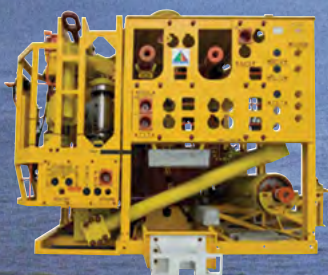


Differential Pressure (flowmeter) Transmitter **20 000 Psi Line Pressure**

NEW



SUBSEA APPLICATIONS



Solutions for Super High Line Pressure for Flow and Differential Pressure Applications

Based on more than 15 years experience of supplying Differential Pressure transmitters for Oil & Gas for line pressure of **more than 6000 Psi**, Fuji Electric France, is proud to announce the release of its latest Differential Pressure for **20 000 Psi** (1379 bar) line pressure as a direct response to our customer's requirements in **super** high pressure applications that are traditionally found in Oil & Gas flow measurement.

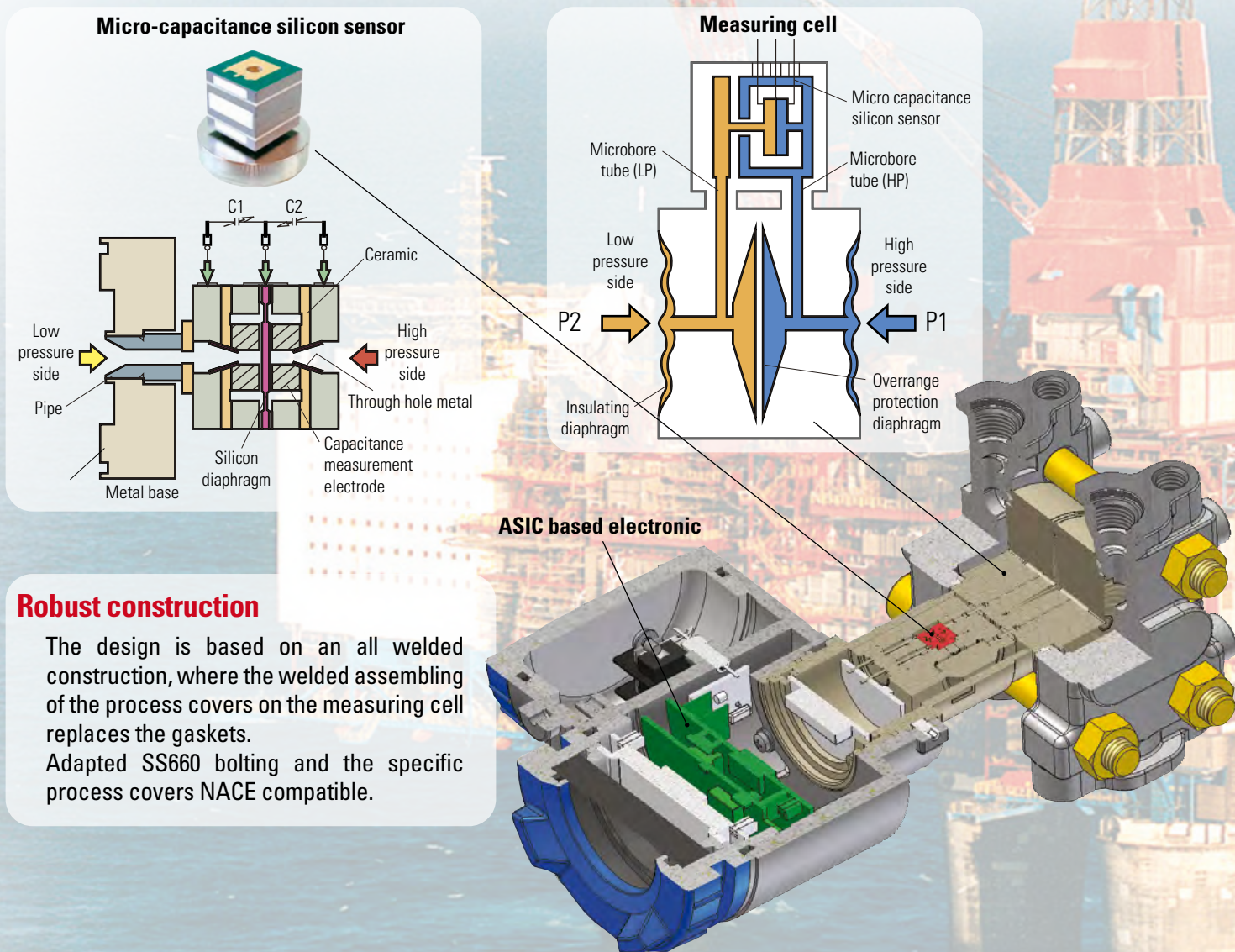
The experience and technical capability that we built into the new transmitter enables it to measure differential pressures of 130 mbar at static pressures of up to 20 000 Psi (1379 bar), typically found in **top side and subsea applications**.

