

# PRESSURE TRANSMITTER WITH SAFETY FUNCTIONS

## DATA SHEET

The FCX-AII VG serie of pressure transmitter with safety functions use the unique and proven silicon sensor with state-of-the-art digital processing to provide exceptional performances and functionalities.

The pressure transmitter with Safety functions complies with Safety Integrity Levels 2/3 according to IEC 61508.

## FEATURES

### 1. Safety function

Specific hardware and software feature have been integrated to provide Safety Integrity Levels 2 (HFT\* = 0) and 3 (HFT = 1) according to IEC 61508 Standard.

\* Handcare Fault Tolerance

### 2. High accuracy and stability with minimum environment influence

Fuji's micro-capacitance silicon sensor assures this accuracy for all elevated or suppressed calibration ranges without additional adjustment.

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.

### 3. Minimum inventory and design

Electronics unit, local indicators and electronics housing are interchangeable among all FCX-AII transmitters.

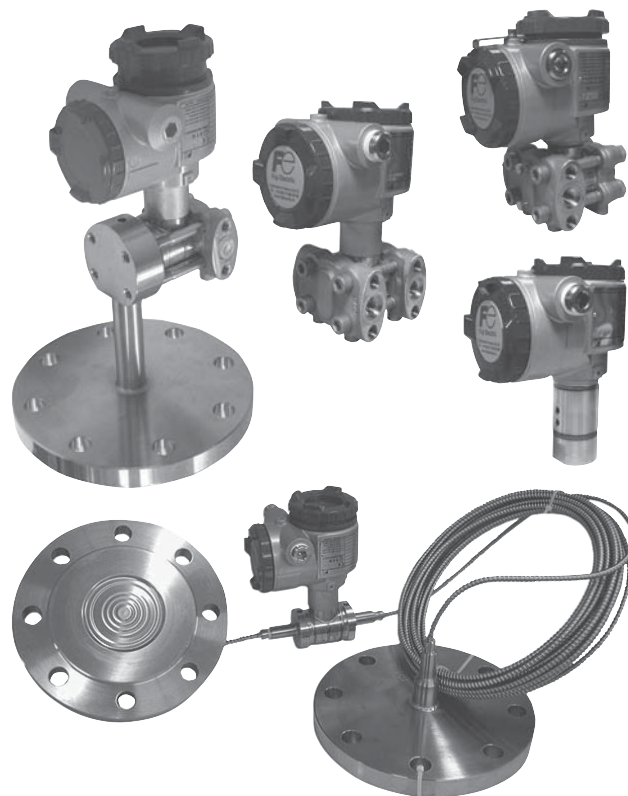
### 4. Fuji/HART® revision 7 communication protocols

FCX-AII series transmitter offers digital communication protocols to speak both Fuji proprietary protocol and HART®. Any HART® compatible devices can communicate with FCX-AII.

### 5. Application flexibility

Various options that render the FCX-AII suitable for almost any process applications include.

- Analog indicator at either the electronics side or terminal side
- 6 digit and 5% increment bar graph LCD meter with engineering unit



- Hazardous area approvals upon request
- Built-in RFI filter and lightning arrester
- 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 : 3.4 to 3.8 mA, Over Scale : 20.8 to 22.5 mA)

Burnout signal level is adjustable to comply with NAMUR NE43.

### 8. Dry calibration without reference pressure

Thanks to the best combination of unique construction of me-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.

## Model Configuration

### ■ Standard process covers

| Differential pressure / Flow transmitter<br>(model : FKC...G) |           |  |
|---------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|
|                                                               | Ref. page |                                                                                    |
| Common specifications                                         | 4-6       |                                                                                    |
| Individual specifications                                     | 6-7       |                                                                                    |
| Code symbols                                                  | 14-15     |                                                                                    |
| Outline diagram                                               | 32        |                                                                                    |

| Gauge pressure transmitter<br>(model : FKG...G) |           |  |
|-------------------------------------------------|-----------|------------------------------------------------------------------------------------|
|                                                 | Ref. page |                                                                                    |
| Common specifications                           | 4-6       |                                                                                    |
| Individual specifications                       | 7-8       |                                                                                    |
| Code symbols                                    | 16        |                                                                                    |
| Outline diagram                                 | 33        |                                                                                    |

| Absolute pressure transmitter<br>(model : FKA...G) |           |  |
|----------------------------------------------------|-----------|-------------------------------------------------------------------------------------|
|                                                    | Ref. page |                                                                                     |
| Common specifications                              | 4-6       |                                                                                     |
| Individual specifications                          | 8         |                                                                                     |
| Code symbols                                       | 17        |                                                                                     |
| Outline diagram                                    | 34        |                                                                                     |

### ■ Direct mounted

| Direct mount type gauge pressure transmitter<br>(model : FKP...G) |           |  |
|-------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|
|                                                                   | Ref. page |                                                                                      |
| Common specifications                                             | 4-6       |                                                                                      |
| Individual specifications                                         | 9         |                                                                                      |
| Code symbols                                                      | 18        |                                                                                      |
| Outline diagram                                                   | 35        |                                                                                      |

| Direct mount type absolute pressure transmitter<br>(model : FKH...G) |           |  |
|----------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|
|                                                                      | Ref. page |                                                                                      |
| Common specifications                                                | 4-6       |                                                                                      |
| Individual specifications                                            | 9         |                                                                                      |
| Code symbols                                                         | 19        |                                                                                      |
| Outline diagram                                                      | 36        |                                                                                      |

## ■ Level transmitter

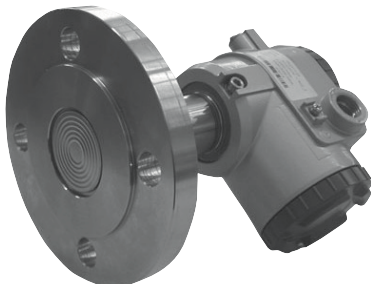
| Level pressure transmitter<br>(model : FKE...G) |           |  |
|-------------------------------------------------|-----------|------------------------------------------------------------------------------------|
|                                                 | Ref. page |                                                                                    |
| Common specifications                           | 4-6       |                                                                                    |
| Individual specifications                       | 10        |                                                                                    |
| Code symbols                                    | 20        |                                                                                    |
| Outline diagram                                 | 37-38     |                                                                                    |

## ■ Remote seal

| Remote seal type differential pressure/Flow transmitter<br>(model : FKD...G) |           |  |
|------------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------------|
|                                                                              | Ref. page |                                                                                    |
| Common specifications                                                        | 4-6       |                                                                                    |
| Individual specifications                                                    | 11        |                                                                                    |
| Code symbols                                                                 | 21        |                                                                                    |
| Outline diagram                                                              | 39-40     |                                                                                    |

| Remote seal type gauge or absolute pressure transmitter<br>(model : FKB...F/FKM...G) |           |  |
|--------------------------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|
|                                                                                      | Ref. page |                                                                                      |
| Common specifications                                                                | 4-6       |                                                                                      |
| Individual specifications                                                            | 11-12     |                                                                                      |
| Code symbols                                                                         | 22-23     |                                                                                      |
| Outline diagram                                                                      | 41-42     |                                                                                      |

| Remote seal type gauge pressure transmitter<br>(model : FKP...G) |           |  |
|------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|
|                                                                  | Ref. page |                                                                                      |
| Common specifications                                            | 4-6       |                                                                                      |
| Individual specifications                                        | 12        |                                                                                      |
| Code symbols                                                     | 24        |                                                                                      |
| Outline diagram                                                  | 43-44     |                                                                                      |

| Remote seal type absolute pressure transmitter<br>(model : FKH...G) |           |  |
|---------------------------------------------------------------------|-----------|--------------------------------------------------------------------------------------|
|                                                                     | Ref. page |                                                                                      |
| Common specifications                                               | 4-6       |                                                                                      |
| Individual specifications                                           | 13        |                                                                                      |
| Code symbols                                                        | 25        |                                                                                      |
| Outline diagram                                                     | 45        |                                                                                      |

# SPECIFICATIONS

## (1) Common specifications

### Functional and performance specifications

#### Service :

Liquid, gas, or vapour

#### Type :

Smart, 4 to 20 mA DC + Fuji / Hart® revision 7 digital signal

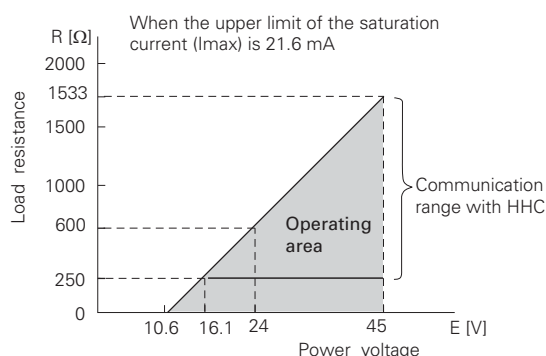
#### Output signal :

4 to 20 mA DC (linear or square root)

#### Power supply :

Transmitter operates on 10.5 V to 45 V DC at transmitter terminals. 10.5 V to 32 V DC with optional arrester.

#### Load limitations : see figure below



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

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

#### Hazardous Locations:

| Markings | Flameproof / Explosion Proof                                                                                                                                                                                                              |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ATEX     | II 2 G Ex d IIC T5 / T6 Gb<br>II 2 D Ex tb IIIC T85 °C / T100 °C Db                                                                                                                                                                       |
| (X)      | Ambient temperature range:<br>-40 °C to +85 °C for T5 / T100 °C<br>-40 °C to +65 °C for T6 / T85 °C<br>Power supply: 45 Vdc max. (without arrester)<br>(32 Vdc max. with arrester)<br>Output: 4 ... 20 mA                                 |
| cCSAus   | Class I, Groups C and D;<br>Class II, Groups E, F and G ; Class III                                                                                                                                                                       |
| (E)      | Maximum ambient temperature 85°C<br>Maximum working pressure 50 MPa<br>Rated: 42.4 Vdc, 4 to 20 mA (without arrester)<br>(32 Vdc, 4 to 20 mA with arrester)<br>Note: "Do not open while energized"<br>"Seal within 18" of enclosure wall" |
| IECEX    | Ex d IIC T5 / T6 Gb<br>Ex tb IIIC T85 °C / T100 °C Db                                                                                                                                                                                     |
| (R)      | Ambient temperature range:<br>-40 °C to +85 °C for T5 / T100 °C<br>-40 °C to +65 °C for T6 / T85 °C<br>Power supply: 45 Vdc max. (without arrester)<br>(32 Vdc max. with arrester)<br>Output: 4 ... 20 mA                                 |

#### SIL Certification :

Hardware: SIL2 / Software: SIL3 according to IEC 61508  
Probability of dangerous failure per hour (PFH) < 3.5x10<sup>-7</sup>/h  
Probability of dangerous failure on demand (PFD) < 3.5x10<sup>-3</sup>  
Safety failure fraction (SFF) ≥ 90%.

#### Zero/span adjustment :

Zero and span are adjustable from the hand held communicator. Zero and span are also adjustable externally from the adjustable screw.

#### Damping :

Adjustable from the hand held communicator or local adjustment unit with LCD display. The time constant is adjustable between 0.04 to 32 sec.

#### Normal / reverse action :

Selectable from the hand held communicator.

#### Indication :

Analog indicator or 6 digit and 5% increment bar graph LCD meter, as specified.

A plug-in analog indicator can be mounted on the electronics unit or the terminal block.

#### Saturation current

Lower limit : 3.6 to 4.0 mA. Default value 3.8 mA

Upper limit : 20 to 21.6 mA. Default value 20.8 mA

#### Burnout direction :

If self-diagnostic detects a 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.

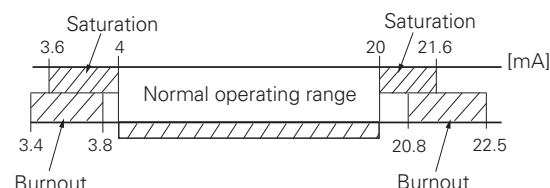
"Default value : 21.6 mA" :

Adjustable within the range 20.8 mA to 22.5 mA from the hand held communicator.

"Default value : 3.6 mA" :

Adjustable within the range 3.4 to 3.8 mA from the hand held communicator.

Output limits conforming to NAMUR NE43 by order.



#### Loop-check output :

Transmitter can be configured to provide constant signal 3.4 mA through 22.5 mA.

#### Temperature limit :

Ambient : -40 to +85°C

-30 to +80°C (for LCD indicator)

-40 to +60°C (for arrester option)

-10 to +60°C (for fluorinated oil filled transmitters)

For explosion proof units, ambient temperature must be within the limits specified for such a standard.

Storage : -40 to +90°C

#### Humidity limit :

0 to 100% RH (Relative Humidity)

#### Communication :

With the portable communicator (model FXW), following items can be remotely displayed or configured.

Note : Hand held communicator version must be higher than 7.0 (or FXW □□□□1-□□), for FCX-All. for supporting these items : "Saturate current", "Write protect", and "History".

For Hart®, the version must be 7 or higher.

Hart® registered Device Description files can be retrieved from the Fieldcomm Group tm website (Manufacturer ID : 0X0015 ; Expanded Device ID : 0X1504).

| Items                                        | Fuji Protocol with FXW |     | Hart® Protocol |     | By local configurator (LCD indicator) |     |
|----------------------------------------------|------------------------|-----|----------------|-----|---------------------------------------|-----|
|                                              | Display                | Set | Display        | Set | Display                               | Set |
| Tag No.                                      | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Model No.                                    | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Serial No. & Software Version                | ✓                      | —   | ✓              | —   | ✓                                     | —   |
| Engineering unit                             | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Range limit                                  | ✓                      | —   | ✓              | —   | ✓                                     | —   |
| Measuring range                              | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Damping                                      | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Output mode                                  | Linear                 | ✓   | ✓              | ✓   | ✓                                     | ✓   |
|                                              | Square root            | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Burnout direction                            | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Calibration current output                   | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Output adjust                                | —                      | ✓   | —              | ✓   | —                                     | ✓   |
| Data                                         | ✓                      | —   | ✓              | —   | ✓                                     | —   |
| Self diagnoses                               | ✓                      | —   | ✓              | —   | ✓                                     | —   |
| Printer (In case of FXW with printer option) | ✓                      | —   | —              | —   | —                                     | —   |
| External switch lock                         | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Transmitter display                          |                        |     |                |     |                                       |     |
| – LDV,UDV,LcdUnit                            | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| – LcdOpt                                     | —                      | —   | ✓              | ✓   | ✓                                     | ✓   |
| Linearize                                    | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Rerange                                      | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Saturate current                             | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| Write protect                                | ✓                      | ✓   | ✓              | ✓   | ✓                                     | ✓   |
| History                                      | ✓                      | —   | ✓              | —   | ✓                                     | —   |

#### Programmable output linearization function :

Output signal can be characterized with “14 points linear approximation function”

#### Low flow cut-off:

The output signal is proportional to  $\sqrt{}$  differential pressure between low flow cut-off and the measuring range. Between zero and low flow cut-off, the output signal is programmable to zero or linear between 0 and 20% of the flow.

### Performance specifications common for both output modes

#### Supply voltage effect :

Less than 0.05% of calibrated span and zero per 10V

#### Update rate :

40 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)

#### Mounting position effect :

Zero shift, less than 0.12 kPa {1.2 mbar} for a 10° tilt in any plane. This error can be corrected by adjusting Zero. (Double the effect for fluorinated fill sensor).

No effect on span.

#### Material fatigue :

Please consult Fuji Electric.

#### Vibration effect :

<  $\pm 0,25\%$  Of span for spans greater than 1/10 of URL.  
Frequency 10 to 150 Hz, acceleration 39,2 m/sec<sup>2</sup> .

#### Dielectric strength :

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

#### Insulation resistance :

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

#### Internal resistance for external field indicator :

12  $\Omega$  max. (connected to test terminal CK+ and CK-)

## Physical specifications

#### Non-wetted parts material :

Electronics housing :

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

Bolts and nuts:

Cr-Mo alloy (standard).

Options :

SS 316 (L) for static pressure if 160 bar max.

SS 660 (M10) for static pressure < 160 bar.

SS 660 (M12) for static pressure > 160 bar

Fill fluid :

Silicone oil (standard) or fluorinated oil (option)

Mounting bracket :

SS 304L or 316L (option)

#### Environmental protection:

IEC IP66/IP67 and NEMA 4X

#### Mounting:

Without mounting bracket :

Direct mounting on manifold (optional)

With optional mounting bracket :

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

## 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 6 digit and 5% increment bar graph LCD meter with engineering unit is also available.

#### Local configurator with LCD display :

An optional 6 digit and 5% increment bar graph LCD meter with 3 push buttons can support items without using communication with the portable communicator.

#### Arrester :

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

Lightning surge immunity: 4 kV (1.2  $\times$  50  $\mu$ s).

#### 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 :

The fill fluid is fluorinated oil. Same procedure and same fill fluid that above.

