsic Safety and Non Incendive
L	(*7)	cCSAus -Combination Explosion proof, Intrinsic Safety and Non Incendive
R	(*7)	IECEx - Flameproof
T		IECEx - Intrinsic Safety
Q		IECEx - Increased Safety
N	(*7)	IECEx - Combination Flameproof and Intrinsic Safety
W	(*7)	IECEx - ATEX - cCSAus - Explosion/flameproof, Intrinsic Safety and Non Incendive

1	2	3	4	5	6	7	8		9	10	11	12	13		14	15		16	DESCRIPTION
F	K	G						-						-			-		

Side Vent/drain / Mounting bracket

A	None (Standard)	None
C		SS 304L
K		SS 316L
D	Yes	None
F		SS 304L
L		SS 316L

Stainless steel parts

			TAG plate	Housing
Y			None	None
B			Yes	
C		(*9)	None	Yes
E		(*9)	Yes	

Special applications & filling fluids

			Treatment	Filling fluid
Y			None (std)	Silicone oil
W				Fluorinated oil
G			Degreasing	Silicone oil
A			Oxygen service	Fluorinated oil (only with digit 7 = V)
D			Chlorine service	Fluorinated oil (only with digit 7 = H, T)
N		(*6)	NACE	Silicone oil

Process cover gasket

-	A		Viton
-	C		PTFE square section gasket in SS flange
-	D		PTFE square section gasket in PVDF insert

Bolts/screws material

A			Carbon steel Cr-Mo - M10 (standard)
U			SS 316L / SS 316L - M10
V			Carbon steel Cr-Mo - M12 for static pressure > 100 bar
W		(*6)	SS 660 / SS 660 - M10 for static pressure < 100 bar
W		(*6)	SS 660 / SS 660 - M12 for static pressure > 100 bar

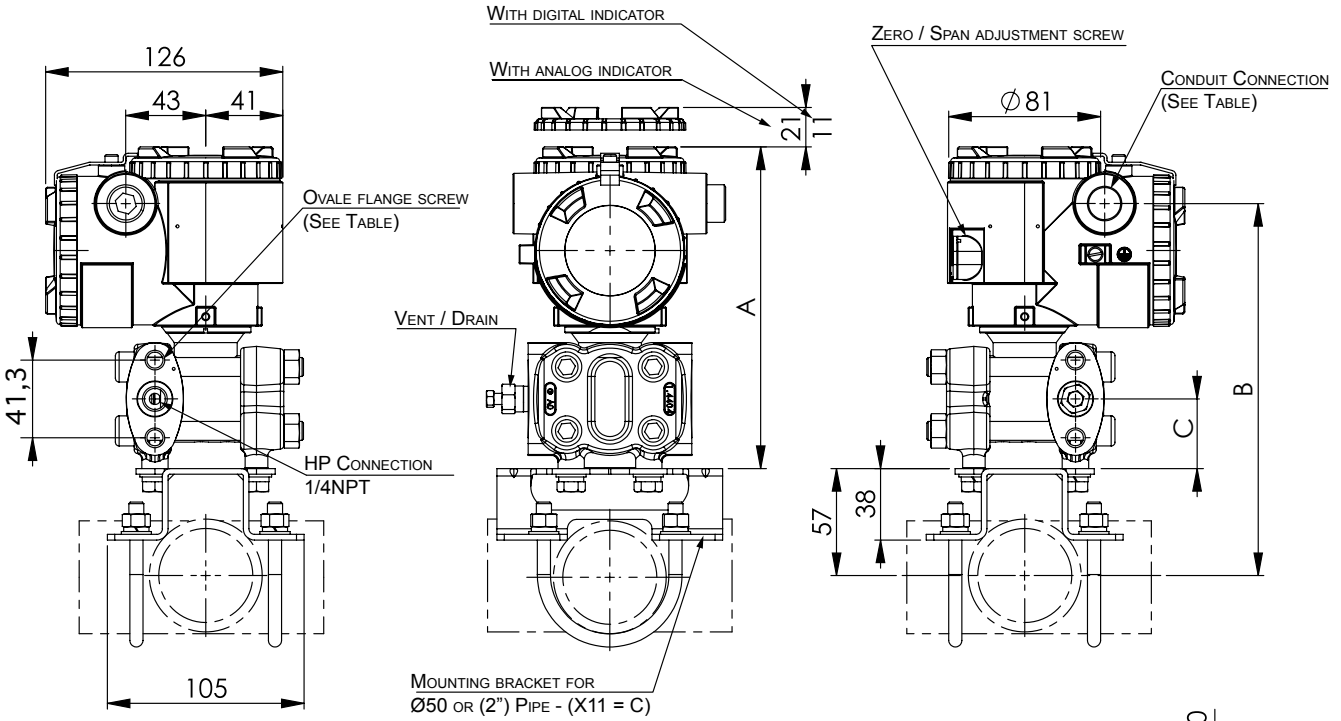
Special options or design

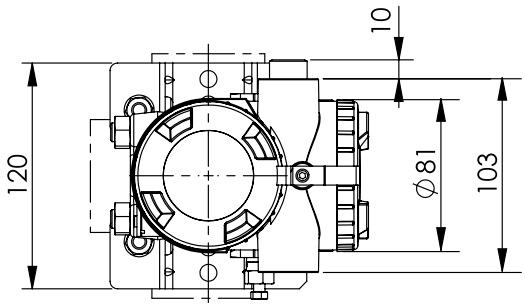
(*5)	-	*	Special, no code available

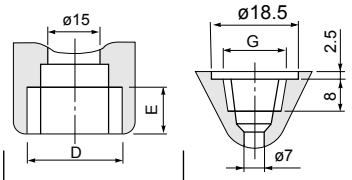
Notes* :

