

■ DATA SHEET

The ProcessX level transmitter accurately measures liquid level and transmits a proportional 4 to 20 mA signal. The transmitter utilizes a unique micromachined capacitance silicon sensor with state-of-the-art microprocessor technology to provide exceptional performance and functionality.

■ FEATURES

1. HIGH ACCURACY

0.165% accuracy for all calibrated spans is a standard feature. The micro-capacitance silicon sensor assures this accuracy for all elevated or suppressed calibration ranges without additional adjustment. 0.1% accuracy is available as option.

2. MINIMUM INVENTORY AND DESIGN

Electronics unit, local indicators and electronics housing are interchangeable among all ProcessX transmitters.

3. 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.

4. GEORGIN/HART® BILINGUAL COMMUNICATIONS PROTOCOL

ProcessX series transmitter offers bilingual communications to speak both Georgin proprietary protocol and HART®. Any HART® compatible devices can communicate with ProcessX.

5. APPLICATION FLEXIBILITY

Various options that render the ProcessX suitable for almost any process applications include :

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

6. PROGRAMMABLE OUTPUT LINEARIZATION FUNCTION

Output signal can be freely programmable. (Up to 14 compensated points at approximation).

7. BURNOUT CURRENT FLEXIBILITY (UNDER SCALE: 3.2 TO 4.0 mA, OVER SCALE: 20.0 TO 22.5 mA)

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

8. 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.



■ FUNCTIONAL SPECIFICATIONS

Type :

FKE : Smart, 4-20 mA DC + Georgin/Hart® digital signal

Service :

Liquid, gas or vapour

Static pressure, span, and range limit :

Type	Static pressure	Span limit (mmH ₂ O)		Range limit (mmH ₂ O)
		Minimum	Maximum	
FKE□□2	Up to flange rating	10	600	± 600
FKE□□3		32	3200	± 3200
FKE□□5		130	13000	± 13000
FKE□□6		500	50000	± 50000
FKE□□8		3000	300000	±300000

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 : 66 kPa abs (500 mmHg abs) at temperature below 60 °C. See fig.2

Overrange limit :

To maximum static pressure limit.

Output signal :

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

Power supply :

Transmitter operates on 10.5 V to 45 V DC at transmitter terminals.

10.5 V to 32 V DC for the units with optional arrester.

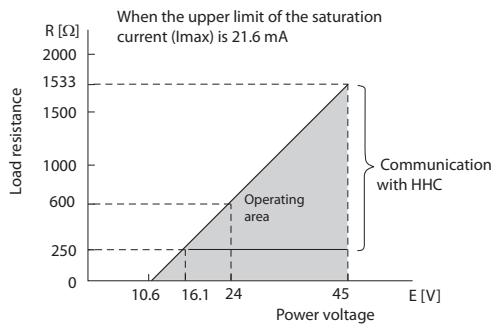


FKE...5 Level transmitter



Safety for Industrial Process

■ **LOAD LIMITATIONS : see figure below**



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

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

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

■ **HAZARDOUS LOCATIONS : See below**

	digit 10	Explosion Proof	Installation areas	ATEX and IECEx parameters
ATEX	X	Attestation DEKRA 14ATEX0015X Ex d IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db Ta= -40<+85°C) - T5/T100°C Ta= -40<+65°C) - T6/T85°C IP66/67 Ex II 2 GD : Group II (Surface) - Category 2GD The temperature of the cable can be Ta + 5 ° C	Zones 1-2 Zones 21-22	Model without surge arrester Ui≤45Vdc Pi≤1.0125W Model with surge protector Ui≤32Vdc Pi≤1.0125W
IECEX	R	Attestation IECEx CSA 16.0048X Ex d IIC T5/T6 Gb Ex tb IIIC T85°C/T100°C Db Ta= -40<+85°C) - T5/T100°C Ta= -40<+65°C) - T6/T85°C IP66/67		
	digit 10	Intrinsic safety	Installation areas	ATEX and IECEx parameters
ATEX	K	Attestation DEKRA 14ATEX0016X Ex ia IIC T4/T5 Ga Ex ia IIIC T100°C/T135°C Da Ta= -40<+70°C) - T4/T135°C Ta= -40<+50°C) - T5/T100°C IP66/67 Ex II 1 GD : Group II (Surface) - Category 1GD	Zones 0-1-2 Zones 20-21-22	Ui≤28Vdc Ii≤94.3mA Pi≤0.66W Model with / without surge arrester Ci=36nF / Ci=26nF Model with / without analogue indicator Li=0.7mH / Li=0.6mH
IECEX	H	Attestation IECEx CSA 16.0049X Ex ia IIC T4/T5 Ga Ex ia IIIC T100°C/T135°C Da Ta= -40<+70°C) - T4/T135°C Ta= -40<+50°C) - T5/T100°C IP66/67		
	digit 10	"n" Type	Installation areas	ATEX and IECEx parameters
ATEX	P	Ex nA IIC T5 Gc Ex tc IIIC T100°C Dc Ta= -40°C<+70°C) - T5/T100°C IP66/67 Ex II 3 GD : Group II (Surface) - Category 3GD	Zones 2 Zones 22	Model without surge arrester Ui≤45Vdc Pi≤1.0125W
IECEX	Q	Ex nA IIC T5 Gc Ex tc IIIC T100°C Dc Ta= -40°C<+70°C) - T5/T100°C IP66/67		