Measuring principle

The transmitter utilizes a unique micromachined capacitive silicon sensor with state of the art microprocessor technology to provide exceptional performance and functionality. The silicon sensor is assembled floating in measuring cell neck, which allows extreme high line pressures and improves the static pressure characteristics.

Pressure transfer oil envelops the silicon sensor >>> **FLOATING SILICON SENSOR**.

Static pressure (line pressure) influence is strongly minimized thanks to floating sensor design.



Robust construction

The design is based on an all welded construction, where the welded assembling of the process covers on the measuring cell replaces the gaskets.

Adapted SS660 bolting and the specific process covers NACE compatible.

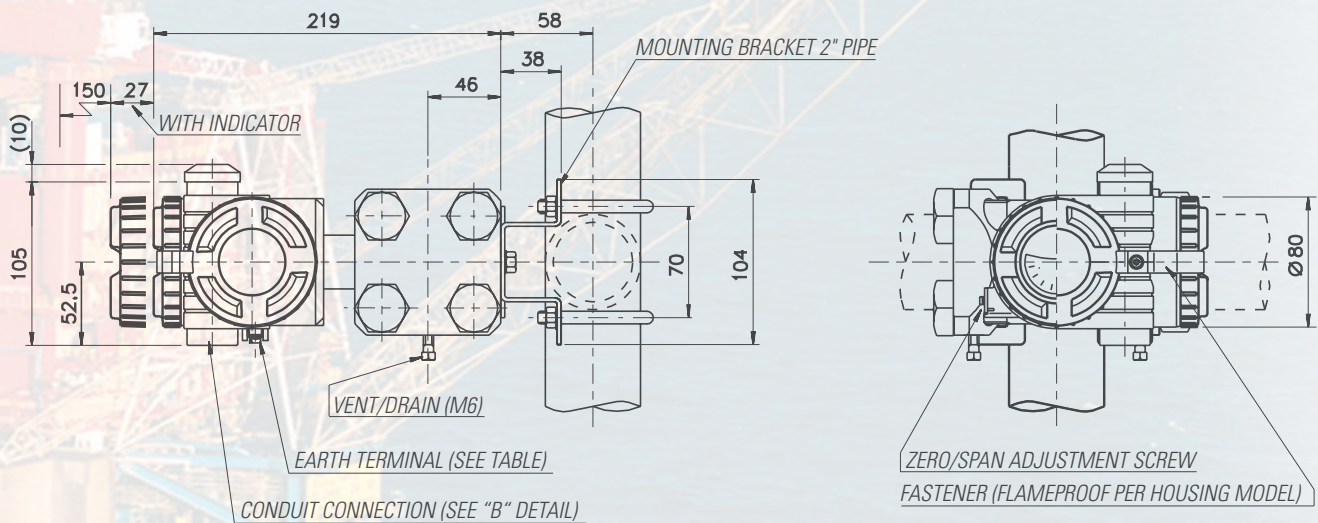
Physical Specifications

Process connections	Autoclave 9/16-18 UNF - 2B SF 375CX20, 9/16-18 UNF - 2B F 250C or 13/16-16UNF-2B SF 562CX20, 3/8-24 UNF - 2B/Speedbite SW125, 7/16-20 UNF - 2B/SF250 CX20
Wetted parts materials <small>*Nota : see table (code symbols)</small>	Measuring cell and body / Diaphragm-Hastelloy C 276, other wetted parts material : Inconel 625
Non wetted parts	Electronics housing : SS316 Bolts/nuts : ASTM - A453 Grad 660
Ambient temperature	-5 to 85 °C
Process temperature	-5 to 120 °C
Remote seal designs	Available according customer specifications