**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 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 with customer tag data is wired to the transmitter.

**Accessories****Oval flanges :**

Converts process connection to 1/2"-14 NPT

**Manifolds :**

Available in SS 316 and in pressure rating 16 MPa or 42 MPa.

**Hand held communicator :**

FXW model (refer to datasheet N° EDS8-47)

**Vacuum service :**

Special silicone oil and filling procedure are applied

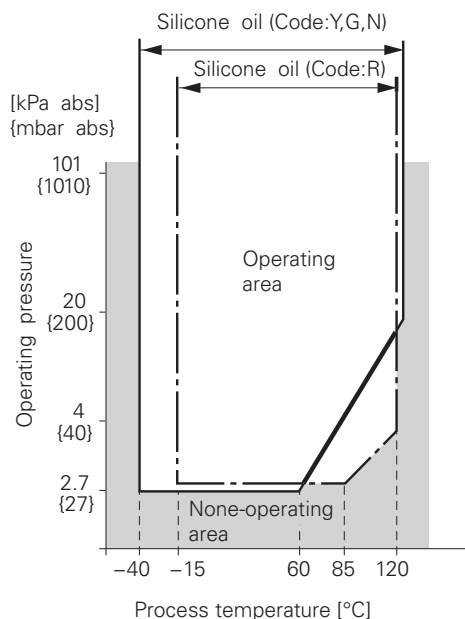


Fig. 1

Relation between process temperature and operating pressure

**(2) Individual specifications**

Reference conditions, silicone oil fill, SS 316L isolating diaphragms, 4 to 20 mA analog output in linear mode.

**Differential Pressure/Flow Transmitter FK...G****Static pressure, span, and range limit :**

| Type    | Static pressure<br>MPa {bar} | Span limit kPa<br>{m bar} |                   | Range limit<br>kPa {m bar}         |
|---------|------------------------------|---------------------------|-------------------|------------------------------------|
|         |                              | Min.                      | Max.              |                                    |
| FKC□11  | -0.1 to +3.2<br>{-1 to +32}  | 0.1<br>{1}                | 1<br>{10}         | ±1<br>{±10}                        |
| FKC□22  | -0.1 to +10<br>{-1 to +100}  | 0.1<br>{1}                | 6<br>{60}         | ±6<br>{±60}                        |
| FKC□33  | -0.1 to +16<br>{-1 to +160}  | 0.32<br>{3.2}             | 32<br>{320}       | ±32<br>{±320}                      |
| FKC□35  | -0.1 to +16<br>{-1 to +160}  | 1.3<br>{13}               | 130<br>{1300}     | ±130<br>{±1300}                    |
| FKC□36  | -0.1 to +16<br>{-1 to +160}  | 5<br>{50}                 | 500<br>{5000}     | ±500<br>{±5000}                    |
| FKC□38  | -0.1 to +16<br>{-1 to +160}  | 30<br>{300}               | 3000<br>{30000}   | ±3000<br>{±30000}                  |
| FKC□43  | -0.1 to +42<br>{-1 to +420}  | 0.32<br>{3.2}             | 32<br>{320}       | ±32<br>{±320}                      |
| FKC□45  | -0.1 to +42<br>{-1 to +420}  | 1.3<br>{13}               | 130<br>{1300}     | ±130<br>{±1300}                    |
| FKC□46  | -0.1 to +42<br>{-1 to +420}  | 5<br>{50}                 | 500<br>{5000}     | ±500<br>{±5000}                    |
| FKC□48  | -0.1 to +30<br>{-1 to +300}  | 30<br>{300}               | 3000<br>{30000}   | ±3000<br>{±30000}                  |
| FKC□49* | -0.1 to +30<br>{-1 to +300}  | 500<br>{5000}             | 20000<br>{200000} | +20000,-10000<br>{+200000,-100000} |

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

\* Important : For FDC□49, max possible overload pressure on LP side must be ≤ 100 bar.

The accuracy is not guaranteed when used at negative DP.

**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

**Over range limit :**

To maximum static pressure limit

**Zero elevation / suppression :**

-100% to +100% of URL

**Performance specifications for linear output****Accuracy rating :**

(including linearity, hysteresis, and repeatability)

**Max span above 32 kPa to 3000 kPa model :**

For spans greater than 1/10 of URL :

±0.065% of span

±0.04% of span (option)

For spans below 1/10 of URL :

$\pm \left( 0.015 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right)$  % of span

**Max span 20 MPa models :**

For spans ≥ 5 MPa :

±0.1% of span

For spans < 5 MPa :

$\pm \left( 0.05 + 0.05 \frac{5 \text{ MPa}}{\text{Span}} \right)$  % of span

**Max span 1kPa, 6kPa model :**

For spans greater than 1/10 of URL:

±0.1% of span

For spans below 1/10 of URL:

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

**Stability :**

±0.1% of upper range limit (URL) for 10 years for 6th digit code 3, 5, 6, 8 and 9

**Temperature effect :**

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

| Range code<br>(6th digit in Code<br>Symbols) (max. span)                                                                                | Zero shift<br>(% of span)               | Total effect<br>(% of span)             |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|-----------------------------------------|
| "1"/1 kPa {10 mbar}<br>"2"/6 kPa {60 mbar}                                                                                              | $\pm (0.125 + 0.1 \frac{URL}{Span})$    | $\pm (0.15 + 0.1 \frac{URL}{Span})$     |
| "3"/32 kPa {320 mbar}<br>"5"/130 kPa {1300 mbar}<br>"6"/500 kPa {5000 mbar}<br>"8"/3000 kPa {30000 mbar}<br>"9"/20000 kPa {200000 mbar} | $\pm (0.075 + 0.0125 \frac{URL}{Span})$ | $\pm (0.095 + 0.0125 \frac{URL}{Span})$ |

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

**Static pressure effect :**

| Static pressure code<br>(5th digit in Code symbols)        | Zero shift<br>(% of URL)                                                  |
|------------------------------------------------------------|---------------------------------------------------------------------------|
| "1" / 1kPa {10 mbar} sensor<br>"2" / 6kPa {60 mbar} sensor | $\pm 0.2\%$ / 3.2 MPa {32 bar}<br>$\pm 0.2\%$ / 10MPa {100 bar}           |
| "3"<br>"4"                                                 | $\pm 0.035\%$ / 6.9 MPa {69 bar}<br>$\pm 0.2\%$ / 6.9 MPa {69 bar} FDC□49 |

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

**Overrange effect :**

| Static pressure code<br>(5th digit in Code symbols)          | Zero shift (% of URL)                                                                                                                                                             |
|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| "1" / 1 kPa {10 mbar} sensor<br>"2" / 6 kPa {60 mbar} sensor | $\pm 0.2\%$ / 3.2 MPa {32 bar}<br>$\pm 0.2\%$ / 10 MPa {100 bar}                                                                                                                  |
| "3"<br>"3"<br>"4"<br>"4"                                     | $\pm 0.1\%$ / 16 MPa {160 bar} FDC□35,36,38<br>$\pm 0.15\%$ / 16 MPa {160 bar} FDC□33<br>$\pm 0.25\%$ / 42 MPa {420 bar} FDC□43,45,46,48<br>$\pm 0.2\%$ / 10 MPa {100 bar} FDC□49 |

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

**Response time :**

80ms whitout additionnal damping and including dead time of 40ms (except FKC code 1 and 2 digit 6)

**Pressure equipment directive (PED) 2014/68/UE :**

Digit 5 code 1, 2, 3, 8 and 9 according to Article 4.3  
Digit 5 code 4 : Category III module H1

**Performance specifications for square root output****Accuracy rating :**

| Output     | Span           |                                                              |
|------------|----------------|--------------------------------------------------------------|
|            | over 0.1 × URL | below 0.1 × URL                                              |
| 50 to 100% | $\pm 0.065\%$  | $\pm (0.015 + 0.05 \times 0.1 \times URL/Span)\%$            |
| 20 to 50%  | $\pm 0.163\%$  | $\pm 2.5 \times (0.015 + 0.05 \times 0.1 \times URL/Span)\%$ |
| 10 to 20%  | $\pm 0.325\%$  | $\pm 5 \times (0.015 + 0.05 \times 0.1 \times URL/Span)\%$   |

**Max span 1kPa, 6kPa model :**

| Output     | Accuracy     |
|------------|--------------|
| 50 to 100% | $\pm 0.1\%$  |
| 20 to 50%  | $\pm 0.25\%$ |
| 10 to 20%  | $\pm 0.5\%$  |

**Temperature effect :**

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

| Range code      | Shift at 20% output point                                    |
|-----------------|--------------------------------------------------------------|
| "1" and "2"     | $\pm (0.375 + 0.25 \frac{URL}{Span})\% / 28^\circ\text{C}$   |
| "3" through "9" | $\pm (0.24 + 0.03125 \frac{URL}{Span})\% / 28^\circ\text{C}$ |

**Physical specifications****Electrical connections :**

1/2"-14 NPT, Pg 13.5 or M 20 × 1.5

**Process connections :**

1/4"-18 NPT meets DIN 19213.

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

**Process-wetted parts material :**

| Material code<br>(7th digit) | Process<br>cover | Diaphragm                 | Wetted<br>sensor body | Vent/drain |
|------------------------------|------------------|---------------------------|-----------------------|------------|
| V                            | Ranges 1 & 2     | SS 316L                   | SS 316L               | SS 318LN   |
|                              | Ranges 3 to 8    | SS 316L                   | SS 316L               | SS 316L    |
| W                            | SS 316L          | Hastelloy-C               | SS 316L               | SS 316L    |
| H                            | SS 316L          | Hastelloy-C               | Hastelloy-C           | SS 316L    |
| J                            | SS 316L          | SS 316L +<br>Gold coating | SS 316L               | SS 316L    |
| M                            | SS 316L          | Monel                     | Monel lining          | SS 316L    |
| T                            | SS 316L          | Tantalum                  | Tantalum lining       | SS 316L    |

**Mass {weight} :**

Transmitter approximately 3.5 kg without options.

Refer to outline dimensions

**Pressure Transmitter : FKG...G****Span, range and overrange limit :**

| Type   | Span limit kPa [bar] |                | Range limit kPa [bar] |                | Overrange limit MPa [bar] |
|--------|----------------------|----------------|-----------------------|----------------|---------------------------|
|        | Min.                 | Max.           | Lower limit           | Upper limit    |                           |
| FKG□01 | 1.3<br>[0.013]       | 130<br>[1.3]   | -100<br>[-1]          | 130<br>[1.3]   | 1<br>[10]                 |
| FKG□02 | 5<br>[0.05]          | 500<br>[5]     | -100<br>[-1]          | 500<br>[5]     | 1.5<br>[15]               |
| FKG□03 | 30<br>[0.3]          | 3000<br>[30]   | -100<br>[-1]          | 3000<br>[30]   | 9<br>[90]                 |
| FKG□04 | 100<br>[1]           | 10000<br>[100] | -100<br>[-1]          | 10000<br>[100] | 15<br>[150]               |
| FKG□05 | 500<br>[5]           | 50000<br>[500] | -100<br>[-1]          | 50000<br>[500] | 75<br>[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

**Process temperature limit:**

| Filled oil      | 13th code | Process<br>temperatuer |
|-----------------|-----------|------------------------|
| Silicone oil    | Y, G, N   | -40 to +100°C          |
| Fluorinated oil | W, A, D   | -20 to +80°C           |

**Response time :**

80ms whitout additionnal damping and including dead time of 40ms

**Pressure equipment directive (PED) 2014/68/UE :**

Digit 6 code 1, 2, 3, 4 and 9 according to Article 4.3  
Digit 6 code 5 : Category III module B

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability)

#### Max span above 32kPa model :

For spans greater than 1/10 of URL :

$\pm 0.065\%$  of span

$\pm 0.04\%$  of span (option)

For spans below 1/10 of URL :

$\pm \left( 0.015 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right) \% \text{ of span}$

#### For model with max. span 50000 kPa :

For spans greater than 1/10 of URL :

$\pm 0.1\%$  of span

For spans below 1/10 of URL :

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

### Stability :

$\pm 0.1\%$  of upper range limit (URL) for 10 years

### Temperature effect :

Effects per 28°C change between the limits of  $-40^\circ\text{C}$  and  $+85^\circ\text{C}$

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

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

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

### Overrange effect :

Zero shift: 0.2% of URL for any overrange to maximum limit

## Physical specifications

### Process-wetted parts material :

| Material code (7th digit in code symbols) | 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    |

### Process connections :

1/4" - 18 NPT as specified.

Option : 1/2" - 14 NPT for oval flanges.

### Mass {weight} :

Transmitter approximately 2.9 to 3.4 kg without options.

Refer to outline dimensions

### Vacuum service :

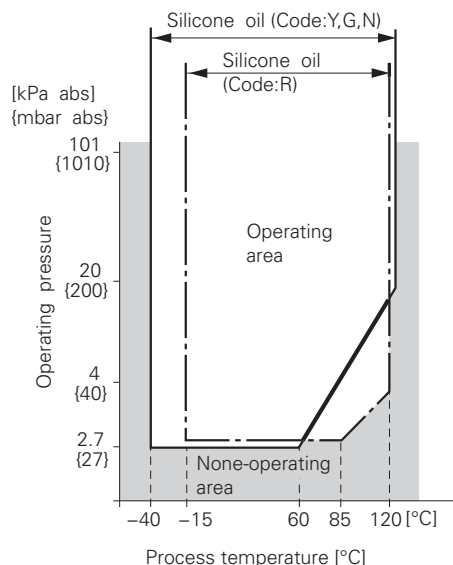


Fig.1 Relation between process temperature and operating pressure

## Absolute Pressure Transmitter : FKA...G

### Span, range and overrange limit:

| Type   | Span limit<br>kPa abs [bar abs] |                | Range limit<br>kPa abs<br>[bar abs] | Overrange<br>limit<br>MPa<br>[bar] |
|--------|---------------------------------|----------------|-------------------------------------|------------------------------------|
|        | Min.                            | Max.           |                                     |                                    |
| FKA□01 | 1.6<br>[0.016]                  | 16<br>[0.16]   | 0 to +16<br>[0 to +0.16]            | 0.5<br>[5]                         |
| FKA□02 | 1.6<br>[0.016]                  | 130<br>[1.3]   | 0 to +130<br>[0 to +1.3]            | 0.5<br>[5]                         |
| FKA□03 | 5<br>[0.05]                     | 500<br>[5]     | 0 to +500<br>[0 to +5]              | 1.5<br>[15]                        |
| FKA□04 | 30<br>[0.3]                     | 3000<br>[30]   | 0 to +3000<br>[0 to +30]            | 9<br>[90]                          |
| FKA□05 | 100<br>[1]                      | 10000<br>[100] | 0 to +10000<br>[0 to +100]          | 15<br>[150]                        |

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

### Process temperature limit :

$-40$  to  $+85^\circ\text{C}$  for silicone oil fill sensor

### Response time :

80ms whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability).

For spans greater than 1/10 of URL :

$\pm 0.2\%$  of span

$\pm 0.1\%$  of span (option)

For spans below 1/10 of URL :

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

(Not available for Max span 16kPa abs, 130kPa abs)

For spans greater than 1/10 of URL :

$\pm 0.1\%$  of span

For spans below 1/10 of URL :

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

### Stability :

$\pm 0.2\%$  of upper range limit (URL) for 10 years

### Temperature effect :

Effect per 28°C change between the limits of  $-40^\circ\text{C}$  and  $+85^\circ\text{C}$

Zero shift:  $\pm \left( 0.125 + 0.1 \frac{\text{URL}}{\text{Span}} \right) \%$

Total effect:  $\pm \left( 0.15 + 0.1 \frac{\text{URL}}{\text{Span}} \right) \%$

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

### Overrange effect :

Zero shift:  $\pm 0.2\%$  of URL for any overrange to maximum limit

## Physical specifications

### Process connections :

1/4" - 18 NPT as specified.

Option : 1/2" - 14 NPT for oval flanges.