Refer to the package insert for safe use.

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⁽¹⁾ or local adjustment unit with LCD display.

The time constant is adjustable between 0.12 to 32 sec.

ZERO ELEVATION/SUPPRESSION :

-100% to + 100% of URL.

NORMAL/REVERSE ACTION :

Selectable from HHC⁽¹⁾

INDICATION :

Analog indicator or 5-digit LCD meter.

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" :

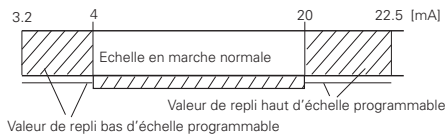
Output signal is hold as the value just before failure happens.

"Output Overscale" :

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

"Output Underscale" :

Adjustable within the range 3.2 mA to 4.0 mA from HHC⁽¹⁾. Output limits conforming to NAMUR NE43 by order.



LOOP-CHECK OUTPUT :

Transmitter can be configured to provide constant signal 3.2 mA through 22.5 mA by HHC⁽¹⁾.

TEMPERATURE LIMIT :

Ambient : -40 à + 85°C

-20 à + 80°C (for LCD indicator)

-40 à + 60°C (for arrester option)

-10 à + 60°C (for fluorinated oil fill transmitter)

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

Process :

	Code in the 13th digit of "Code symbols"	Process temperature	Lower limit of static pressure
Fluorinated oil	W, A	-20 to 120°C	Atmospheric
Silicone oil	Y et G	-40 to 150°C	20 torr

Note : For higher process temperature, please consult Georgin.

Storage : -40 à + 90°C

HUMIDITY :

0 to 100% RH (Relative Humidity)

COMMUNICATION :

With HHC⁽¹⁾ (model FXW, consult DS_EDS8-47), following items can be remotely displayed or configured.

Note : HHC's version must be higher than 7.0 (or FXW □□□□1-□4), for ProcessX for supporting these items: "Saturate current", "Write protect", and "History".

Items	Georgin Protocol with le FXW		Hart® Protocol		By local configurator (with 3 push button), (LCD indicator)	
	Affich.	Régl.	Affich.	Régl.	Affich.	Régl.
Tag No.	v	v	v	v	v	v
Model No.	v	v	v	v	v	v
Serial No. & Software Version	v	—	v	—	v	—
Engineering unit	v	v	v	v	v	v
Range limit	v	—	v	—	v	—
Measuring range	v	v	v	v	v	v
Damping	v	v	v	v	v	v
Output mode	Linear	v	v	v	v	v
	Square root	v	v	v	v	v
Burnout direction	v	v	v	v	v	v
Calibration	v	v	v	v	v	v
Output adjust	—	v	—	v	—	v
Data	v	—	v	—	v	—
Self diagnoses	v	—	v	—	v	—
Printer (In case of FXW with printer option)	v	—	—	—	—	—
External switch lock	v	v	v	v	v	—
Transmitter display	v	v	v	v	v	—
Linearize*	v	v	—	—	—	—
Rerange	v	v	v	v	v	v
Saturate current	v	v	v	v	v	v
Write protect	v	v	v	v	v	v
History	—	—	—	—	—	—
	—	—	—	—	—	—

(Note) (1) HHC : Hand Held Communicator

***LOCAL CONFIGURATOR WITH LCD DISPLAY (OPTION) :**

Local configurator with 3 push button and LCD display can support all items (Georgin Protocol list) except "Linearize" function.

PROGRAMMABLE OUTPUT LINEARIZATION FUNCTION :

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

PERFORMANCE SPECIFICATIONS

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

ACCURACY RATING : (including linearity, hysteresis, and repeatability)

(Standard)

For spans greater than 1/10 of URL :

$$\pm 0.165\% \text{ of span}$$

For spans below 1/10 of URL :

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

(Option)

For span greater than 1/10 of URL :

$$0.1\% \text{ of span}$$

For span below 1/10 of URL :

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

STABILITY : ±0.2% of upper range limit (URL) for 10 years.