Performance Specifications

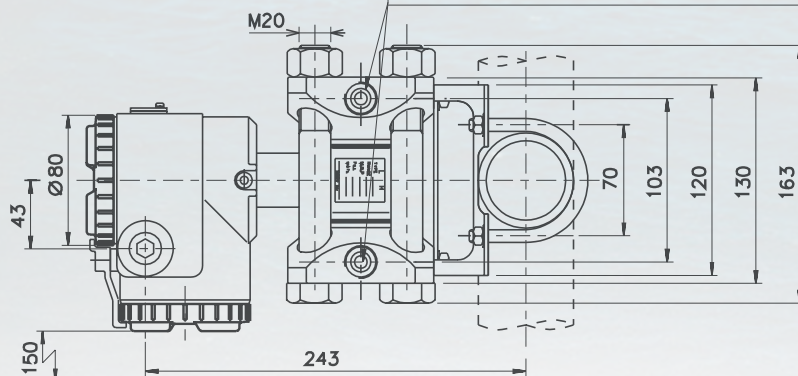
Accuracy rating : (including linearity, hysteresis and repeatability)	For spans greater than 1/10 of URL : ± 0.1 % of span (reference conditions: 22 °C ± 3 °C, atmospheric pressure)
Stability	± 0.2 % of upper range limit (URL) for 3 years (reference conditions: 22 °C ± 3 °C, atmospheric pressure)
Ambient temperature effect	Zero: $\pm (0.1 + 0.025 \times \text{URL} / \text{span}) \times 2$ in % of span / 28 °C Total: $\pm (0.125 + 0.025 \times \text{URL} / \text{span}) \times 2$ in % of span / 28 °C
Static pressure effect	Zero: ± 0.2 % of URL / 10 MPa Hysteresis & repeatability of zero : any value inside the envelop of ± 0.2 % of URL/10 MPa Span: 0 to - 0.6 % of span / 10 MPa
Supply voltage effect	Less than 0.05 % of calibrated span per 10 V
RFI effect	Less than 0.2% of URL for the frequencies of 20 to 1000 MHz and field strength 30 V/m when electronics covers in place. (Classification : 2-abc : 0.2% span per SAMA PMC 33.1)
Mounting position effect	Zero shift : Less than 0.12 kPa {1.2 mbar} for a 10° tilt in any plane. No effect on span. This error can be corrected by adjusting Zero after installatrion.
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
Dielectric strength	500 V AC, 50/60 Hz 1 min, between circuit and earth.
Insulation resistance	More than 100 MΩ at 500 V DC
Turn-on time	4 seconds

OUTLINE DIMENSIONS

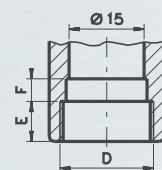


PROCESS CONNECTIONS

13/16-16 UNF - 2B SF562 CX20 - for 9/16 MP AUTOCLAVE CONNECTIONS
9/16-18 UNF - 2B F 250C - for 1/4 HP AUTOCLAVE CONNECTIONS
9/16-18 UNF - 2B SF 375 CX20 - for 3/8 MP AUTOCLAVE CONNECTIONS



"B" DETAIL



TABLE

CONDUIT CONNECTION	E	F	EARTH TERMINAL
D			
1/2-14 NPT	16	5	N°8 - 32UNC
M20X1.5	16	5	M4

CODE SYMBOLS

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
				V			4	-		C			-	W	Y	DESCRIPTION
F	K	C														Smart, 4-20 mAdc + Fuji/Hart™ digital signal
F	D	C														Bus communication (RS 485 Modbus™)
			T													Electrical connection
			W													1/2"-14 NPT
																M 20 x 1,5
				V												Max working pressure (static pressure)
																1379 bar (20 000 Psi) - M20 bolting
																Test pressure
																2069 bar (30 000 Psi)
																Range (mbar)
																Min
																Max
					5											0 - 130
					6											0 - 500
					8											0 - 3000
																0 - 30000
																Wetted parts material
																Cell Body
																Hast C276
																Seal diaphragm
																Hast C276
																Process cover
																Inconel 625
																Indicator
																Arrester
																Communication type
																No
																No
																4/20 mA - Hart™
																LCD, 0-100%
																No
																4/20 mA - Hart™
																LCD, Custom scale
																No
																4/20 mA - Hart™
																LCD, 0-100%
																Yes
																4/20 mA - Hart™
																LCD, Custom scale
																Yes
																4/20 mA - Hart™
																No
																Modbus RS 485 *Note1
																Approvals for hazardous locations (consult FUJI for availability)
																None (standard)
																Flameproof housing ATEXex II 2 GD - EEx d IIC T5/T6
																Intrinsic Safety ATEXExII 1 GD - EEx ia IIC T4/T5
																FM - Flameproof housing Class I, Division 1, Group B,C,D
																Dust ignitionproof Class II/III, Division 1, Group E,F,G - (elec. conn. code "T" only)
																FM - Intrinsic safety Class I, II, III, Division 1, Group A,B,C,D,E,F,G
																Nonincentive Class I,II,III, Division 2, Group A,B,C,D,F,G
																Combined ATEX ex II 2 GD - EEx d IIC T5/T6 & ATEX ex II 1 GD - EEx ia IIC T4/T5
																Mounting bracket
																Tag plate
																Without
																SS 316
																SS 316L
																SS 316
																Fill fluid
																Specific oil fill for cell
																Specific oil fill for cell. Wetted parts and bolting in conformity with NACE
																Welded process cover design
																Process cover bolts/nuts in SS 660
																Process connection
																C 13/16 - 16 UNF - 2B / SF562CX20
																D 9/16 - 18 UNF - 2B / F250C
																E 9/16 - 18 UNF - 2B / SF375CX20
																F 3/8 - 24 UNF - 2B / Speedbite SW 125
																G 7/16 - 20 UNF - 2B / SF250CX20

* Note 1 : Only available with digit 10 codes A & X

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