### Process-wetted parts material :

| Material code (7th digit in code symbols) | Process cover   | Diaphragm              | Wetted sensor body | Vent/drain |
|-------------------------------------------|-----------------|------------------------|--------------------|------------|
| V                                         | SS 316L         | SS 316L                | SS 316L            | SS 316L    |
| H                                         | PVDF or SS 316L | Hastelloy C            | Hastelloy C        | SS 316L    |
| J                                         | SS 316L         | SS 316L + gold coating | SS 316L            | SS 316L    |

### Mass {weight} :

Transmitter approximately 3.5 kg without options. Refer to outline dimensions

## Direct mount Type Gauge Pressure Transmitter : FKP...G

Span, range, and overrange limits:

| Type   | Span limit kPa (bar) |                | Range limit kPa (bar)          | Overrange limit MPa (bar) |
|--------|----------------------|----------------|--------------------------------|---------------------------|
|        | Min.                 | Max.           |                                |                           |
| FKP□01 | 8.125<br>{0.08125}   | 130<br>{1.3}   | -100 to + 130<br>{-1 to +1.3}  | 1<br>{10}                 |
| FKP□02 | 31.25<br>{0.3125}    | 500<br>{5}     | -100 to + 500<br>{-1 to +5}    | 1.5<br>{15}               |
| FKP□03 | 187.5<br>{1.875}     | 3000<br>{30}   | -100 to +3000<br>{-1 to +30}   | 9<br>{90}                 |
| FKP□04 | 625<br>{6.25}        | 10000<br>{100} | -100 to +10000<br>{-1 to +100} | 15<br>{150}               |

Lower range limit (vacuum limit) :

Silicone fill sensor : See Fig. 1

Fluorinated fill sensor : 66 kPa abs (500mmHg abs) at below 60°C

Process temperature limit :

| Filled oil      | 13th code | Process temperature |
|-----------------|-----------|---------------------|
| Silicone oil    | Y, G, N   | -40 to +100°C       |
| fluorinated oil | A         | -20 to +80°C        |

Response time :

80ms whitout additionnal damping and including dead time of 40ms

Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

### Performance specifications

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

For spans greater than 1/10 of URL :

±0.1% of span

For spans below 1/10 of URL :

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

Stability :

±0.2% of upper range limit (URL) for 10 years (in case of 6th digit code "2", "3", "4")

Temperature effect :

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

Zero shift :  $\pm \left( 0.4 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.475 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Overrange effect :

Zero shif : ±0.3% of URL for any overrange to maximum limit

### Physical specifications

Process connections :

1/2"-14 NPT, 1/4"-18 NPT, Rc 1/2", G1/2" A manometer fitting, M20 x 1,5

Process-wetted parts material :

| Material code (7th digit in Code symbols) | Process cover | Diaphragm              | Wetted sensor body |
|-------------------------------------------|---------------|------------------------|--------------------|
| J                                         | SS 316L       | SS 316L + Gold coating | SS 316L            |
| V                                         | SS 316L       | SS 316L                | SS 316L            |

Mass {weight} :

Transmitter approximately 1.7 kg without options. Refer to outline dimensions

## Direct mount Type absolute pressure Transmitter : FKH...G

Span, range, and overrange limits :

| Type   | Span limit kPa abs (bar abs) |              | Range limit kPa abs (bar abs) | Overrange limit MPa (bar) |
|--------|------------------------------|--------------|-------------------------------|---------------------------|
|        | Min.                         | Max.         |                               |                           |
| FKH□02 | 8.125<br>{0.08125}           | 130<br>{1.3} | 0 to 130<br>{0 to 1.3}        | 0.5<br>{5}                |
| FKH□03 | 31.25<br>{0.3125}            | 500<br>{5}   | 0 to 500<br>{0 to 5}          | 1.5<br>{15}               |
| FKH□04 | 187.5<br>{1.875}             | 3000<br>{30} | 0 to 3000<br>{0 to 30}        | 9<br>{90}                 |

Process temperature limit :

-40 to +85°C for silicone oil fill sensor

Response time :

80ms whitout additionnal damping and including dead time of 40ms

Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

### Performance specifications

Accuracy rating :

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL :

±0.2% of span

For spans below 1/10 of URL :

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

Stability :

±0.2% of upper range limit (URL) for 10 years "(In case of 6th digit code "3", "4")"

Temperature effect :

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

Zero shift :  $\pm \left( 0.4 + 0.2 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.475 + 0.2 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Overrange effect :

Zero shif : ±0.3% of URL for any overrange to maximum limit

### Physical specifications

Process connections :

1/2"-14 NPT, 1/4"-18 NPT, Rc 1/2", G1/2" A manometer fitting, M20 x 1,5

Process-wetted parts material :

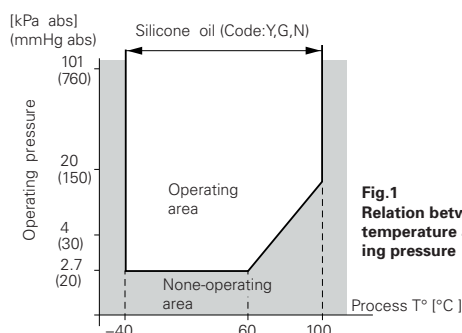
| Material code (7th digit in Code symbols) | Process cover | Diaphragm              | Wetted sensor body |
|-------------------------------------------|---------------|------------------------|--------------------|
| J                                         | SS 316L       | SS 316L + Gold coating | SS 316L            |
| V                                         | SS 316L       | SS 316L                | SS 316L            |

Mass {weight} :

Transmitter approximately 1.7 kg without options.

Refer to outline dimensions

Vacuum service :



**Fig.1**  
Relation between process temperature and operating pressure

## Level Transmitter : FKE...G

### Static pressure, span, and range limit :

| Type   | Static pressure     | Span limit (mmH2O) |        | Range limit (mmH2O) |
|--------|---------------------|--------------------|--------|---------------------|
|        |                     | Min.               | Max.   |                     |
| 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 fillsensor : 66 kPa abs (500 mmHg abs) at temperature below 60 °C (See Fig.2)

Over range limit : To maximum static pressure limit

### Process temperature and negative pressure tolerance limit :

| Filled oil      | 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 and G                                  | -40 to 150°C        | 20 torr                        |

Note: For higher process temperature, please consult Fuji Electric.

### Response time :

| Range code (6th digit in code symbols) | Response time (at 23°C) |
|----------------------------------------|-------------------------|
| "3"                                    | 550 msec                |
| "5" to "8"                             | 300 msec                |

Whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL :

±0.165% 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 spans greater than 1/10 of URL :

±0.1% of span

For spans below 1/10 of URL :

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

### Stability :

±0.2% 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 (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"

## Physical specifications

### Process connections :

LP side : 1/4"-18 NPT

1/2"-14 NPT with oval flanges (option)

HP side : ANSI or DIN raised face fange. 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                      |

### Mass {weight} :

Transmitter :

Approx. 10.2 to 19.2 kg without options.

Refer to the previous outline dimensions

### Vacuum limit :

Fig. 1

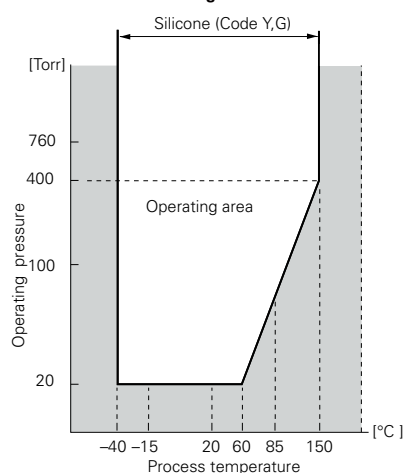
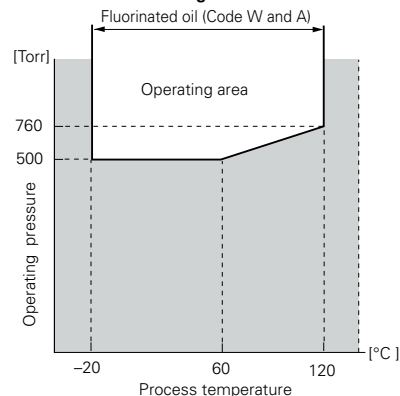


Fig. 2



Relation between process temperature and operating pressure

## Remote Seal Type Differential Pressure / Flow Transmitter : FKD...G

Static pressure, span, and range limit :

| Type    | Static pressure     | Span limit [mbar] |         | Range limit [mbar] |
|---------|---------------------|-------------------|---------|--------------------|
|         |                     | Min.              | Max.    |                    |
| FKD□□3  | Up to flange rating | 3.2               | 320     | ± 320              |
| FKD□□5  |                     | 13                | 1300    | ±1300              |
| FKD□□6  |                     | 50                | 5000    | ±5000              |
| FKD□□8  |                     | 300               | 30 000  | ±30 000            |
| FKD□□9* |                     | 2000              | 200 000 | ±200 000           |

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

\*Note : For FKD□49, max possible overload pressure on LP side must be ≤ 100 bar. The accuracy is not guaranteed when used at negative DP.

### Over range limit :

To maximum static pressure limit

### Process temperature limit :

Check in the seal - datasheet with the specific temperature conditions

### Response time :

300 msec whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL :

0.065% of span

For spans below 1/10 of URL :

$\pm \left( 0.015 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right)$  % of span

### Stability :

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

### Linearity :

0,05% of calibrated span

### Temperature effect:

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

Zero shift :  $\pm \left( 0.075 + 0.125 \frac{0.1 \times \text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.095 + 0.125 \frac{0.1 \times \text{URL}}{\text{Span}} \right)$  % of span

### Static pressure effect:

Zero shift: ±0.035% of URL for 100 bar

### Overrange effect:

Zero shift: ±0.15% of URL / 160 bar limit

## Physical specifications

### Process connections:

1/4"-18 NPT meets DIN 19213

1/2"-14 NPT for oval flanges (option)

### Process-wetted parts material :

Diaphragm :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Flange face :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Extension :

SS 316L, Hastelloy-C (refer to code symbols)

### Mass {weight} :

Transmitter approximately 3.5 kg without options.

Refer to outline dimensions

## Remote Seal Type Pressure Transmitter : FKB...G

Span and range limit:

| Type   | Span limit [bar] |      | Range limit [bar] |
|--------|------------------|------|-------------------|
|        | Min.             | Max. |                   |
| FKB□□1 | 0,013            | 1,3  | –1 to +13         |
| FKB□□2 | 0,05             | 5    | –1 to +5          |
| FKB□□3 | 0,3              | 30   | –1 to +30         |
| FKB□□4 | 1                | 100  | –1 to +100        |
| FKB□□5 | 5                | 500  | –1 to +500        |

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

### Process temperature limit:

Check in the seal - datasheet with the specific temperature conditions

### Response time :

200 msec whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

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

Digit 6 code 5 : Category III module B

## Performance specifications

### Accuracy rating:

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL :

±0.065% of span

± 0,1% of span (option)

For spans below 1/10 of URL :

$\pm \left( 0.015 + 0.05 \frac{0.1 \times \text{URL}}{\text{Span}} \right)$  % of span

### Stability :

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

### Linearity :

0,05% of calibrated span

### Temperature effect:

Effect per 28°C change between the limits of –40°C and +85°C

Zero shift :  $\pm \left( 0.075 + 0.0125 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.095 + 0.0125 \frac{\text{URL}}{\text{Span}} \right)$  % of span

### Overrange effect:

Zero shif : ±0.2% of URL for any overrange to maximum limit

## Physical specifications

### Process connections :

1/4"-18 NPT meets DIN 19213.

1/2"-14 NPT for oval flanges (option)

### Process-wetted parts material :

Diaphragm :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Flange face :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Extension :

SS 316L, Hastelloy-C (refer to code symbols)

### Mass {weight} :

Transmitter approximately 3.5 to 4 kg without options.

Refer to outline dimensions

## Remote Seal Type Absolute Pressure Transmitter : FKM...G

Span and range limit :

| Type    | Span limit [bar abs] |      | Range limit [bar abs] |
|---------|----------------------|------|-----------------------|
|         | Min.                 | Max. |                       |
| FKM□□□1 | 0.016                | 0.16 | 0 to +0.16            |
| FKM□□□2 | 0.013                | 1.3  | 0 to +1.3             |
| FKM□□□3 | 0.05                 | 5    | 0 to +5               |
| FKM□□□4 | 0.3                  | 30   | 0 to +30              |
| FKM□□□5 | 1                    | 100  | 0 to +100             |

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

### Process temperature and negative pressure tolerance limit:

Check in the seal - datasheet with the specific temperature conditions

### Response time :

200 msec whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL:

±0.2% of span

For spans below 1/10 of URL:

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

### Stability :

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

### Linearity : 0,1% of calibrated span

### Temperature effect :

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

Zero shift :  $\pm \left( 0.125 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.15 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

### Overrange effect :

Zero shift :

±0.2% of URL for any overrange to maximum limit

## Physical specifications

### Process connections :

1/4"-18 NPT meets DIN 19213.

1/2"-14 NPT for oval flanges (option)

### Process-wetted parts material :

Diaphragm :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Flange face :

SS 316L, Hastelloy-C, Monel, Tantalum, Titanium or Zirconium

Extension :

SS 316L, Hastelloy-C (refer to code symbols)

### Mass {weight} :

Transmitter approximately 3.5 to 4 kg without options.

Refer to outline dimensions

## Remote seal type gauge pressure transmitter (rigid or capillary mounted) : FKP...VG

Span, range, and overrange limits :

| Type    | Span limits (bar) |         | Range limits (bar) | Overrange limits (bar) |
|---------|-------------------|---------|--------------------|------------------------|
|         | Minimum           | Maximum |                    |                        |
| FKP□□01 | 0,08125           | 1,3     | -1 à +1,3          | 10                     |
| FKP□□02 | 0,3125            | 5       | -1 à +5            | 15                     |
| FKP□□03 | 1,875             | 30      | -1 à +30           | 90                     |
| FKP□□04 | 6,25              | 100     | -1 à +100          | 150                    |

Note: to minimise environmental influence, span should be greater than 1/10 of the max. span in most applications.

### Zero elevation/suppression :

-1 bar to 100% of URL

### Process temperature limit :

Check in the seal datasheet with the specific temperature conditions

### Response time :

200 msec whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating:

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL:

±0.1% of span

For spans below 1/10 of URL:

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

### Stability:

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

### Temperature effect:

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

Zero shift :  $\pm \left( 0.4 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.475 + 0.1 \frac{\text{URL}}{\text{Span}} \right)$  % of span

### Overrange effect:

Zero shift :

±0.3% of URL (max overrange pressure = 1.5% max span)

### Mass {weight} :

Transmitter approximately 2kg without options.

Refer to outline dimensions

## Remote seal type absolute pressure transmitter (rigid or capillary mounted) : FKH...VG

Span, range, and overrange limits :

| Type   | Span limits (bar abs) |         | Range limits (bar abs) | Overrange limits (bar abs) |
|--------|-----------------------|---------|------------------------|----------------------------|
|        | Minimum               | Maximum |                        |                            |
| FKH□02 | 0,08125               | 1,3     | 0 à +1,3               | 5                          |
| FKH□03 | 0,3125                | 5       | 0 à +5                 | 15                         |
| FKH□04 | 1,875                 | 30      | 0 à +30                | 90                         |

Note: to minimise environmental influence, span should be greater than 1/10 of the max. span in most applications.

### Zero elevation/suppression :

0 kPa Abs to +100 % of URL

### Process temperature limit :

Check in the seal datasheet with the specific temperature conditions

### Response time :

200 msec whitout additionnal damping and including dead time of 40ms

### Pressure equipment directive (PED) 2014/68/UE :

According to Article 4.3

## Performance specifications

### Accuracy rating :

(including linearity, hysteresis, and repeatability)

For spans greater than 1/10 of URL:

±0.2% of span

For spans below 1/10 of URL:

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

### Stability :

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

### Temperature effect:

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

Zero shift :  $\pm \left( 0.4 + 0.2 \frac{\text{URL}}{\text{Span}} \right)$  % of span

Total effect :  $\pm \left( 0.475 + 0.2 \frac{\text{URL}}{\text{Span}} \right)$  % of span

### Overrange effect:

Zero shif :

±0.3% of URL (max overrange pressure = 1.5% max span)

### Mass {weight} :

Transmitter approximately 2kg without options.