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TEMPERATURE EFFECT :

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

Zero shift (transmitter only) : ±0,3 of URL

Zero shift (level kit only) : +0,3 mbar/28°C

Total effect (level kit and transmitter) : ± 0,3% of URL

Note : The indicated values are for temperature compensation made on transmitter only, without level kit.

Zero shift is improved (2 to 3 times) by an additional temperature compensation of the complete level transmitter (level kit and transmitter).

STATIC PRESSURE EFFECT :

Zero shift : ±0.2% of URL / 1MPa

Span shift : ±0.2% of calibrated span / 1MPa

Double the effects for material code (7th digit in codes symbols) "H", "M", "T", "B", "P" and "R".

OVERRANGE EFFECT :

Zero shift : ±0.15% of URL (160bar max)

Double the effects for material code (7th digit in codes symbols) "H", "M", "T", "B", "P" and "R"

SUPPLY VOLTAGE EFFECT : Less than 0.005% of calibrated span per 1 V.

UPDATE RATE : 60 msec

RFI EFFECT :

< 0,2% of URL for the frequencies of 20 to 1000 MHz and field strength of 10 V/m when electronic housing covers are on (Classification : 2-abc : 0,2% of span according SAMA PMC 33.1)

RESPONSE TIME :

(At 63,3% of output signal without damping)

Range code	Time constant (at 23°C)	Dead time
"3"	550 msec	120 msec approx.
"5" à "8"	300 msec	

Response time = time constant + dead time

MOUNTING POSITION EFFECT :

Zero shift, less than 30 mmH₂O for a 10° tilt in any plane (no extension). This error can be corrected by adjusting zero. (Double the effect for fluorinated fill sensor). No effect on span.

VIBRATION EFFECT :

< ±0,25% of span for spans greater than 1/10 of URL. Frequency 10 to 150 Hz, acceleration 39,2 m/sec².

MATERIAL FATIGUE : Please consult GeorGIN

DIELECTRIC STRENGTH :

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

INSULATION RESISTANCE : More than 100 MΩ at 500 V DC.

TURN-ON TIME : 4 seconds

INTERNAL RESISTANCE FOR EXTERNAL FIELD INDICATOR :

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

PRESSURE EQUIPMENT DIRECTIVE (PED) 97/23/EC :

According to Article 3.3

PHYSICAL SPECIFICATIONS

ELECTRICAL CONNECTIONS : 1/2"-14 NPT, Pg 13,5 or M20 x 1,5

PROCESS CONNECTIONS :

LP side : Standard : 1/4"-18 NPT

Option : 1/2"-14 NPT with oval flanges

HP side : ANSI or DIN raised face flange

Raised face flange machining :

Stockfinish - SS 316L diaphragm

Smooth finish - Other diaphragm materials

PROCESS-WETTED PARTS MATERIAL :

Material code (7th digit in "Code symbols")	LP side			HP side
	Process cover	Diaphragm	Wetted sensor body	Diaphragm & flange face
V	SS 316L	SS 316L	SS 316L	SS 316L
W	SS 316L	Hastelloy-C	SS 316L	Hastelloy-C
H	SS 316L	SS 316L	SS 316L	Hastelloy-C
M	SS 316L	SS 316L	SS 316L	Monel
T	SS 316L	SS 316L	SS 316L	Tantalum
A	SS 316L	SS 316L	SS 316L	SS 316L + FEP
				lining diaphragm
B	SS 316L	SS 316L	SS 316L	SS 316L + Gold coating
P	SS 316L	SS 316L	SS 316L	Titanium
R	SS 316L	SS 316L	SS 316L	Zirconium

Note : Gasket : Viton O-ring or PTFE/15% graphite square section gasket.

NON-WETTED PARTS MATERIAL :

Electronics housing : Low copper die-cast aluminum, finished with polyester coating (standard), or SS 316 as specified.

Bolts and nuts : Cr-Mo alloy (standard) or SS 316(L)

Fill fluid :

Silicone oil (standard) for the measuring cell and level

Kit Silicone oil (standard) for the measuring cell and

fluorinated oil (or specific oils upon request) for the

level kit.

Mounting flange : 316L SS

ENVIRONMENTAL PROTECTION :

IP66/IP67 and NEMA 4X

MASS {WEIGHT} :

Transmitter : Approx. 10.2 to 19.2 kg without options

Add : 0.3 kg for indicator

0.5 kg for mounting bracket

2.0 kg for stainless steel housing (option)

1.0 kg per 50mm extension of diaphragm

ACCESSORIES

OVAL FLANGES :

Converts process connection to 1/2-14 NPT

HAND HELD COMMUNICATOR :

(Model FXW, refer to data sheet (EDS8-47))

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 housing.