1- M12 oval flange screws are required for pressure > 100 bar.
2- Turn down ration of 100 is possible but span greater than 1/40 of the the URL is recommended for better performances.
3- Gold coating on wetted parts of the measuring cell for hydrogen service. Gold/ceramic coating available upon request.
4- Process cover with PVDF insert: 1/2"-14 NPT side process connection, no vent/drain, square section PTFE gasket. Other upon request
5- When no code can be found in the current model code, place "*" in the corresponding digit code as well as in the 16th digit.
6- SS 660 bolts/nuts are in conformity with NACE MR0175/ISO 15156 and must be used for NACE service
7- Only with digit 4 = "R", "T", "W", "6", "8"
8- Except digit 10 = "P", "Q"
9- SS 316L enclosure not available for "T" shape version

OUTLINE DIAGRAM (unit : mm) **<7th digit code : V, H, M, T>**







CODE X=4	CONDUIT CONNECTION		OVAL FLANGE SCREW
	D	E	G
R	M20x1.5	16	7/16-20 UNF
T	1/2-14NPT	16	7/16-20 UNF
V	Pg13.5	10,5	M10 or M12
W	M20x1.5	16	M10 or M12
X	Pg13.5	10,5	7/16-20 UNF

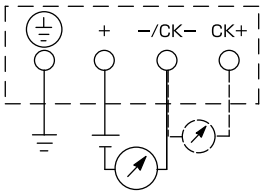
TABLE

DIMENSIONS			
MODEL	A	B	C
FKG□01	171	198	37
FKG□02			
FKG□03			
FKG□04			
FKG□05	172,5	199,5	38,5

WEIGHT : *- 3,5 KG (WITHOUT OPTION)*
ADD : *- 0,3 KG FOR INDICATOR OPTION*
- 0,5 KG FOR MOUNTING BRACKET
- 2 KG FOR STAINLESS STEEL HOUSING OPTION

X1 X2 X3 X4 X5 X6 X7 X8 - X9 X10 X11 X12 X13 - X14 X15 - X16 F K G □0□□5-□□□□□-□□-□		*SPAN LIMIT*	
		Min.	Max.
	FKG□01	1,3 KPa (13 mbar)	130 KPa (1300 mbar)
	FKG□02	5 KPa (50 mbar)	500 KPa (5 bar)
	FKG□03	30 KPa (0,3 bar)	3 MPa (30 bar)
	FKG□04	100 KPa (1 bar)	10 MPa (100 bar)
	FKG□05	500 KPa (5 bar)	50 MPa (500 bar)

CONNECTION DIAGRAM



ELECTROMAGNETIC COMPATIBILITY

All FCX-AII series of pressure transmitters are in conformity with the provision of the EMC Directive 2014/30/EU on the harmonization of the laws of the Members States relating to electromagnetic compatibility.

All these models of pressure transmitters are in accordance with the following harmonized standards :

- **EN 61326-1** *(Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements).*
- **EN 61326-2-3** *(Particular requirements - Test configuration, operational conditions and performance criteria for tranducers with integrated or remote signal conditioning).*

Emission limits (according to EN 55011 / CISPR 11, Group 1 Class A)

Frequency range (MHz)	Limits	Basic standard
30 to 230	40 dB (µV/m) quasi peack, measured at 10 m distance	Passed
230 to 1000	47 dB (µV/m) quasi peack, measured at 10 m distance	

Immunity

Phenomenon	Test value	Standard	Required Performance criteria	Result of criteria
Electrostatic Discharge	±4 kV (Contact) ±8 kV (Air)	EN/IEC 61000-4-2	**B**	**A**
Radiated, Electromagnetic Field	10 V/m (0.08 to 1.0 GHz) 3 V/m (1.4 to 2.0 GHz) 1 V/m (2.0 to 2.7 GHz)	EN/IEC 61000-4-3	**A**	**A**
Fast transients (burst)	2 kV (5/50 ns, 5 kHz	EN/IEC 61000-4-4	**B**	**A**
Surge Transients	1 kV Line to line 2 kV Line to ground	EN/IEC 61000-4-5	**B**	**A**
Conducted RF Disturbances	3 Vrms (150 kHz to 80 MHz) 80% AM @ 1 kHz	EN/IEC 61000-4-6	**A**	**A**
Power Frequency Magnetic Field	30 A/m (50 Hz, 60 Hz)	EN/IEC 61000-4-8	**A**	**A**

Performance criteria (A & B): according to IEC 61326

Fuji Electric

Fuji Electric France S.A.S.
46 rue Georges Besse - ZI du brézet - 63039 Clermont ferrand
Tél : 04 73 98 26 98 - Fax : 04 73 98 26 99
Mail : sales.dpt@fujielectric.fr - web : www.fujielectric.fr