Refer to outline dimensions

## CODE SYMBOLS

## Differential pressure / flow transmitter : FKC...G

| 1                                    | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16                            | DESCRIPTION                                  |                     |                        |                       |                  |                 |
|--------------------------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|-------------------------------|----------------------------------------------|---------------------|------------------------|-----------------------|------------------|-----------------|
| F K C                                |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | Type                                         |                     |                        |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | Smart, 4-20 mAdc + Fuji/Hart® digital signal |                     |                        |                       |                  |                 |
| M<br>N<br>P<br>R<br>T<br>V<br>W<br>X |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | Connections                                  |                     |                        |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | Process connections                          |                     | Oval flange connection | Electrical connection |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*9) 1/4"-18 NPT                             |                     | M10                    | M20 x 1,5             |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*9) 1/4"-18 NPT                             |                     | M10                    | Pg 13,5               |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*9) 1/4"-18 NPT                             |                     | M10                    | 1/2"-14 NPT           |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*8) 1/4"-18 NPT                             |                     | 7/16"-20 UNF           | M20 x 1,5             |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*8) 1/4"-18 NPT                             |                     | 7/16"-20 UNF           | 1/2"-14 NPT           |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | (*1) 1/4"-18 NPT                             |                     | M10 or M12 (*1)        | Pg 13,5               |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) 1/4"-18 NPT              |                                              | M10 or M12 (*1)     | M20 x 1,5              |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*8) 1/4"-18 NPT              |                                              | 7/16"-20 UNF        | Pg 13,5                |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Range & wetted parts material |                                              |                     |                        |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Static pressure limits        | Spans (*2)                                   | Process - cover     |                        | Measuring diaphragm   | Wetted cell body |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | LP side             | HP - side              |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | -1                            | 10/100                                       | SS 316L             |                        | SS 316L               | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | to                            | mm WC                                        | SS 316L             |                        | Hastelloy C           | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 32 bar                        |                                              | SS 316L             |                        | Gold coat             | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1                             | 10/600                                       | SS 316L             |                        | SS 316L               | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | to                            | mm WC                                        | SS 316L             |                        | Hastelloy C           | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 100 bar                       |                                              | SS 316L             |                        | Gold coat             | SS 318LN         |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | -1                            | 32<br>/3200<br>mm WC                         | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | Monel            |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | SS 316L                                      |                     | Gold/ceramic           | Gold/ceramic          |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | SS 316L                                      |                     | Tantalum               | Tantalum lining       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | to                                           | 0,13<br>/13<br>m WC | SS 316L                |                       | SS 316L          | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | Monel           |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Gold coat        | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | SS 316L                       |                                              | Gold/ceramic        | Gold/ceramic           |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | SS 316L                       |                                              | Tantalum            | Tantalum lining        |                       |                  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 160 bar (*3)                  | 0,5/50<br>m WC                               | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 3/300 m WC                    |                                              | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Tantalum              | Tantalum lining  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | -1                            | 32/3200<br>mm WC                             | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | Monel            |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | to                                           | 0,13/13<br>m WC     | SS 316L                |                       | SS 316L          | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | Monel           |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Gold coat        | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | 420 bar                                      | 0,5/50<br>m WC      | SS 316L                |                       | SS 316L          | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Hastelloy C      | Monel           |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | SS 316L                |                       | Gold coat        | Monel lining    |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | -1 to 300 bar                 | 3/300 m WC                                   | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Hastelloy C           | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | -1 to 300 bar                 | 50/2000 m WC                                 | SS 316L             |                        | SS 316L               | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | SS 316L             |                        | Gold coat             | SS 316L          |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0                             | 10/100 mmWC                                  | PVDF Insert         |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | 10/600 mmWC         |                        | PVDF Insert           |                  | Hastelloy C     |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | 32<br>/3200<br>mm WC                         | PVDF Insert         |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Monel                 | Monel lining     |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | to                                           | 0,13<br>/13<br>m WC | PVDF Insert            |                       | Hastelloy C      | Hastelloy C     |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | Monel            | Monel lining    |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | Tantalum         | Tantalum lining |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | Tantalum         | Tantalum lining |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 15 bar                        | 0,5<br>/50<br>m WC                           | PVDF Insert         |                        | Hastelloy C           | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Monel                 | Monel lining     |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Tantalum              | Tantalum lining  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Tantalum              | Tantalum lining  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0                             | 10/100 mmWC                                  | PVDF Insert         |                        | SS 316L               | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | 10/600 mmWC         |                        | PVDF Insert           |                  | SS 316L         |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | 32<br>/3200<br>mm WC                         | PVDF Insert         |                        | SS 316L               | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | SS 316L               | Monel            |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               | to                                           | 0,13<br>/13<br>m WC | PVDF Insert            |                       | SS 316L          | Hastelloy C     |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | SS 316L          | Monel           |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | Tantalum         | Tantalum lining |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              |                     | PVDF Insert            |                       | Tantalum         | Tantalum lining |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 15 bar                        | 0,5<br>/50<br>m WC                           | PVDF Insert         |                        | SS 316L               | Hastelloy C      |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | SS 316L               | Monel            |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Tantalum              | Tantalum lining  |                 |
|                                      |   |   |   |   |   |   |   |   |    |    |    |    |    |    |                               |                                              | PVDF Insert         |                        | Tantalum              | Tantalum lining  |                 |

|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   |                                                                   |                                                                      |      |
|---|---|---|---|---|---|---|---|---|--|--|--|--|--|--|--|-------------------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------------------|------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |   |  |  |  |  |  |  |  |                                                                   |                                                                   |                                                                      |      |
| F | K | C |   |   |   |   | G | - |  |  |  |  |  |  |  |                                                                   |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | DESCRIPTION                                                       |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Indicator & Arrestor                                              |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Indicator                                                         | Arrestor                                                          | Initial setting                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - A                                                             | None                                                              | 4-20 mA DC<br><br>+<br><br>Hart® / Fuji<br>digital signal<br>"SMART" |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - B                                                             | (*11) Analog, 0-100% linear scale                                 |                                                                      | None |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - C                                                             | (*11) Analog, 0-100% √ scale                                      |                                                                      | None |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - D                                                             | (*11) Analog, Custom scale                                        |                                                                      | None |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - J                                                             | (*11) Analog, double scale                                        |                                                                      | None |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - E                                                             | None                                                              |                                                                      | Yes  |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - F                                                             | (*11) Analog, 0-100% linear scale                                 |                                                                      | Yes  |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - G                                                             | (*11) Analog, 0-100% √ scale                                      |                                                                      | Yes  |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - H                                                             | (*11) Analog, Custom scale                                        |                                                                      | Yes  |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - K                                                             | (*11) Analog, double scale                                        |                                                                      | Yes  |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 1                                                             | Digital, 0-100% with push button                                  | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 2                                                             | Digital, Custom scale with push button                            | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 3                                                             | Digital, 0-100% √ scale with push button                          | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 4                                                             | Digital, 0-100% with push button                                  | Yes                                                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 5                                                             | Digital, Custom scale with push button                            | Yes                                                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | G - 6                                                             | Digital, 0-100% √ scale with push button                          | Yes                                                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Approvals for hazardous locations (consult FUJI for availability) |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | A                                                                 | None (Standard)                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | X                                                                 | ATEX - Flameproof enclosures (digit 4 = "M, P, R, T" & "W" only)  |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | E                                                                 | CSA - Explosion-Proof (digit 4 = "P" & "T" only)                  |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | R                                                                 | IECEx - Flameproof enclosures (digit 4 = "M, P, R, T" & "W" only) |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Side vent/drain & mounting bracket                                |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | A<br>C<br>K<br>D<br>F<br>L                                        | Side Vent/drain                                                   | Mounting bracket                                                     |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Standard                                                          | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Standard                                                          | Yes, SS 304L                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Standard                                                          | Yes, SS 316L                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Side                                                              | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Side                                                              | Yes, SS 304L                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Side                                                              | Yes, SS 316L                                                      |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | SS parts                                                          |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Y<br>B<br>C<br>E                                                  | SS tag plate                                                      | SS housing                                                           |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | None                                                              | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Yes                                                               | None                                                                 |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | None                                                              | Yes                                                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Yes                                                               | Yes                                                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Special applications & fill fluid                                 |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Y<br>W<br>G<br>A<br>D<br>N                                        | Treatment                                                         | Fill fluid                                                           |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | None (std)                                                        | Silicone oil                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | None (std)                                                        | Fluorinated oil                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Degreasing                                                        | Silicone oil                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Oxygen service                                                    | Fluorinated oil (digit 7 = J, V, W)                                  |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | Chlorine service                                                  | Fluorinated oil (digit 7=H,T)                                        |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  |                                                                   | (*7) NACE                                                         | Silicone oil                                                         |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Process cover gasket                                              |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | - A                                                               | Viton                                                             |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | - C                                                               | PTFE square section gasket in SS flange (FEF design)              |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | - D                                                               | (*5) PTFE square section gasket in PVDF insert                    |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Bolts/screws material                                             |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | A                                                                 | Carbon steel Cr-Mo (standard) M10                                 |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | U                                                                 | (*3) SS 316(L) / 316(L) (bolt/nuts) M10                           |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | V                                                                 | Carbon steel Cr-Mo M12 (standard) for static pressure > 160 bar   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | W                                                                 | (*10) SS 660/660 (bolt/nuts) M10 for static pressure < 160 bar    |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | W                                                                 | (*10) SS 660/660 (bolt/nuts) M12 for static pressure > 160 bar    |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | Special options or design                                         |                                                                   |                                                                      |      |
|   |   |   |   |   |   |   |   |   |  |  |  |  |  |  |  | (*6) - *                                                          | special, no code available                                        |                                                                      |      |

Notes\*:

- The thread is M12, if static pressure 300/420 bar
- 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
- Max. static pressure 160 bar for SS 316(L) bolts/nuts; for static pressure > 160 bar, please specify SS 660 bolts
- Gold coating on wetted measuring cell parts for Hydrogen service - Hydroseal version - gold/ceramic coating is available upon request
- Process cover with PVDF insert with 1/2"-14 NPT side process connection/no vent drain, other upon request - square section PTFE gasket
- When no code can be found in the current code symbols, place (\*) in concerned code digit(s) & add(\*) in 16 th digit
- Our 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
- For the static pressure option 420 bar and process cover gasket PTFE please use only code "R", "T" or "X"
- Process connection on the bottom side
- SS 660 bolts/nuts have to be used for oil & gas applications
- Approval upon request

## Gauge pressure transmitter : FKG...G

[illegible]

Notes\* :

- 1- M12 oval flange screw required for 500 bar units
- 2- 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.
- 3- Gold coating on wetted measuring cell parts for Hydrogen service - Hydroseal version - Gold/ceramic coating is available upon request.
- 4- Process cover with PVDF insert with 1/2"-14 NPT side process connection/ no vent drain, other upon request - square section PTFE gasket
- 5- When no code can be found in the current code symbols, place \* in concerned code digit(s) & add \* in 16 th digit
- 6- Our bolts/nuts in SS 660 are in conformity with the NACE MR0175/ISO 15156 requirements and must be used for NACE MR0175/ISO 15156 service
- 7- SS 660 bolts/nuts have to be used for oil & gas applications
- 8- Approval upon request

### Absolute pressure transmitter : FKA...G

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- When no code can be found in the current code symbols, place\* in concerned code digit(s) & add\* in 16 th digit
- 3- Process cover with PVDF insert with 1/2-14 NPT side process connection/no vent drain, other upon request - square section PTFE gasket
- 4- Our stainless steel bolts/nuts in SS 660 are in conformity with the NACE MR 0175/ISO 15156.
- 5-Approval upon request

## Direct mount type gauge pressure transmitter : FKP...G

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |                                                                          |                                                                   |                 |                |  |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------|----------------|--|
| F | K | P |   | 0 |   |   | G | - |    |    |    |    |    | 0  |                                                                          |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>DESCRIPTION</b>                                                       |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Type</b>                                                              |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Smart, 4-20 mAdc + Fuji/Hart® digital signal                             |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Connections</b>                                                       |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Process connection                                                       | Electrical connection                                             |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | 1/2-14 NPT                                                        |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | Pg 13,5                                                           |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | M 20 x 1,5                                                        |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Range &amp; wetted parts material</b>                                 |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Span                                                                     | Diaphragm material                                                | Wetted parts    |                |  |
| 0 | 1 | V |   |   |   |   |   |   |    |    |    |    |    |    | 0,08125/1,3 bar                                                          | SS 316L                                                           | SS 316L         |                |  |
| 0 | 1 | J |   |   |   |   |   |   |    |    |    |    |    |    | 0,08125/1,3 bar                                                          | SS 316L / gold coat                                               | SS 316L         |                |  |
| 0 | 2 | V |   |   |   |   |   |   |    |    |    |    |    |    | 0,3125/5 bar                                                             | SS 316L                                                           | SS 316L         |                |  |
| 0 | 2 | J |   |   |   |   |   |   |    |    |    |    |    |    | 0,3125/5 bar                                                             | SS 316L / gold coat                                               | SS 316L         |                |  |
| 0 | 3 | V |   |   |   |   |   |   |    |    |    |    |    |    | 1,875/30 bar                                                             | SS 316L                                                           | SS 316L         |                |  |
| 0 | 3 | J |   |   |   |   |   |   |    |    |    |    |    |    | 1,875/30 bar                                                             | SS 316L / gold coat                                               | SS 316L         |                |  |
| 0 | 4 | V |   |   |   |   |   |   |    |    |    |    |    |    | 6,25/100 bar                                                             | SS 316L                                                           | SS 316L         |                |  |
| 0 | 4 | J |   |   |   |   |   |   |    |    |    |    |    |    | 6,25/100 bar                                                             | SS 316L / gold coat                                               | SS 316L         |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Indicator &amp; Arrester</b>                                          |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Indicator                                                                | Arrester                                                          | Initial setting |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - A                                                                    | None                                                              | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - B                                                                    | (*1) Analog, 0-100% linear scale                                  | None            | 4-20 mA DC     |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - D                                                                    | (*1) Analog, Custom scale                                         | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - J                                                                    | (*1) Analog, double scale                                         | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - E                                                                    | None                                                              | Yes             | +              |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - F                                                                    | (*1) Analog, 0-100% linear scale                                  | Yes             |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - H                                                                    | (*1) Analog, Custom scale                                         | Yes             | Hart® /Fuji    |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - K                                                                    | (*1) Analog, double scale                                         | Yes             | digital signal |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - 1                                                                    | Digital, 0-100% with push button                                  | None            | "SMART"        |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - 2                                                                    | Digital, Custom scale with push button                            | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - 4                                                                    | Digital, 0-100% with push button                                  | Yes             |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G - 5                                                                    | Digital, Custom scale with push button                            | Yes             |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Approvals for hazardous locations (consult FUJI for availability)</b> |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | A                                                                        | None (Standard)                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | X                                                                        | ATEX - Flameproof enclosures (digit 4 = "T" & "W" only)           |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | E                                                                        | CSA - Explosion-Proof (digit 4 = "T" only)                        |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | R                                                                        | IECEX - Flameproof enclosures (digit 4 = "M, P, R, T" & "W" only) |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Mounting bracket</b>                                                  |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | A                                                                        | None                                                              |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | C                                                                        | Yes (SS 304L)                                                     |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Stainless Steel parts</b>                                             |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Tag plate                                                                | Housing                                                           |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Y                                                                        | None                                                              | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | B                                                                        | Yes                                                               | None            |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | C                                                                        | None                                                              | Yes             |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | E                                                                        | Yes                                                               | Yes             |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Special applications &amp; fill fluid</b>                             |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Treatment                                                                | Fill fluid                                                        |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Y                                                                        | None (std)                                                        | Silicone oil    |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G                                                                        | Degreasing                                                        | Silicone oil    |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | A                                                                        | Oxygen service                                                    | Fluorinated oil |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | N                                                                        | NACE                                                              | Silicone oil    |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Process connection (welded) adaptor - all stainless steel parts</b>   |                                                                   |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 Y                                                                    | 1/2 - 14 NPTI                                                     |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 B                                                                    | Rc 1/2 I                                                          |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 C                                                                    | 1/4 - 18 NPTI                                                     |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 D                                                                    | 1/2 - 14 NPTE                                                     |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 E                                                                    | G 1/2"A manometer fitting                                         |                 |                |  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | - 0 F                                                                    | M20 x 1,5                                                         |                 |                |  |

Note\* :

1 - Approval upon request

# Direct mount type absolute pressure transmitter : FKH...G

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |                                                                          |                       |                 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|--------------------------------------------------------------------------|-----------------------|-----------------|
| F | K | H |   | 0 |   |   | G | - |    |    |    |    | 0  |    |                                                                          |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>DESCRIPTION</b>                                                       |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Type</b>                                                              |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Smart, 4-20 mAdc + Fuji/Hart® digital signal                             |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Connections</b>                                                       |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Process connection                                                       | Electrical connection |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | 1/2-14 NPT            |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | Pg 13,5               |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | See digit 15                                                             | M 20 x 1,5            |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Range &amp; wetted parts material</b>                                 |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Span (bar abs)                                                           | Diaphragm material    | Wetted parts    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0,08125/1,3                                                              | SS 316L               | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0,08125/1,3                                                              | SS 316L / gold coat   | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0,3125/5                                                                 | SS 316L               | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 0,3125/5                                                                 | SS 316L / gold coat   | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1,875/30                                                                 | SS 316L               | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1,875/30                                                                 | SS 316L / gold coat   | SS 316L         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Indicator &amp; Arrestor</b>                                          |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Indicator                                                                | Arrestor              | Initial setting |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None                                                                     | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, 0-100% linear scale                                         | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, Custom scale                                                | None                  | 4-20 mA DC      |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, double scale                                                | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None                                                                     | Yes                   | +               |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, 0-100% linear scale                                         | Yes                   |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, Custom scale                                                | Yes                   | Hart® / Fuji    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | (*1) Analog, double scale                                                | Yes                   | digital signal  |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Digital, 0-100% with push button                                         | None                  | "SMART"         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Digital, Custom scale with push button                                   | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Digital, 0-100% with push button                                         | Yes                   |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Digital, Custom scale with push button                                   | Yes                   |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Approvals for hazardous locations (consult FUJI for availability)</b> |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None (Standard)                                                          |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | ATEX - Flameproof enclosures (digit 4 = "T" & "W" only)                  |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | CSA - Explosion-Proof (digit 4 = "T" only)                               |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | IECEX - Flameproof enclosures (digit 4 = "M, P, R, T" & "W" only)        |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Mounting bracket (SS)</b>                                             |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None                                                                     |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Yes                                                                      |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Stainless steel parts</b>                                             |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | SS tag plate                                                             | SS housing            |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None                                                                     | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Yes                                                                      | None                  |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None                                                                     | Yes                   |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Yes                                                                      | Yes                   |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Special applications &amp; fill fluid</b>                             |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Treatment                                                                | Fill fluid            |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | None (std)                                                               | Silicone oil          |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Degreasing                                                               | Silicone oil          |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | NACE                                                                     | Silicone oil          |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | <b>Processconnection (welded) adaptor - all stainless steel parts</b>    |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1/2 - 14 NPTI                                                            |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | Rc 1/2 I                                                                 |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1/4 - 18 NPTI                                                            |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | 1/2 - 14 NPTE                                                            |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | G 1/2"A manometer fitting                                                |                       |                 |
|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    | M20 x 1,5                                                                |                       |                 |