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 HHC.

ARRESTER :

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

Lightning surge immunity : 4 kV (1.2 × 50µs)

OXYGEN SERVICE :

Special cleaning procedures are followed throughout the process to maintain all process wetted parts oil-free. The fill fluid is fluorinated oil.

CHLORINE SERVICE :

Oil free procedures as above. Includes fluorinated oil for fill.

- DEGREASING :**
 Process-wetted parts are cleaned, but the fill fluid is standard silicone oil. Not for use on oxygen or chlorine measurement.
- NACE SPECIFICATION :**
 Metallic materials for all pressure bound any parts comply with NACE MR 0175/ISO 15156.
 SS 660 bolts and nuts comply with NACE MR 0175/ISO 15156.

- OPTIONAL TAG PLATE :**
 An extra stainless steel tag with customer tag data is wired to the transmitter.
- VACUUM SERVICE :**
 Special silicone oil and filling procedure are applied. See Fig.1 and Fig.2 below.

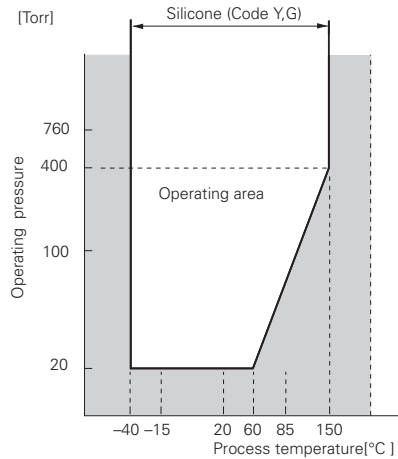


Fig. 1 : Relation between process temperature and operating pressure

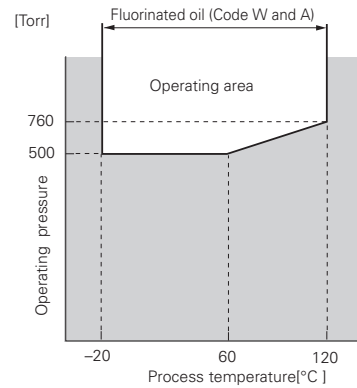


Fig. 2 : Relation between process temperature and operating pressure

EMC Directive (2004/108/EC)

All models of ProcessX series transmitters are in accordance with :

- the harmonized standards :
 - EN 61326-1 : 2006 (Electrical equipment for measurement, control and laboratory use - EMC requirement).
 - EN 61326-2-3 : 2006 (Part 2-3 : Particular requirement - Test configurations, operational conditions and performance criteria for transducers with integrated or remote signal conditioning).

Emission limits : EN 61326-1 : 2006

Frequency range (MHz)	Limits	Basics standard
30 to 230	40 dB (µV/m) quasi peak, measured at 10 m distance	EN 55011 / CISPR 11 Group 1 Class A
230 to 1000	47 dB (µV/m) quasi peak, measured at 10 m distance	

Immunity requirements : EN 61326-1 : 2006 (Table 2)

Phenomenon	Test value	Basic standard	Performance criteria
Electrostatic discharge (EDS)	4 kV (Contact) 8 kV (Air)	EN 61000-4-2 IEC 61000-4-2	B
Electromagnetic field	10 V/m (80 to 1000 MHz) 3 V/m (1.4 to 2.0 GHz) 1 V/m (2.0 to 2.7 GHz)	EN 61000-4-3 IEC 61000-4-3	A
Rated power frequency magnetic field	30 A/m	EN 61000-4-8 IEC 61000-4-8	A
Burst	2 kV (5/50 NS, 5 kHz)	EN 61000-4-4 IEC 61000-4-4	B
Surge	1 kV line to line 2 kV line to line	EN 61000-4-5 IEC61000-4-5	B
Conducted RF	3 V (150 kHz to 80 MHz)	EN 61000-4-6 IEC61000-4-6	A

Performance criteria :

- A :** During testing, normal performance within the specification limits.
- B :** During testing, temporary degradation or less of function or performance which is self-recovering.