Note\* :

1 - Approval upon request

**Level transmitter : FKE...VG**

[illegible]

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, 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 316 are in conformity with the NACE MR 0175/ISO 15156 requirements and must be used for NACE MR 0175/ISO 15156 service.
- 6- Please consult Fuji with you application conditions
- 7- Approval upon request

## Remote seal type differential pressure transmitter : FKD...VG

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | DESCRIPTION |                                                                                  |  |                                         |                                                            |         |
|---|---|---|---|---|---|---|---|---|----|----|----|----|-------------|----------------------------------------------------------------------------------|--|-----------------------------------------|------------------------------------------------------------|---------|
| F | K | D |   |   |   | V | G | - |    |    |    |    |             |                                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*5) <b>Type</b>                                                                 |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Differential pressure transmitter - Smart, 4-20 mAdc + Fuji/Hart® digital signal |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | <b>Conduit connection</b>                                                        |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 1/2"-14NPT                                                                       |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Pg 13.5                                                                          |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | M20 x 1.5                                                                        |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | <b>Diaphragm seal rating</b>                                                     |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 25                                                                            |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 20 - 150 Lbs                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 50 - 300 Lbs                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 40                                                                            |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 16                                                                            |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 100 - 600Lbs                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 150 - 900 lbs                                                                 |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*8) PN 250 - 1500 lbs                                                           |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) PN 420 - 2500 lbs                                                           |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*1) <b>Spans</b>                                                                |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*2) 0 to 3,2/320 mbar                                                           |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*2) 0 to 0,013/1,3 bar                                                          |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 0 to 0,05/5 bar                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 0 to 0,3/30 bar                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 0 to 2/200 bar                                                                   |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | <b>Indicator, arrester and initial setting</b>                                   |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Indicator                                                                        |  | Arrester                                | Initial setting                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | None                                                                             |  | None                                    | 4-20mA DC<br>+<br>Hart ®/Fuji<br>digital signal<br>"SMART" |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, 0-100% linear scale                                                 |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, 0-100% √ scale                                                      |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, Custom scale                                                        |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, double scale                                                        |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | None                                                                             |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, 0-100% linear scale                                                 |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, 0-100% √ scale                                                      |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, Custom scale                                                        |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*9) Analog, double scale                                                        |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, 0-100% with push button                                                 |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, Custom scale with push button                                           |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, 0-100% √ scale with push button                                         |  | None                                    |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, 0-100% with push button                                                 |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, Custom scale with push button                                           |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Digital, 0-100% √ scale with push button                                         |  | Yes                                     |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | <b>Approvals for hazardous locations (consult FUJI for availability)</b>         |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | None (Standard)                                                                  |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | ATEX - Flameproof enclosures (digit 4 = "T" & "W" only)                          |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | CSA - Explosion-Proof (digit 4 = "T" only)                                       |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | IECEx - Flameproof enclosures (digit 4 = "T" & "W" only)                         |  |                                         |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*5) (*6) <b>Mounting design (*3)</b>                                            |  | <b>Ambiant temperature correction</b>   |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Capillary on HP side                                                             |  | Transmitter and diaphragm seal assembly |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Capillary on HP & LP side                                                        |  | Transmitter and diaphragm seal assembly |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*6) Rigid short design on HP & capillary on LP side                             |  | Transmitter and diaphragm seal assembly |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Capillary on HP side                                                             |  | Transmitter                             |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Capillary on HP & LP side                                                        |  | Transmitter                             |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | <b>Cell flange design</b>                                                        |  | <b>Stainless Steel parts</b>            |                                                            |         |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Operating pressure (bar)                                                         |  | Bolts/nuts                              | Tag plate                                                  | Housing |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*4) p ≤ 50 bar                                                                  |  | None                                    | None                                                       | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*4) p ≤ 50 bar                                                                  |  | None                                    | Yes                                                        | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*4) p ≤ 50 bar                                                                  |  | None                                    | None                                                       | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | (*4) p ≤ 50 bar                                                                  |  | None                                    | Yes                                                        | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Y Y 50 < p ≤ 160                                                                 |  | Carbon steel                            | None                                                       | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | B Y 50 < p ≤ 160                                                                 |  | Carbon steel                            | Yes                                                        | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | C Y 50 < p ≤ 160                                                                 |  | Carbon steel                            | None                                                       | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | E Y 50 < p ≤ 160                                                                 |  | Carbon steel                            | Yes                                                        | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | A Y p ≤ 160 bar                                                                  |  | SS 316(L)/SS 316(L)                     | None                                                       | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | D Y p ≤ 160 bar                                                                  |  | SS 316(L)/SS 316(L)                     | Yes                                                        | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | F Y p ≤ 160 bar                                                                  |  | SS 316(L)/SS 316(L)                     | None                                                       | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | G Y p ≤ 160 bar                                                                  |  | SS 316(L)/SS 316(L)                     | Yes                                                        | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | H Y (*7) p ≤ 160 bar                                                             |  | SS 660/SS 660                           | None                                                       | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | J Y (*7) p ≤ 160 bar                                                             |  | SS 660/SS 660                           | Yes                                                        | None    |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | K Y (*7) p ≤ 160 bar                                                             |  | SS 660/SS 660                           | None                                                       | Yes     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | L Y (*7) p ≤ 160 bar                                                             |  | SS 660/SS 660                           | Yes                                                        | Yes     |

Notes\* :

1- Turn down of 100:1 is possible, but should be used at the span greater than 1/10 of the maximum span for better performance.

2- For DN = 50 consult FUJI for your application with the specific operating conditions.

3- Transmitter with capilary design has a standard mounting bracket

4- If direct mounted seal design is required, bolts are necessary even when p < 50 bar

5- Standard fill fluid of measuring cells : silicone oil - Others fill fluids : upon request

6- Transmitter with different diaphragm seals or capillary lenghtes on HP and LP side must be temperature corrected.

7- Our 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

Notes\* :

- 1- Turn down of 100:1 is possible, but should be used at the span greater than 1/10 of the maximum span for better performance.
- 2- For DN = 50 consult FUJI for your application with the specific operating conditions.
- 3- Transmitter with capillary design has a standard mounting bracket
- 4- If direct mounted seal design is required, bolts are necessary even when p < 50 bar
- 5- Standard fill fluid of measuring cells : silicone oil - Others fill fluids : upon request
- 6- Transmitter with different diaphragm seals or capillary lengths on HP and LP side must be temperature corrected.
- 7- Our 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.
- 8- High static pressure DP measuring cell and M12 bolting required (upon request).
- 9- Approval upon request



## Remote seal type absolute pressure transmitter : FKM...VG

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | DESCRIPTION |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |    |
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| F | K | M |   |   |   | V | G | - |    |    |    | Y  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | </ |

Notes\* :

- 1- Turn down of 100:1 is possible, but should be used at the span greater than 1/10 of the maximum span for better performance.
- 2- Consult FUJI for your application with the specific operating conditions
- 3- For DN = 50 consult FUJI for your application with the specific operating conditions
- 4- Transmitter with capillary design has a standard mounting bracket - rigid mounting design are always without mounting bracket
- 5- Flange rating according max. operating pressure - for DN < 50 flange size and / or PN > 150 - Consult FUJI
- 6- Standard fill fluid of measuring cells : silicone oil - Other fill fluids : upon request
- 7- Our 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.
- 8- Approval upon request

## Remote seal type gauge pressure transmitter (rigid or capillary mounted) : FKP...VG

| 1                                                                                                        | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13    | DESCRIPTION                                                                                            |                              |                                         |                 |
|----------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|---|---|----|----|----|-------|--------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------------------|-----------------|
| F                                                                                                        | K | P |   |   |   |   | G | - |    |    |    |       |                                                                                                        |                              |                                         |                 |
| T<br>V<br>W                                                                                              |   |   |   |   |   |   |   |   |    |    |    |       | Type                                                                                                   |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Smart, 4-20 mAdc + Fuji/Hart digital signal                                                            |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Conduit connection                                                                                     |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | 1/2-14 NPT<br>Pg 13,5<br>M 20 x 1,5                                                                    |                              |                                         |                 |
| 2<br>4<br>6<br>8<br>9<br>L                                                                               |   |   |   |   |   |   |   |   |    |    |    |       | Diaphragm seal rating                                                                                  |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | PN 25                                                                                                  |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | PN 20 - 150 Lbs                                                                                        |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | PN 50 - 300 Lbs                                                                                        |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | PN 40                                                                                                  |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | PN 16<br>PN 100 - 600Lbs                                                                               |                              |                                         |                 |
| 1<br>2<br>3<br>4                                                                                         | V |   |   |   |   |   |   |   |    |    |    |       |                                                                                                        | Span                         |                                         |                 |
|                                                                                                          | V |   |   |   |   |   |   |   |    |    |    |       |                                                                                                        | 0,08125/1,3 bar              |                                         |                 |
|                                                                                                          | V |   |   |   |   |   |   |   |    |    |    |       |                                                                                                        | 0,3125/5 bar                 |                                         |                 |
|                                                                                                          | V |   |   |   |   |   |   |   |    |    |    |       |                                                                                                        | 1,875/30 bar<br>6,25/100 bar |                                         |                 |
| G - A<br>G - B<br>G - D<br>G - J<br>G - E<br>G - F<br>G - H<br>G - K<br>G - 1<br>G - 2<br>G - 4<br>G - 5 |   |   |   |   |   |   |   |   |    |    |    |       | Indicator & Arrester                                                                                   |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Indicator                                                                                              |                              | Arrester                                | Initial setting |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | None                                                                                                   |                              | none                                    | 4-20 mA DC      |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, 0-100% linear scale                                                                       |                              | none                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, Custom scale                                                                              |                              | none                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, double scale                                                                              |                              | none                                    | +               |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | None                                                                                                   |                              | yes                                     |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, 0-100% linear scale                                                                       |                              | yes                                     | Hart® / Fuji    |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, Custom scale                                                                              |                              | yes                                     | digital signal  |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | (*1) Analog, double scale                                                                              |                              | yes                                     | "SMART"         |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Digital, 0-100% with push button                                                                       |                              | none                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Digital, Custom scale with push button                                                                 |                              | none                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Digital, 0-100% with push button                                                                       |                              | yes                                     |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Digital, Custom scale with push button                                                                 |                              | yes                                     |                 |
| A<br>X<br>E<br>R                                                                                         |   |   |   |   |   |   |   |   |    |    |    |       | Approvals for hazardous locations (consult FUJI for availability)                                      |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | None (Standard)                                                                                        |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | ATEX - Flameproof enclosures (digit 4 = "T" & "W" only)                                                |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | CSA - Explosion-Proof (digit 4 = "T" only)<br>IECEx - Flameproof enclosures (digit 4 = "T" & "W" only) |                              |                                         |                 |
| B<br>G<br>L<br>S                                                                                         |   |   |   |   |   |   |   |   |    |    |    |       | Mounting design                                                                                        |                              | Ambiant temperature correction          |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Capillary                                                                                              |                              | Transmitter and diaphragm seal assembly |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Capillary                                                                                              |                              | Transmitter                             |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Rigid                                                                                                  |                              | Transmitter and diaphragm seal assembly |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    | Rigid |                                                                                                        | Transmitter                  |                                         |                 |
| Y<br>B<br>C<br>F                                                                                         |   |   |   |   |   |   |   |   |    |    |    |       | Stainless Steel parts                                                                                  |                              |                                         |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Tag plate                                                                                              |                              | Housing                                 |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | None                                                                                                   |                              | None                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | Yes                                                                                                    |                              | None                                    |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    |       | None                                                                                                   |                              | Yes                                     |                 |
|                                                                                                          |   |   |   |   |   |   |   |   |    |    |    | Yes   |                                                                                                        | Yes                          |                                         |                 |

Note\* :

1- Approval upon request

## Remote seal type absolute pressure transmitter (rigid or capillary mounted) : FKH...VG

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | DESCRIPTION |                                              |                                                                     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|-------------|----------------------------------------------|---------------------------------------------------------------------|
| F | K | H |   |   |   |   | G | - |    |    |    | Y  |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Type                                         |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Smart, 4-20 mAdc + Fuji/Hart™ digital signal |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Conduit connection                           |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 1/2-14 NPT                                   |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Pg 13,5                                      |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | M 20 x 1,5                                   |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Diaphragm seal rating                        |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 25                                        |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 20 - 150 Lbs                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 50 - 300 Lbs                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 40                                        |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 16                                        |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | PN 100 - 600Lbs                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Span                                         |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 0,08125/1,3 bar abs                          |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 0,3125/5 bar abs                             |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | 1,875/30 bar abs                             |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Indicator & Arrester                         |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             | Indicator                                    | Arrester                                                            |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              | Initial setting                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              | 4-20 mA DC<br><br>+<br><br>Hart® /Fuji<br>digital signal<br>"SMART" |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
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|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
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|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |
|   |   |   |   |   |   |   |   |   |    |    |    |    |             |                                              |                                                                     |

Note\* :

1- Approval upon request

## ELECTROMAGNETIC COMPATIBILITY

All FCX Series electronic pressure transmitters – Type FCX-All – Models FK...G... 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 harmonized standards :

- **EN 61326-1:2013** (*Electrical equipment for measurement, control and laboratory use - EMC requirements – Part 1: General requirements*).
- **EN 61326-2-3:2013** (*Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning*).

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

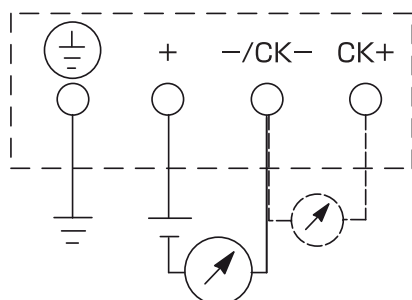
| Frequency range (MHz) | Limits                                           | Basic standard |
|-----------------------|--------------------------------------------------|----------------|
| 30 to 230             | 50 dB (μV/m) quasi peak measured at 3m distance  | Passed         |
| 230 to 1000           | 57 dB (μV/m) quasi peak measured at 3 m distance |                |

### Immunity

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

Performance criteria (A & B): according to IEC 61326-1:2013, § 6.4.

## Connection diagram



# DIAPHRAGM SEAL(S)

S

Diaphragm seals designed by Fuji Electric are used to measure accurately liquid level, density on open and closed tanks, or flow measurement in pipes. The use of the diaphragm seal(s) avoid(s) that the measuring cell is directly in contact with the process. The welded seal construction assures excellent reliability in high temperature and high corrosive, viscous, sticking, crystallizable and abrasive process conditions.

## FEATURES

### 1- Construction

The diaphragm seals are mounted on differential, gauge and absolute pressure transmitters of FCX-All series.

The seal can be rigid, (direct) mounted on the transmitter or with capillaries between the seal and the transmitter.

The construction is an all welded design without any gasket between the seal and the transmitter diaphragm and is filled with the suitable oil for your application.

### 2- Operating principle

The measuring pressure is applied on the diaphragm seal and transferred by the filling fluid through the capillary tube to the measuring cell of the pressure transmitter.

### 3- Parts materials

Wetted parts materials (diaphragm and gasket face) are in stainless steel, Tantalum, Hastelloy, Monel, Titanium, Zirconium, Nickel, depending on the application requirements.

Other parts are in stainless steel : capillary tube, reduced volume flange, diaphragm seal body, direct mounting connection parts.

Standard filling fluid is silicone oil.

Fluorinated oil, sanitary oil, high temperature oil and vacuum service filling are available through model selection.

### 4- Diaphragm seal types

According to the mounting and operating conditions different seal types can be useful :

Flush mounting design from DN40 to DN100.

Seals with extensions (50 to 200 mm).

Flanged, screwed or weld neck adaptors

Seals for sanitary applications according DIN, SMS or Tri-Clamp standards.

For specifics seals, please consult Fuji Electric.



## SPECIFICATIONS

### Functional specifications

#### Diaphragm seal application :

The seal(s) can be mounted direct or rigid on the transmitter (for example for liquid level measurement at the bottom of the tank) or capillary mounted to distance the measuring point away from the transmitter (for example in case of high process temperature).

Nota :

For FKB, FKM and FKD

The rigid mounted seal can be assembled in a long design or in a short (compact) design according to the physical dimension requests of the customer (see outline dimensions drawings).

|     | Rigid mounting                           | Capillary mounting                   |
|-----|------------------------------------------|--------------------------------------|
| FKB | short or long design                     | HP side                              |
| FKM | short or long design                     | HP side                              |
| FKD | see datasheet of level transmitter (FKE) | HP and LP side<br>HP side<br>LP side |

#### Capillary tube specifications :

Standard capillary lengths :

1,5 / 3 / 6 m (other upon request)

Inside diameter :

1 mm standard

2 mm for vacuum service, high process temperature applications, short response time requirements

Smallest bending radius of the capillary :

100 mm

#### Capillary tube sheald possibilities :

Temperature limit :

PVC sheald : -10 à 80°C

Stainless steel sheald : -40 à 350°C

#### Process connection possibilities :

The diaphragm seals can be:

- Flush mounting design

- Extension mounting

- Adaptors mounting (flanged, screwed or welded neck).

The adaptors mounting can adapte the remote seals to special connection and to increase the sensibility of the transmitter during special process conditions.

**Temperature limits :**

Ambiant temperature :

-40 to 85°C for transmitter

Process temperature :

-40 to 150°C for rigid mounting,

0 to 350°C for capillary design, and according to the filling fluid limitations.

**Pressure limits :**

Working pressure :

Limited by the static pressure or the working pressure of the transmitter or by the nominal flange rating of the diaphragm seal (PN). (Please take the smallest of both)

Vacuum limit :

Depending of the limit of the transmitter and the filling fluid of the seal.

For a differential or gauge pressure transmitter the lowest vacuum is 20 Torr or 27 mbar abs.

Only the absolute pressure transmitter can be used till absolute zero (FKM).

For the utilization of vacuum service < 20 Torr, please consult Fuji Electric.

The absolute pressure transmitter has to be used.

**Performance specifications**

To calculate the total performance, both the transmitter and the diaphragm seals performances have to be added.

(Under reference conditions, Silicone oil fill, isolated seals SS 316L, at linear mode)

**Accuracy :**

The assembling of 1 or 2 diaphragm seals on a transmitter increases the accuracy error at reference conditions of 0,1% of the span.

**Ambiant temperature effect :**

*Effect when transmitter alone is corrected.*

*(See digit 11: code G, S, T of the code symbols FDB and FDM, code G, H of the code symbols FDD).*

*(See digit 11 code G, S of the code symbols FDP and FDH).*

| Seals \ Transmitters           | Effect (mbar/10°C)                        |               |                             |               |
|--------------------------------|-------------------------------------------|---------------|-----------------------------|---------------|
|                                | FKB/FKM & FKP/FKH - Gauge / Abs. pressure | Capillary (m) | FKD - Differential pressure | Capillary (m) |
| DN50 / 2" SS diaphr.           | 2.03                                      | 1.5           | 0.48                        | 0.32          |
| DN80 / 3" SS diaphr.           | 0.11                                      | 0.08          | 0.04                        | 0.03          |
| DN80 / 3"                      | 0.22                                      | 0.2           | 0.05                        | 0.07          |
| Other diaph. materials         |                                           |               |                             |               |
| DN100 / 4"                     | 0.04                                      | 0.03          | 0.02                        | 0.01          |
| Adaptor                        | 0.11                                      | 0.08          | 0.04                        | 0.03          |
| Clamp 2"                       | 2.06                                      |               |                             |               |
| DN 50 or 2" (SMS or DIN 11851) | 2.85                                      |               |                             |               |
| No dead volume                 | 5.16                                      |               |                             |               |
| G 1"-1/2                       | 5.16                                      |               |                             |               |
| G 2"                           | 2.03                                      |               |                             |               |

Note : the indicated values are in mbar/10°C for capillary length of 1m and internal capillary tube  $\varnothing$  of 1 mm

*Effect when transmitter and the seal assembly is corrected.*

*(See digit 11: codes B,C,L,M of the codification FKB, FKD and FKM).*

*(See digit 11: codes B, L of the codification FKP and FKH)*

According to the complete transmitter design (transmitter and seals), a strong correction of the zero drift can be realized by an additional temperature correction operation on the complete transmitter unit (transmitter and seals).

A thermal isolation or a heating of the capillaries minimises the ambient temperature effect.

**Process temperature effect : (mbar/10°C)**

| Seals \ Transmitters           | Effect (mbar/10°C)                        |                             |
|--------------------------------|-------------------------------------------|-----------------------------|
|                                | FKB/FKM & FKP/FKH - Gauge / Abs. pressure | FKD - Differential pressure |
| DN50 / 2" SS diaphr.           | 1.24                                      | 0.5                         |
| DN80 / 3" SS diaphr.           | 0.17                                      | 0.09                        |
| DN80 / 3"                      | 0.73                                      | 0.22                        |
| Other diaph. materials         |                                           |                             |
| DN100 / 4"                     | 0.08                                      | 0.05                        |
| Adaptor                        | 0.17                                      | 0.09                        |
| Clamp 2"                       | 2.61                                      |                             |
| DN 50 or 2" (SMS or DIN 11851) | 4.22                                      |                             |
| No dead volume                 | 5.16                                      |                             |
| G 1"-1/2                       | 1.42                                      |                             |
| G 2"                           | 1.24                                      |                             |

**Static pressure effect for  $\Delta P$  transmitter with stainless steel diaphragms (FKD transmitter with DN80 and DN100 seals) :**

Zero shift :

$\pm 0,2\%$  of URL for flange rating, up to 40 bar or 300 lbs

| Oil filling                        | Code digit 7 | Density at 25°C | Response time |              |
|------------------------------------|--------------|-----------------|---------------|--------------|
|                                    |              |                 | 0 to 320 mbar | 0 to 1.3 bar |
| Std silicone oil                   | Y, G         | 0,95            | 0,15          | 0,037        |
| Fluorinated oil                    | W,A,D        | 1,84            | 0,17          | 0,04         |
| Oil for vacuum or high temperature | U, X         | 1,07            | 0,25          | 0,065        |

**Response time : (mean values)**

The indicated values are in seconds per meter of capillary length with internal tube diameter  $\varnothing$  1 mm.

The indicated response time is based on a pressure change of 0 to 100% of the calibrated span at reference temperature of 20°C.

The indicated values do not include the response time of the transmitter.

**Filling fluid of the diaphragm seals :**

| Code digit 7 | Designation          | Temperature resistance (°C) |               | Density (25°C) |
|--------------|----------------------|-----------------------------|---------------|----------------|
|              |                      | P abs $\geq$ 1 bar          | P abs < 1 bar |                |
| Y            | Silicone oil         | -40 to 180                  | -40 to 120    | 0,95           |
| W            | Fluorinated oil      | -20 to 200                  | -20 to 120    | 1,84           |
| F            | Sanitary fill fluids | -10 to 250                  | -10 to 120    | 0,94           |
| V            | Silicone oil         |                             | 20 to 200     | 1,07           |
| U            | Silicone oil         | 0 to 300                    | 20 to 200     | 1,07           |
| X            | Silicone oil         | -10 to 350                  | 20 to 200     | 1,09           |

The indicated values and limits are indicated for the most common applications (standard filling fluids).

Please consult Fuji Electric for special applications indicating your temperature, pressure and vacuum conditions (vacuum and temperature can occur together).

Other filling fluids can be used for your applications.

# CODE SYMBOLS - Diaphragm seals S

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | DESCRIPTION                                                                                         |
|---|---|---|---|---|---|---|---|-----------------------------------------------------------------------------------------------------|
| S |   |   |   |   |   |   |   | Flanged axial diaphragm seal connection                                                             |
| A |   |   |   |   |   |   |   | Flanged radial diaphragm seal connection - Not possible with rigid mounting design digit 6 : code R |
| R |   |   |   |   |   |   |   | Wafer type - Not possible with rigid mounting design digit 6 : code R                               |
| W |   |   |   |   |   |   |   |                                                                                                     |
|   |   |   |   |   |   |   |   | (*)1 Flanges RF (Flange size and rating)                                                            |
| 4 |   |   |   |   |   |   |   | ANSI-150LB 3"-ISO PN 20 DN 80                                                                       |
| 5 |   |   |   |   |   |   |   | ANSI-150LB 4"-ISO PN 20 DN 100                                                                      |
| 6 |   |   |   |   |   |   |   | ANSI-300LB 3"-ISO PN 50 DN 80                                                                       |
| 7 |   |   |   |   |   |   |   | ANSI-300LB 4"-ISO PN 50 DN 100                                                                      |
| 8 |   |   |   |   |   |   |   | DIN PN40 DN80                                                                                       |
| 9 |   |   |   |   |   |   |   | DIN PN16 DN100                                                                                      |
| H |   |   |   |   |   |   |   | (*)2 ANSI-150LB 2"-ISO PN 20 DN 50                                                                  |
| J |   |   |   |   |   |   |   | (*)2 ANSI-300LB 2"-ISO PN 50 DN 50                                                                  |
| K |   |   |   |   |   |   |   | (*)2 DIN PN40 DN50                                                                                  |
| L |   |   |   |   |   |   |   | (*)9 G 2" screwed seal                                                                              |
| U |   |   |   |   |   |   |   | (*)9 G 1 1/2" screwed seal                                                                          |
| V |   |   |   |   |   |   |   | PN 25 / DN 50 - coupling nut DIN 11851 design material code "V" only                                |
| W |   |   |   |   |   |   |   | PN 40 / DN 50 - coupling nut SMS material code "V" only                                             |
| X |   |   |   |   |   |   |   | PN 40 / DN 50 Clamp material code "V" only                                                          |
| A |   |   |   |   |   |   |   | No dead volume Sanitary material code "V" only                                                      |
| B |   |   |   |   |   |   |   | (*)3 Flange adaptor PN 40 DN 25 material code "V" - others UR                                       |
| C |   |   |   |   |   |   |   | (*)3 Flange adaptor ISO PN 20 DN 25 (1"-150 ANSI) material code "V" - others UR                     |
| D |   |   |   |   |   |   |   | (*)3 Flange adaptor ISO PN 50 DN 25 (1"- 300 ANSI) material code "V" - others UR                    |
| E |   |   |   |   |   |   |   | (*)3 Flange adaptor PN 40 DN 40 material code "V" - others UR                                       |
| F |   |   |   |   |   |   |   | (*)3 Flange adaptor ISO PN 20 DN 40 (1 1/2 - 150 ANSI) material code "V" - others UR                |
| S |   |   |   |   |   |   |   | (*)3 Flange adaptor ISO PN 50 DN 40 (1 1/2 - 300 ANSI) material code "V" - others UR                |
| T |   |   |   |   |   |   |   | (*)3 Screwed 1/2 NPTE material code "V" - others UR                                                 |
|   |   |   |   |   |   |   |   | (*)3 To be welded (pipe 2"1/2) material code "V" - others UR                                        |
|   |   |   |   |   |   |   |   | Diaphragm seal material                                                                             |
|   |   |   |   |   |   |   |   | Diaphragm Flange raised face Flange                                                                 |
| V |   |   |   |   |   |   |   | SS 316L SS 316L SS 316L                                                                             |
| H |   |   |   |   |   |   |   | Hastelloy-C Hastelloy-C SS 316L                                                                     |
| B |   |   |   |   |   |   |   | Monel Monel SS 316L                                                                                 |
| T |   |   |   |   |   |   |   | Tantalum Tantalum SS 316L                                                                           |
| P |   |   |   |   |   |   |   | Titanium Titanium SS 316L                                                                           |
| R |   |   |   |   |   |   |   | Zirconium Zirconium SS 316L                                                                         |
| C |   |   |   |   |   |   |   | SS 316L + gold coat SS 316 L SS 316L                                                                |
| F |   |   |   |   |   |   |   | SS 316L + PFA lining SS 316L + PFA lining SS 316L                                                   |
|   |   |   |   |   |   |   |   | Diaphragm seal design                                                                               |
| Y |   |   |   |   |   |   |   | Flush mounting                                                                                      |
| A |   |   |   |   |   |   |   | Diaphragm extension 50 mm                                                                           |
| B |   |   |   |   |   |   |   | Diaphragm extension 100 mm material code "V" - digit 4                                              |
| C |   |   |   |   |   |   |   | Diaphragm extension 150 mm                                                                          |
| D |   |   |   |   |   |   |   | Diaphragm extension 200 mm                                                                          |
| E |   |   |   |   |   |   |   | Diaphragm extension 50 mm                                                                           |
| F |   |   |   |   |   |   |   | Diaphragm extension 100 mm material code "H" - digit 4                                              |
| G |   |   |   |   |   |   |   | Diaphragm extension 150 mm                                                                          |
| H |   |   |   |   |   |   |   | Diaphragm extension 200 mm                                                                          |
| J |   |   |   |   |   |   |   | Diaphragm extension 50 mm                                                                           |
| K |   |   |   |   |   |   |   | Diaphragm extension 100 mm material code "B" - digit 4                                              |
| L |   |   |   |   |   |   |   | Diaphragm extension 150 mm                                                                          |
| M |   |   |   |   |   |   |   | Diaphragm extension 200 mm                                                                          |
| P |   |   |   |   |   |   |   | Diaphragm extension 50 mm                                                                           |
| R |   |   |   |   |   |   |   | Diaphragm extension 100 mm material code "T" - digit 4                                              |
| S |   |   |   |   |   |   |   | Diaphragm extension 150 mm                                                                          |
| T |   |   |   |   |   |   |   | Diaphragm extension 200 mm                                                                          |
|   |   |   |   |   |   |   |   | Transmission diaphragm seal to measuring cell                                                       |
|   |   |   |   |   |   |   |   | Mounting design Capillary length Capillary design                                                   |
| A |   |   |   |   |   |   |   | Capillary 1,5 m PVC protection                                                                      |
| B |   |   |   |   |   |   |   | Capillary 3 m PVC protection                                                                        |
| C |   |   |   |   |   |   |   | Capillary 6 m PVC protection                                                                        |
| D |   |   |   |   |   |   |   | Capillary Upon request PVC protection                                                               |
| G |   |   |   |   |   |   |   | (*)5 Capillary 1,5 m SS sheald                                                                      |
| H |   |   |   |   |   |   |   | (*)5 Capillary 3 m SS sheald                                                                        |
| K |   |   |   |   |   |   |   | (*)5 Capillary 6 m SS sheald                                                                        |
| L |   |   |   |   |   |   |   | (*)5 Capillary Upon request SS sheald                                                               |
| S |   |   |   |   |   |   |   | (*)10 Rigid design - not possible with digit 2 = R, W ; max. process temperature : 150°C            |
|   |   |   |   |   |   |   |   | Special applications and fill fluid for the diaphragm seal only                                     |
|   |   |   |   |   |   |   |   | Treatment Fill fluid                                                                                |
| Y |   |   |   |   |   |   |   | None (standard) Silicone oil                                                                        |
| W |   |   |   |   |   |   |   | None (standard) Fluorinated oil                                                                     |
| F |   |   |   |   |   |   |   | None (standard) Sanitary fill fluid                                                                 |
| D |   |   |   |   |   |   |   | Chlorine service Fluorinated oil                                                                    |
| G |   |   |   |   |   |   |   | Degreasing Silicone oil                                                                             |
| A |   |   |   |   |   |   |   | Oxygen service Fluorinated oil - material code "V" only                                             |
| N |   |   |   |   |   |   |   | NACE Silicone oil                                                                                   |
| V |   |   |   |   |   |   |   | (*)6 Vacuum Silicone oil                                                                            |
| U |   |   |   |   |   |   |   | (*)6 Very high temperature (0 to 300°C) Silicone oil                                                |
| X |   |   |   |   |   |   |   | (*)6 Very high temperature (20 to 350°C) Silicone oil                                               |
|   |   |   |   |   |   |   |   | Special options or design                                                                           |
| - | * |   |   |   |   |   |   | (*)7 Special, no code available                                                                     |