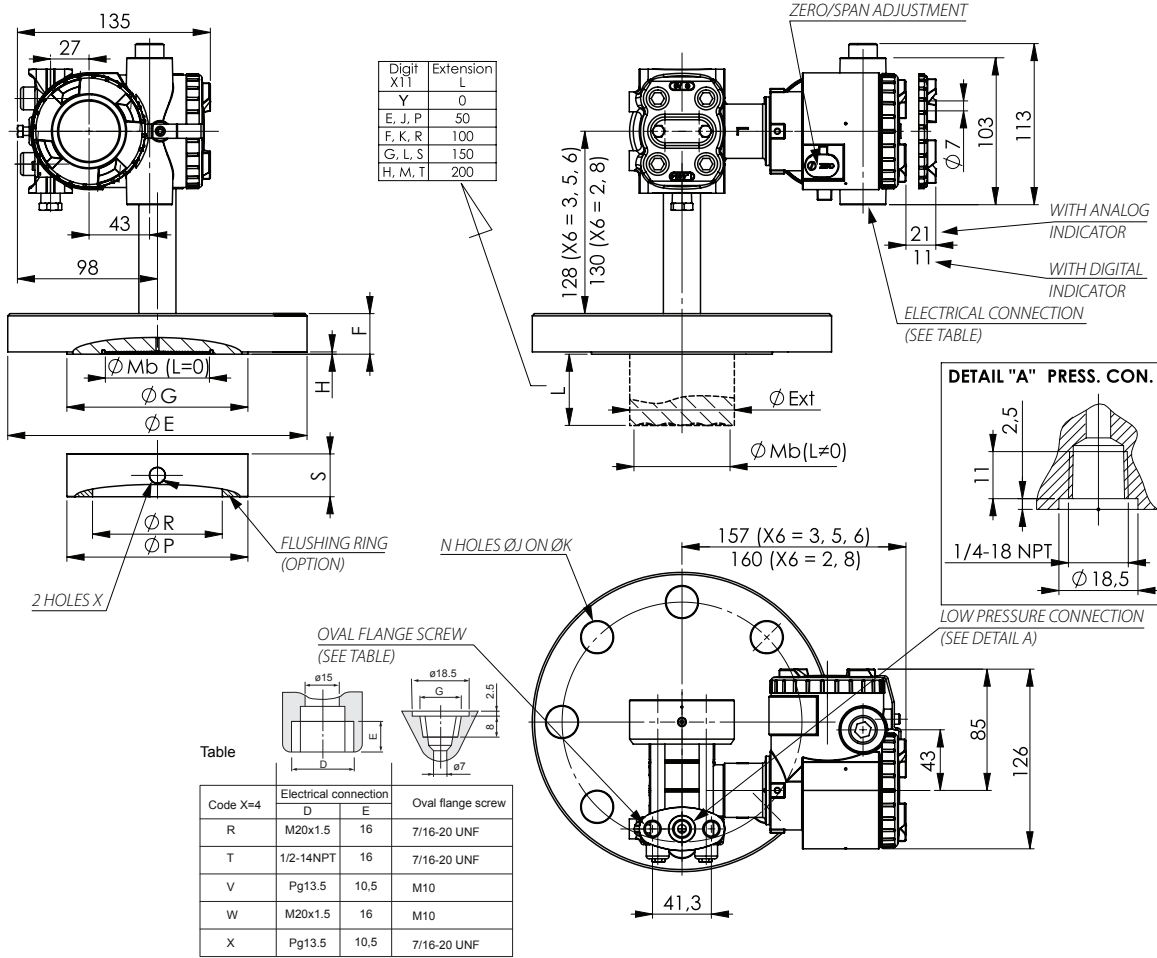
■ **CODE SYMBOLS**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	DESCRIPTION
F I K I E																Type Smart, 4-20 mA dc + Georgin/Hart® digital signal
R T V X																Connections
																LP side connections
																Process
																Oval flange screw
																Electric housing
																Conduit connection
																1/4-18 NPT 7/16-20 UNF M 20 x 1,5
																1/4-18 NPT 7/16-20 UNF 1/2-14 NPT
																1/4-18 NPT M10 Pg 13,5
																1/4-18 NPT M10 Pg 13,5
																1/4-18 NPT 7/16-20 UNF Pg 13,5
4 5 8 9 L M P Q																Mounting flange
																Material
																Size and rating
																Flange mount. position
																SS 316 L
																ANSI-150LB3"-ISO PN 20 DN 80
																ANSI-150LB4"-ISO PN 20 DN 100
																DIN PN40 DN80
																DIN PN16 DN100
																Long design
																ANSI-150LB3"-ISO PN 20 DN 80
																ANSI-150LB4"-ISO PN 20 DN 100
																DIN PN40 DN80
																DIN PN16 DN100
																Short design
2 3 5 6 8																Measuring range (mmH2O)
																(*) 10
																600
																(*) 32
																3200
																130
																13000
																500
																50000
																3000
																300000
V W H M T A B P R																Material
																LP side
																HP side
																Process cover
																Diaphragm
																Wetted sensor body
																Diaphragm and flange face
																SS 316L
																SS 316L
																SS 316L
																Hastelloy-C
																SS 316L
																SS 316L
																Hastelloy-C
																SS 316L
																SS 316L
																Monel
																SS 316L
																SS 316L
																Tantalum
																SS 316L
																SS 316L
																SS 316L + PFA lining
																SS 316L
																SS 316L + gold coat
																SS 316L
																Titanium
																SS 316L
																SS 316L
																Zirconium
F - A F - B F - D F - J F - E F - F F - H F - K F - L F - P F - Q F - S F - 1 F - 2 F - 4 F - 5																Indicator and arrester
																Indicator
																Arrester
																Initial setting
																None
																Analog, 0 to 100% linear scale
																None
																Analog, custom scale
																None
																Analog, double scale
																None
																Analog, double scale
																None
																Analog, 0 to 100% linear scale
																Yes
																Analog, custom scale
																Yes
																Analog, double scale
																Yes
																Digital, 0 to 100%
																None
																Digital, custom scale
																None
																Digital, 0 to 100%
																Yes
																Digital, custom scale
																Yes
																Digital, 0 to 100% with push button
																Yes