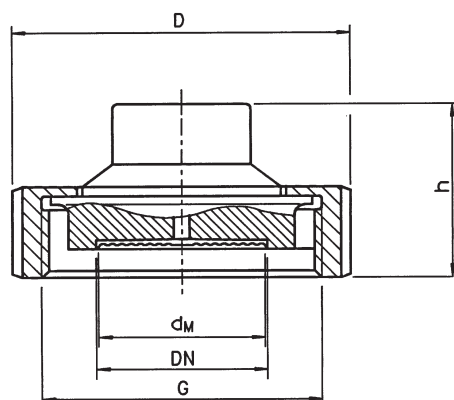
- Notes :
- \*1 Different flange machinings (recess, groove, ...) upon request
  - \*2 Only available with span higher than 0 to 0,5/5 bar - max process temperature : 150°C - Consult Fuji Electric with operating conditions
  - \*3 Axial diaphragm seal connection - no extension possible
  - \*4 Not possible with digit 7 : V, H, T
  - \*5 Recommended for Vacuum or High Temperature applications T > 120°C - (Capillary internal Ø = 2mm)
  - \*6 Consult FUJI for your application with the specific operating conditions
  - \*7 When no code can be found in the current code symbols, place \* in concerned code digit(s) & add \* in 8 th digit
  - \*8 Max process temperature 150 °C
  - \*9 Only for rigid mounted design on FDP, FDH transmitter - Only available with span ≥ 0 to 0,5/5 bar
  - \*10 Process temperature limit 260°C if no vacuum and 180°C if vacuum

## Outline dimensions of sanitary diaphragm seals (units : mm)

The seals for the sanitary and pharmaceutical applications are available according DIN, SMS and Tri-Clamp standards

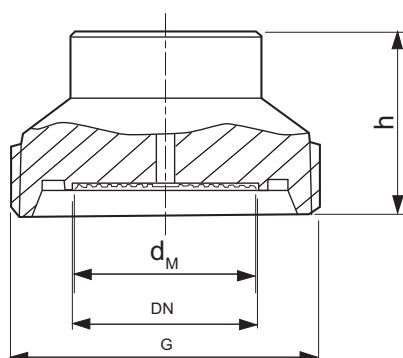
Seals according DIN 11851 et SMS

2 different design exist for DIN 11851 and SMS :



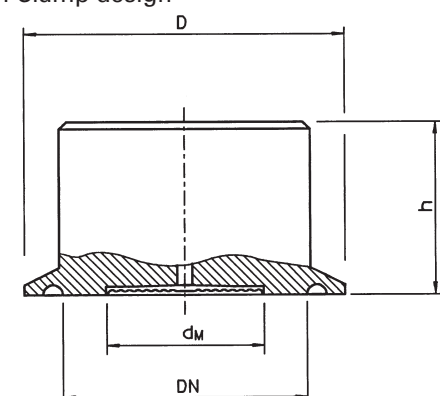
| DIN 11851 |          |     |    |                |              |
|-----------|----------|-----|----|----------------|--------------|
| DN        | PN (Max) | D   | h  | d <sub>M</sub> | G            |
| 25        | 40       | 63  | 36 | 25             | Rd 52 x 1/6  |
| 32        | 40       | 70  | 36 | 32             | Rd 58 x 1/6  |
| 40        | 40       | 78  | 36 | 40             | Rd 65 x 1/6  |
| 50        | 40       | 112 | 36 | 52             | Rd 78 x 1/6  |
| 65        | 40       | 112 | 36 | 65             | Rd 95 x 1/6  |
| 80        | 40       | 127 | 36 | 76             | Rd 110 x 1/4 |
| SMS       |          |     |    |                |              |
| 38        | 40       | 74  | 38 | 40             | Rd 48 x 1/6  |
| 51        | 40       | 84  | 38 | 52             | Rd 60 x 1/6  |
| 63,5      | 40       | 100 | 38 | 65             | Rd 85 x 1/6  |
| 76        | 40       | 114 | 38 | 76             | Rd 98 x 1/6  |

Male thread design



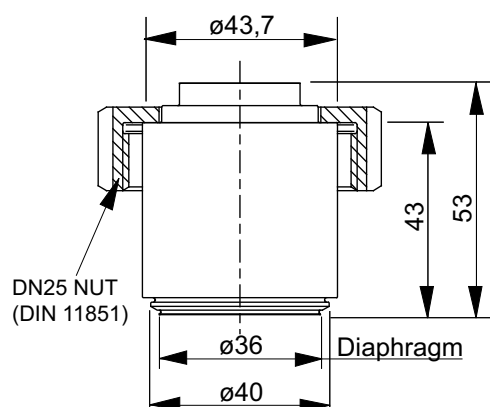
| SMS  |          |     |    |                |             |
|------|----------|-----|----|----------------|-------------|
| DN   | PN (Max) | D   | h  | d <sub>M</sub> | G           |
| 25   | 40       | 51  | 38 | 25             | Rd 40 x 1/6 |
| 32   | 40       | 60  | 38 | 32             | Rd 48 x 1/6 |
| 38   | 40       | 74  | 38 | 40             | Rd 60 x 1/6 |
| 51   | 40       | 84  | 38 | 52             | Rd 70 x 1/6 |
| 63.5 | 40       | 100 | 38 | 65             | Rd 85 x 1/6 |
| 76   | 40       | 114 | 38 | 76             | Rd 98 x 1/4 |

Tri Clamp design

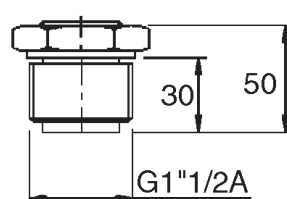


| DN    | PN (Max) | D    | h  | d <sub>M</sub> |
|-------|----------|------|----|----------------|
| 1"1/2 | 40       | 50   | 35 | 32             |
| 2"    | 40       | 64   | 35 | 40             |
| 2"1/2 | 40       | 77,5 | 35 | 50             |
| 3"    | 40       | 91   | 35 | 65             |

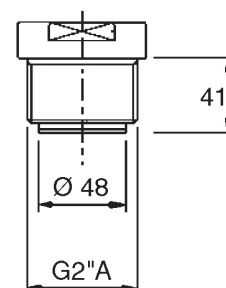
Dead volume seal



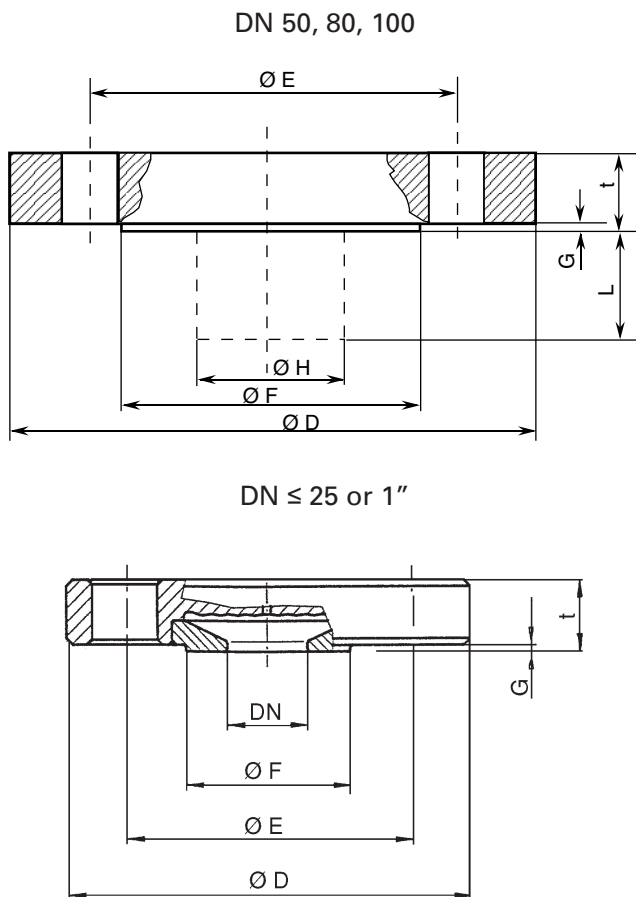
Screwed G 1"1/2 A



Screwed G 2"A



## Outline dimensions of the standard diaphragm seals - Flush/extension (units : mm)

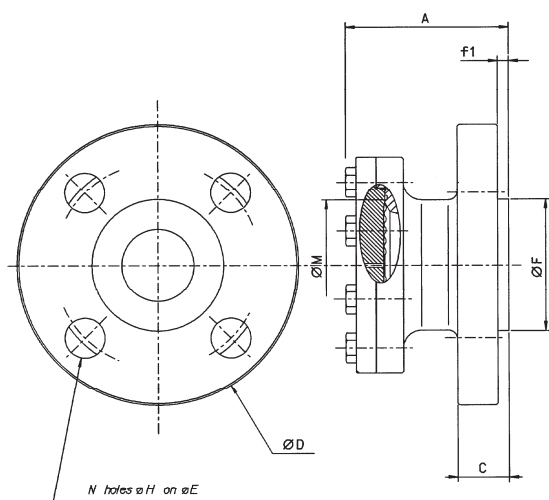


FLANGE DIMENSIONS ACCORDING DIN 2501 ET B16.5

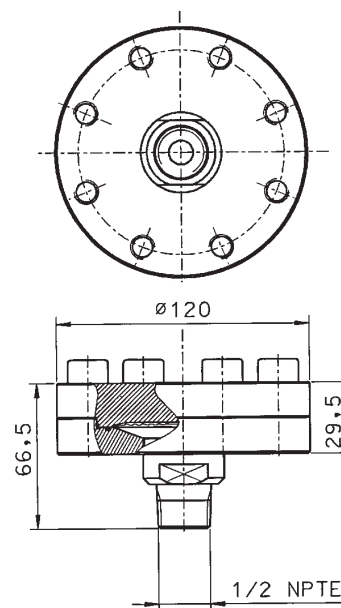
| DIN / ISO | ANSI |           | ØD   | ØE  | ØF    | G   | ØH  | t  | N x Øh |
|-----------|------|-----------|------|-----|-------|-----|-----|----|--------|
|           | PN   | DN        |      |     |       |     |     |    |        |
| 40        | 15   |           | 95   | 65  | 45    | 2   |     | 22 | 4 x 14 |
| 40        | 20   |           | 105  | 75  | 58    | 2   |     | 22 | 4 x 14 |
| 40        | 25   |           | 115  | 85  | 68    | 2   |     | 22 | 4 x 14 |
| 40        | 50   |           | 165  | 125 | 102   | 3   | 48  | 20 | 4 x 18 |
| 40        | 80   |           | 200  | 160 | 138   | 3   | 73  | 20 | 8 x 18 |
| 16        | 100  |           | 220  | 180 | 158   | 3   | 96  | 20 | 8 x 18 |
| 20        | 15   | 150 lbs   | 1/2" | 95  | 60,5  | 35  | 2   | 22 | 4 x    |
| 16        | 20   | 20150 lbs | 3/4" | 100 | 70    | 43  | 2   | 22 |        |
| 4 x 16    | 25   | 25150 lbs | 1"   | 110 | 79,5  | 51  | 2   | 22 |        |
| 50        | 15   | 300 lbs   | 1/2" | 95  | 66,5  | 35  | 2   | 22 | 4 x 16 |
| 50        | 20   | 300 lbs   | 3/4" | 120 | 82,5  | 43  | 2   | 22 | 4 x 20 |
| 50        | 25   | 300 lbs   | 1"   | 125 | 89    | 51  | 2   | 22 | 4 x 20 |
| 20        | 50   | 150 lbs   | 2"   | 150 | 120,5 | 92  | 1,6 | 48 | 20     |
| 20        | 80   | 150 lbs   | 3"   | 190 | 152,5 | 127 | 1,6 | 73 | 24     |
| 20        | 100  | 150 lbs   | 4"   | 230 | 190,5 | 158 | 1,6 | 96 | 24     |
| 50        | 50   | 300 lbs   | 2"   | 165 | 127   | 92  | 1,6 | 48 | 22,5   |
| 50        | 80   | 300 lbs   | 3"   | 210 | 168,5 | 127 | 1,6 | 73 | 29     |
| 50        | 100  | 300 lbs   | 4"   | 255 | 200   | 158 | 1,6 | 96 | 32     |

## Outline dimensions of diaphragm seals with adaptors (units : mm)

Flange adaptor



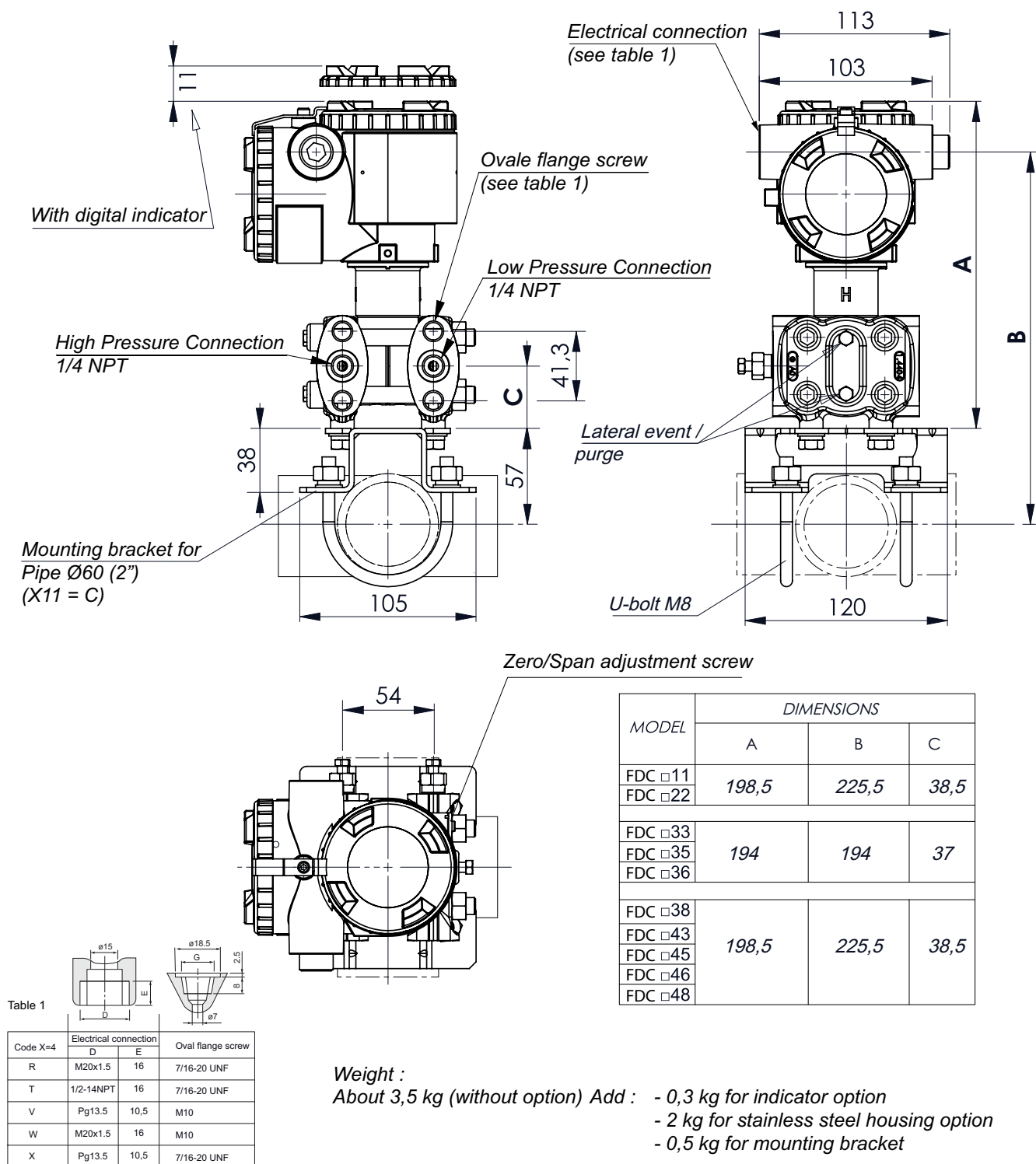
Screwed adaptor



| FLANGES DIMENSIONS |    |      |        |     |       |   |      |      |      |     |    |      |
|--------------------|----|------|--------|-----|-------|---|------|------|------|-----|----|------|
| DIN                |    | ANSI |        | ØD  | ØE    |   |      | ØF   | Cmin | f1  | A  | ØM   |
| PN                 | DN | Pe   | DN     |     |       |   |      |      |      |     |    |      |
| 40                 | 25 |      |        | 115 | 85    | 4 | 14   | 68   | 18   | 2   | 83 | 72,2 |
| 20                 | 25 | 150  | 1"     | 108 | 79,5  | 4 | 15,8 | 50,8 | 16   | 1,6 | 81 | 72,2 |
| 50                 | 25 | 300  | 1"     | 124 | 89    | 4 | 19   | 50,8 | 17,5 | 1,6 | 86 | 72,2 |
| 40                 | 40 |      |        | 150 | 110   | 4 | 18   | 88   | 18   | 3   | 85 | 72,2 |
| 20                 | 40 | 150  | 1 1/2" | 127 | 98,4  | 4 | 15,8 | 73   | 18   | 16  | 85 | 72,2 |
| 50                 | 40 | 300  | 1 1/2" | 156 | 114,3 | 4 | 22,2 | 73   | 21   | 1,6 | 91 | 72,2 |