																Digital, custom scale with push button
																None
																Digital, 0 to 100% with push button
																Yes
																Digital, custom scale with push button
																Yes
A X K D E H J P Q R T L M N V																Approvals for hazardous locations (consult Georgin for availability)
																None (Standard)
																ATEX - Flameproof enclosures (digit 4 = "R, T" & "W" only)
																ATEX - Intrinsic Safety
																(*) FM - Explosion-Proof (digit 4 = "T" only)
																CSA - Explosion-Proof (digit 4 = "T" only)
																FM - Intrinsic Safety and Non Incendive
																CSA - Intrinsic Safety
																ATEX - Type "n" (digit 9 = A, E, 1, 2, 3, 4 & 5 only)
																IECEX - Type "n" (digit 9 = A, E, 1, 2, 3, 4 & 5 only)
																IECEX - Flameproof enclosures (digit 4 = "R, T" & "W" only)
																IECEX - Intrinsic Safety
																CSA - Explosion-Proof & Intrinsic Safety combined approval (digit 4 = "T" only)
																ATEX - Flameproof enclosures & Intrinsic Safety combined approval (digit 4 = "R, T" & "W" only)
																IECEX - Flameproof enclosures & Intrinsic Safety combined approval (digit 4 = "R, T" & "W" only)
																FM - Explosion-Proof & Intrinsic Safety combined approval (digit 4 = "T" only)
Y A B C D E F G H J K L M P R S T																Diaphragm extension (mm)
																Extension (mm)
																Applicable material code
																0
																Any
																(*) 3 50
																(*) 3 100
																(*) 3 150
																(*) 3 200
																(*) 3 50
																(*) 3 100
																(*) 3 150
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																(*) 3 200
																(*) 3 50
																(*) 3 100
																(*) 3 150
																(*) 3 200
Y B C E																SS parts
																SS tag plate
																SS housing
																None
																None
																Yes
																None
																None
																Yes
																Yes
																Yes
Y W F G A D N V																Special applications and fill fluid (fill fluid of cell = Silicone oil)
																Treatment
																Fill fluid of diaphragm seal
																None (stand)
																Silicone oil
																None (stand)
																Fluorinated oil
																None (stand)
																Sanitary fill fluid
																Degreasing
																Silicone oil
																Oxygen service
																Fluorinated oil cell & seal (Material code "V" only)
																Chlorine service
																Fluorinated oil (Material code "H" & "T" only)
																(*) 5 NACE
																Silicone oil
																Vacuum (max 27 mbar abs)
- A - C																Process cover gasket
																Viton
																PTFE square section gasket in SS flange (FEF design)
A U W																Bolts/screws material
																Cr-Mo (standard)
																SS 316 (L) /316 (L) (bolts/nuts)
																SS 660/660 (bolts/nuts)
																Special options or design

Notes* :

- 1- Turn down of 100 : 1 is possible, but it should be used at a span greater than 1/40 of the maximum span for better performance.
- 2- Add values for material options are for DN80 PN40 or ANSI-150 LB3" flange rate, DN100 or 4" add values are available upon request, LP side welded cell body diaphragm in exotic materials are available upon request.
- 3- All wetted parts in the same material (diaphragm, extension, flange gasket area).
- 4- When no code can be found in the current code symbols, place* in concerned code digit(s) + add* in 16 th digit.
- 5- Our stainless steel bolts/nuts in SS 660 are in conformity with the NACE MR 0175/ISO 15156 requirements and must be used for NACE MR 0175/ISO 15156 service.
- 6- Code "D & V" FM approval only possible with electrical connection 1/2"-14 NPT.
- 7- Please consult Georgin with you application conditions.

OUTLINE DIAGRAM FOR SHORT DESIGN (unit : mm)



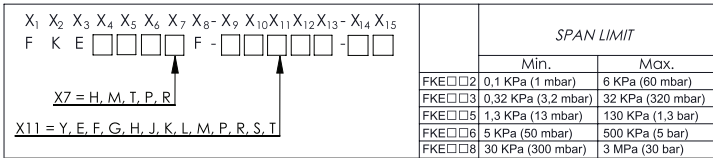
FLUSHING RINGS DIMENSIONS

EN 1092-1	EN 1759-1	HOLES X	ØP	ØR	S
DN 80		1/4-18 NPT	138	91	30
DN 80		1/2-14 NPT	138	91	30
	NPS 3"	1/4-18 NPT	127	91	30
	NPS 3"	1/2-14 NPT	127	91	30
DN 100		1/4-18 NPT	162	116	30
DN 100		1/2-14 NPT	162	116	30
	NPS 4"	1/4-18 NPT	157	116	30
	NPS 4"	1/2-14 NPT	157	116	30

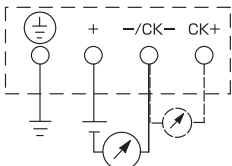
FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1

EN 1092-1	EN 1759-1	ØE	F min	ØG	H	N x ØJ	ØK	Weight (kg)	Diaphragm & extension	
									L=0 (X11=Y)	L≠0 ØExt(ØMb)
DN50 PN40		165	20	102	2	4 x 18	125	3,3	59	48,3 (47)
	2" CLASS 150	152	21	92	1,6	4 x 19	120,6	2,7	59	48,3 (47)
	2" CLASS 300	165	22,5	92	1,6	8 x 19	127	3,7	59	48,3 (47)
DN80 PN40		200	24	138	2	8 x 18	160	5,8	89	76 (72)
	3" CLASS 150	190	24	127	1,6	4 x 19	152,4	5,3	89	76 (72)
	3" CLASS 300	210	28,5	127	1,6	8 x 22,2	168,3	7,8	89	76 (72)
DN100 PN16		220	22	158	2	8 x 18	180	5,9	89	94 (89)
	4" CLASS 150	229	24	157	1,6	8 x 19	190,5	7,7	89	94 (89)
	4" CLASS 300	254	32	157	1,6	8 x 22,2	200	12,7	89	94 (89)

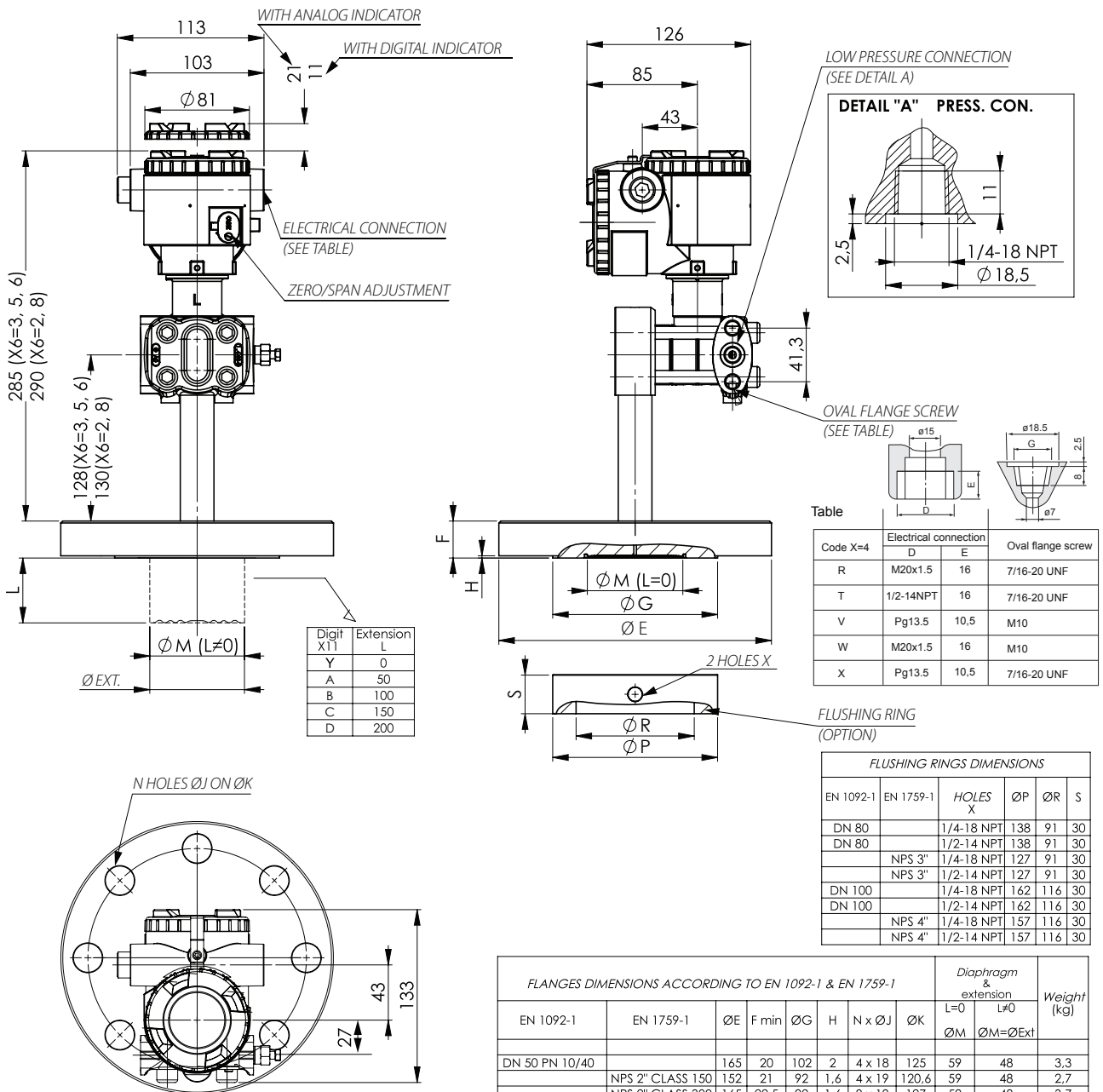
Weight : 10.2 to 19.2 kg (without option)
 Add :
 - Flange's weight (see table)
 - 1 kg per 50 mm of extension
 - 0.3 kg for indicator (option)
 - 2 kg for SS mounting bracket (option)
 - 0.5 kg for mounting bracket



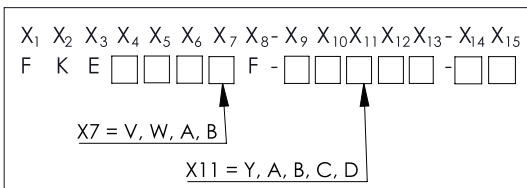
CONNECTION DIAGRAM



OUTLINE DIAGRAM FOR LONG DESIGN (Unit : mm)



Weight : 10.2 to 19.2 kg (without option)
Add :
- Flange's weight (see table)
- 1 kg per 50 mm of extension
- 0.3 kg for indicator (option)
- 2 kg for SS mounting bracket (option)
- 0.5 kg for mounting bracket



FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1								Diaphragm & extension		Weight (kg)
EN 1092-1	EN 1759-1	ØE	F min	ØG	H	N x ØJ	ØK	L=0 ØM	L≠0 ØM=ØExt	
DN 50 PN 10/40		165	20	102	2	4 x 18	125	59	48	3,3
	NPS 2" CLASS 150	152	21	92	1,6	4 x 19	120,6	59	48	2,7
	NPS 2" CLASS 300	165	22,5	92	1,6	8 x 19	127	59	48	3,7
DN 80 PN 40		200	24	138	2	8 x 18	160	73	73	5,8
	NPS 3" CLASS 150	190	24	127	1,6	4 x 19	152,4	73	73	5,3
	NPS 3" CLASS 300	210	28,5	127	1,6	8 x 22,2	168,3	73	73	7,8
DN 100 PN 16		220	22	158	2	8 x 18	180	96	96	5,9
	NPS 4" CLASS 150	229	24	157	1,6	8 x 19	190,5	96	96	7,7
	NPS 4" CLASS 300	254	32	157	1,6	8 x 22,2	200	96	96	12,7

	SPAN LIMIT	
	Min.	Max.
FKE□□2	0,1 KPa (1 mbar)	6 KPa (60 mbar)
FKE□□3	0,32 KPa (3,2 mbar)	32 KPa (320 mbar)
FKE□□5	1,3 KPa (13 mbar)	130 KPa (1,3 bar)
FKE□□6	5 KPa (50 mbar)	500 KPa (5 bar)
FKE□□8	30 KPa (300 mbar)	3 MPa (30 bar)