# OUTLINE DIAGRAM OF EACH STANDARD MODEL (Unit:mm)

Differential pressure / flow transmitter : FK□...G



|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 | SPAN LIMIT |                  |                     |                   |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|----------------|-----------------|-----------------|-----------------|-------------------|-----------------|-------------------|-----------------|------------|------------------|---------------------|-------------------|
|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 | Min.       |                  | Max.                |                   |
| X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> | X <sub>8</sub> - | X <sub>9</sub> | X <sub>10</sub> | X <sub>11</sub> | X <sub>12</sub> | X <sub>13</sub> - | X <sub>14</sub> | X <sub>15</sub> - | X <sub>16</sub> | FKC □□1    | 0,1 kPa (1 mbar) | 1kPa (10 mbar)      |                   |
| F              | K              | C              | □              | □              | □              | □              | G-               | □              | □               | □               | □               | □                 | -               | □                 | □               | -          | FKC □□2          | 0,1 kPa (1 mbar)    | 6kPa (60 mbar)    |
|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 |            | FKC □□3          | 0,32 kPa (3,2 mbar) | 32 kPa (320 mbar) |
|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 |            | FKC □□5          | 1,3 kPa (13 mbar)   | 130 KPa (1,3 bar) |
|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 |            | FKC □□6          | 5 kPa (50 mbar)     | 500 kPa (5 bar)   |
|                |                |                |                |                |                |                |                  |                |                 |                 |                 |                   |                 |                   |                 |            | FKC □□8          | 30 kPa (300 mbar)   | 3 MPa (30 bar)    |

|          |                                                                                     |    |                                                                                     |
|----------|-------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|
|          |  |    |  |
| Code X=4 | Electrical connection                                                               |    | Oval flange screw                                                                   |
|          | D                                                                                   | E  |                                                                                     |
| R        | M20x1.5                                                                             | 16 | 7/16-20 UNF                                                                         |
| T        | 1/2-14NPT                                                                           | 16 | 7/16-20 UNF                                                                         |
| W        | M20x1.5                                                                             | 16 | M10                                                                                 |

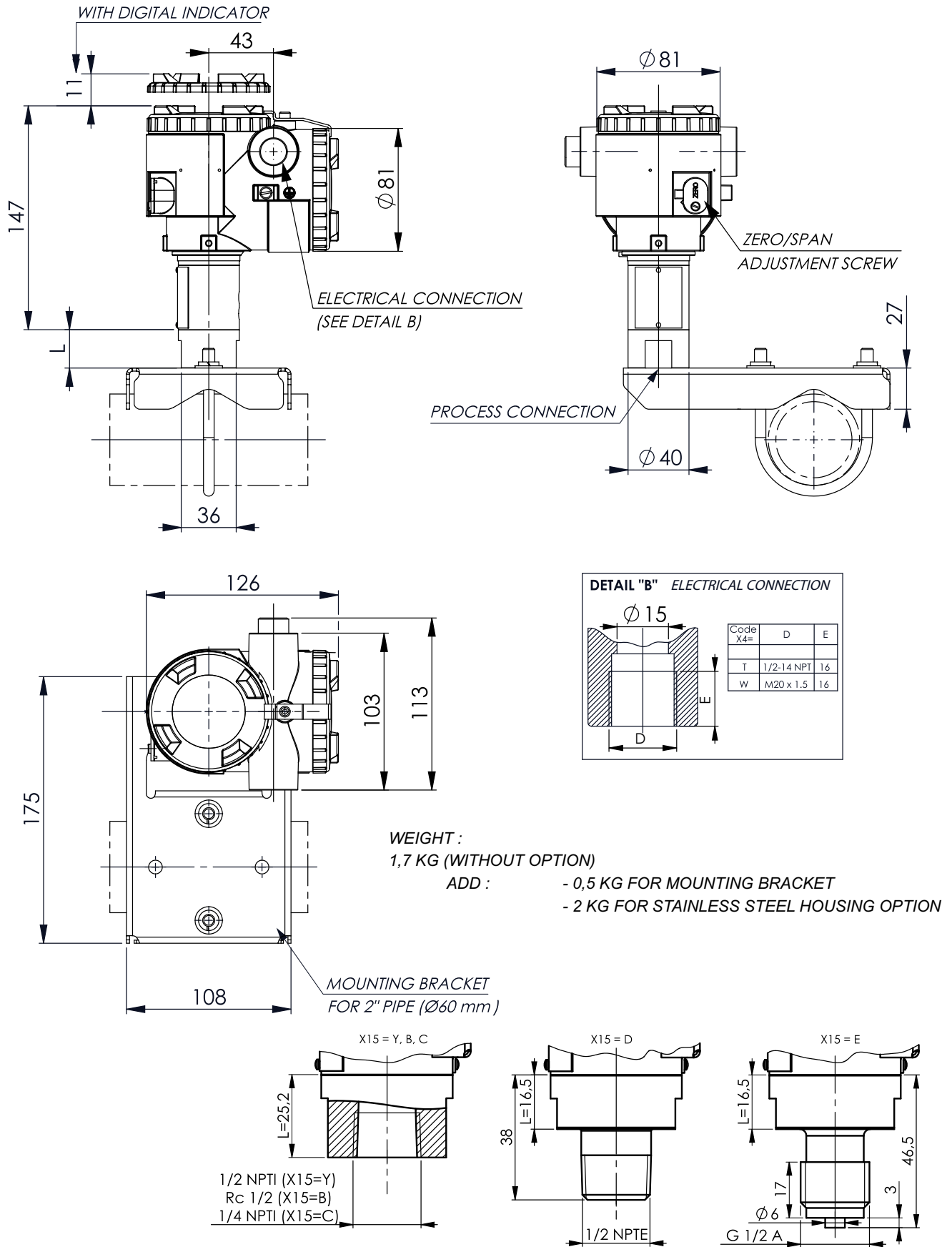
| DIMENSIONS |       |       |      |
|------------|-------|-------|------|
| MODEL      | A     | B     | C    |
| FKG □01    | 171   | 198   | 37   |
| FKG □02    |       |       |      |
| FKG □03    |       |       |      |
| FKG □04    |       |       |      |
| FKG □05    | 172,5 | 199,5 | 38,5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

|                             |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      |                   |                     |      |
|-----------------------------|----------------|----------------|----------------------|----------------|----------------------|----------------------|----------------|----------------|----------------------|----------------------|----------------------|----------------------|-----------------|----------------------|----------------------|----------------------|-------------------|---------------------|------|
| X <sub>1</sub>              | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub>       | X <sub>5</sub> | X <sub>6</sub>       | X <sub>7</sub>       | X <sub>8</sub> | X <sub>9</sub> | X <sub>10</sub>      | X <sub>11</sub>      | X <sub>12</sub>      | X <sub>13</sub>      | X <sub>14</sub> | X <sub>15</sub>      | X <sub>16</sub>      |                      | SPAN LIMIT        |                     |      |
| F                           | K              | G              | <input type="text"/> | 0              | <input type="text"/> | <input type="text"/> | 5              | -              | <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> | -               | <input type="text"/> | <input type="text"/> | <input type="text"/> |                   | Min.                | Max. |
| FKG <input type="text"/> 01 |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      | 1,3 KPa (13 mbar) | 130 KPa (1300 mbar) |      |
| FKG <input type="text"/> 02 |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      | 5 KPa (50 mbar)   | 500 KPa (5 bar)     |      |
| FKG <input type="text"/> 03 |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      | 30 KPa (0,3 bar)  | 3 MPa (30 bar)      |      |
| FKG <input type="text"/> 04 |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      | 100 KPa (1 bar)   | 10 MPa (100 bar)    |      |
| FKG <input type="text"/> 05 |                |                |                      |                |                      |                      |                |                |                      |                      |                      |                      |                 |                      |                      |                      | 500 KPa (5 bar)   | 50 MPa (500 bar)    |      |

33

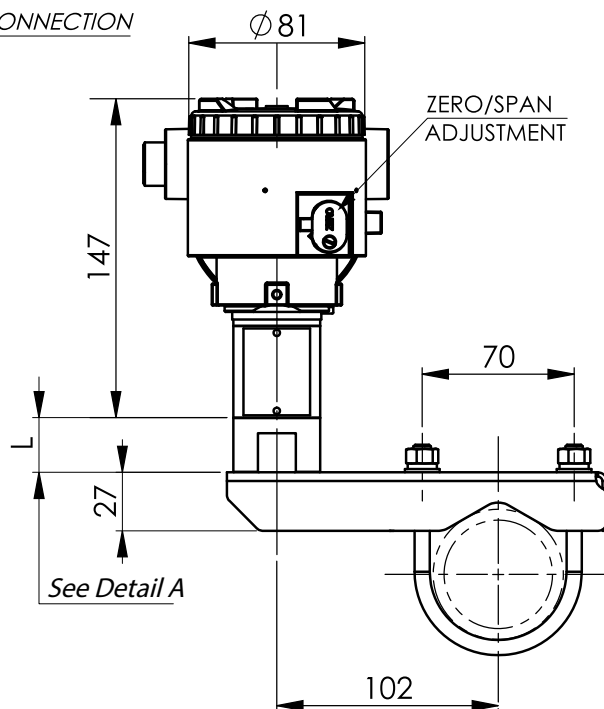
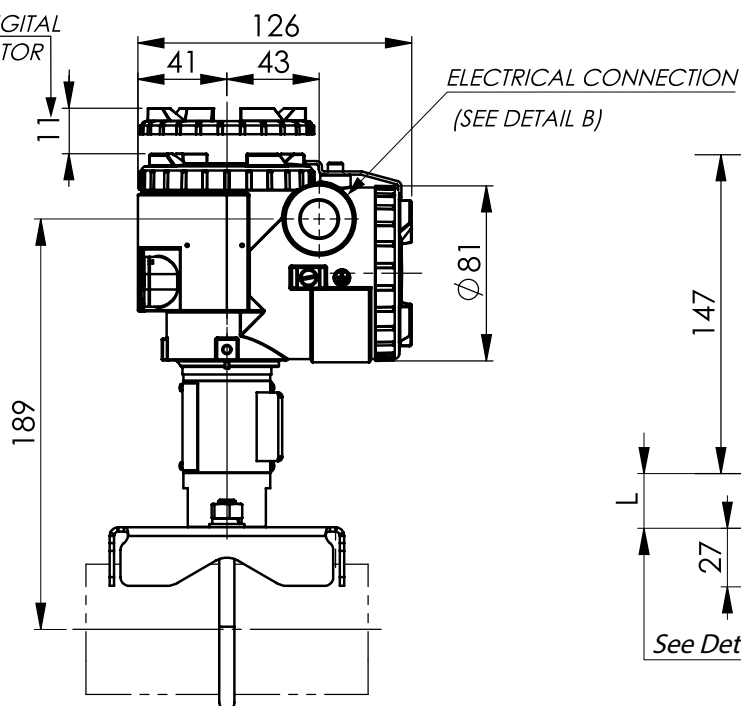


## Direct mount type gauge pressure transmitter : FKP...G



|                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                                   | SPAN LIMIT |                                           |
|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------------------------|------------|-------------------------------------------|
|                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                                   | Min.       | Max.                                      |
| X <sub>1</sub> | X <sub>2</sub> | X <sub>3</sub> | X <sub>4</sub> | X <sub>5</sub> | X <sub>6</sub> | X <sub>7</sub> | X <sub>8</sub> | X <sub>9</sub> | X <sub>10</sub> | X <sub>11</sub> | X <sub>12</sub> | X <sub>13</sub> | - X <sub>14</sub> X <sub>15</sub> | FKP□01     | 8,125 kPa (0,08125 bar) 130 kPa (1,3 bar) |
| F              | K              | P              | □              | 0              | □              | V              | G              | □              | □               | □               | □               | □               | - 0 □                             | FKP□02     | 31,25 kPa (0,3125 bar) 500 kPa (5 bar)    |
|                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                                   | FKP□03     | 187,5 kPa (1,875 bar) 3000 kPa (30 bar)   |
|                |                |                |                |                |                |                |                |                |                 |                 |                 |                 |                                   | FKP□04     | 625 kPa (6,25 bar) 10000 kPa (100 bar)    |

## Direct mount type absolute pressure transmitter : FKH...G

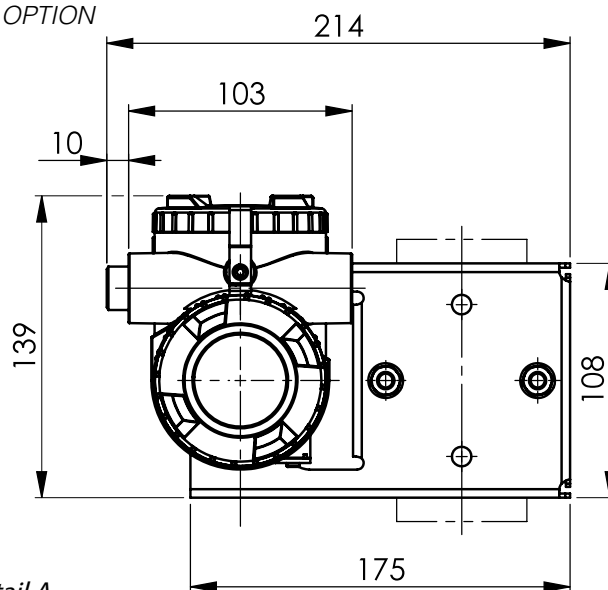
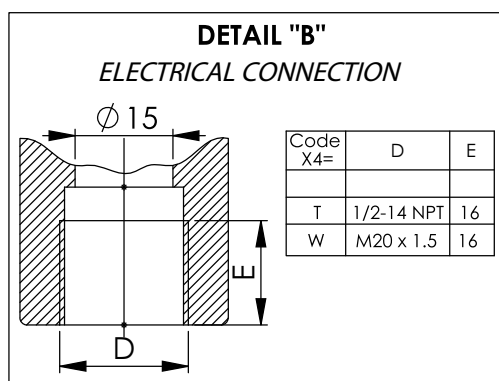
WITH DIGITAL  
INDICATOR

WEIGHT:

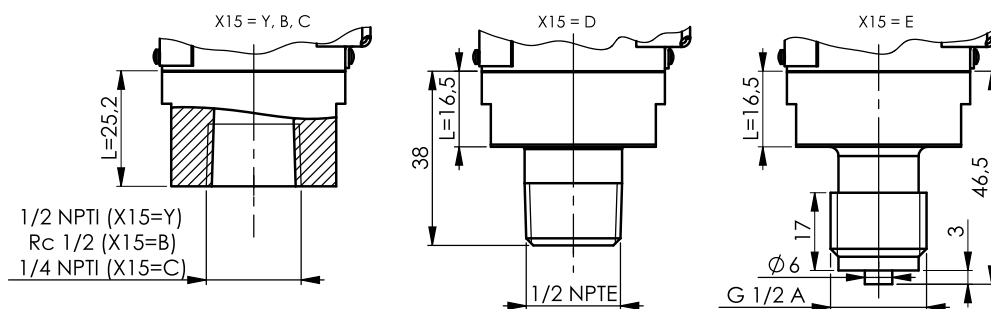
1,7 kg (WITHOUT OPTION)

ADD: - 0,5 kg FOR MOUNTING BRACKET

- 2 kg FOR STAINLESS STEEL HOUSING OPTION



Detail A



| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> - X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub> - X <sub>14</sub> X <sub>15</sub><br>F K H 0 0 G 0 0 0 0 - 0 0 |  | SPAN LIMIT              |                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------|---------------------|
|                                                                                                                                                                                                                                                                         |  | Min.                    | Max.                |
| FKH 02                                                                                                                                                                                                                                                                  |  | 8,125 KPa (81,25 mbar)  | 130 KPa (1300 mbar) |
| FKH 03                                                                                                                                                                                                                                                                  |  | 31,25 KPa (0,3125 mbar) | 500 KPa (5 bar)     |
| FKH 04                                                                                                                                                                                                                                                                  |  | 187,5 KPa (1,875 mbar)  | 3000 KPa (30 bar)   |

## Short Design Mounting



| Code X=4 | Electrical connection |    | Oval flange screw |
|----------|-----------------------|----|-------------------|
|          | D                     | E  |                   |
| R        | M20x1.5               | 16 | 7/16-20 UNF       |
| T        | 1/2-14NPT             | 16 | 7/16-20 UNF       |
| W        | M20x1.5               | 16 | M10               |

| FLUSHING RINGS DIMENSIONS |           |            |     |     |    |
|---------------------------|-----------|------------|-----|-----|----|
| EN 1092-1                 | EN 1759-1 | HOLES<br>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 |              |     |       |     |     |          |       |             | Diaphragm & extension                    |                  |
|-------------------------------------------------------|--------------|-----|-------|-----|-----|----------|-------|-------------|------------------------------------------|------------------|
| EN 1092-1                                             | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Weight (kg) | Exotic material<br>L=0<br>(X11=Y)<br>ØMb | L#0<br>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)

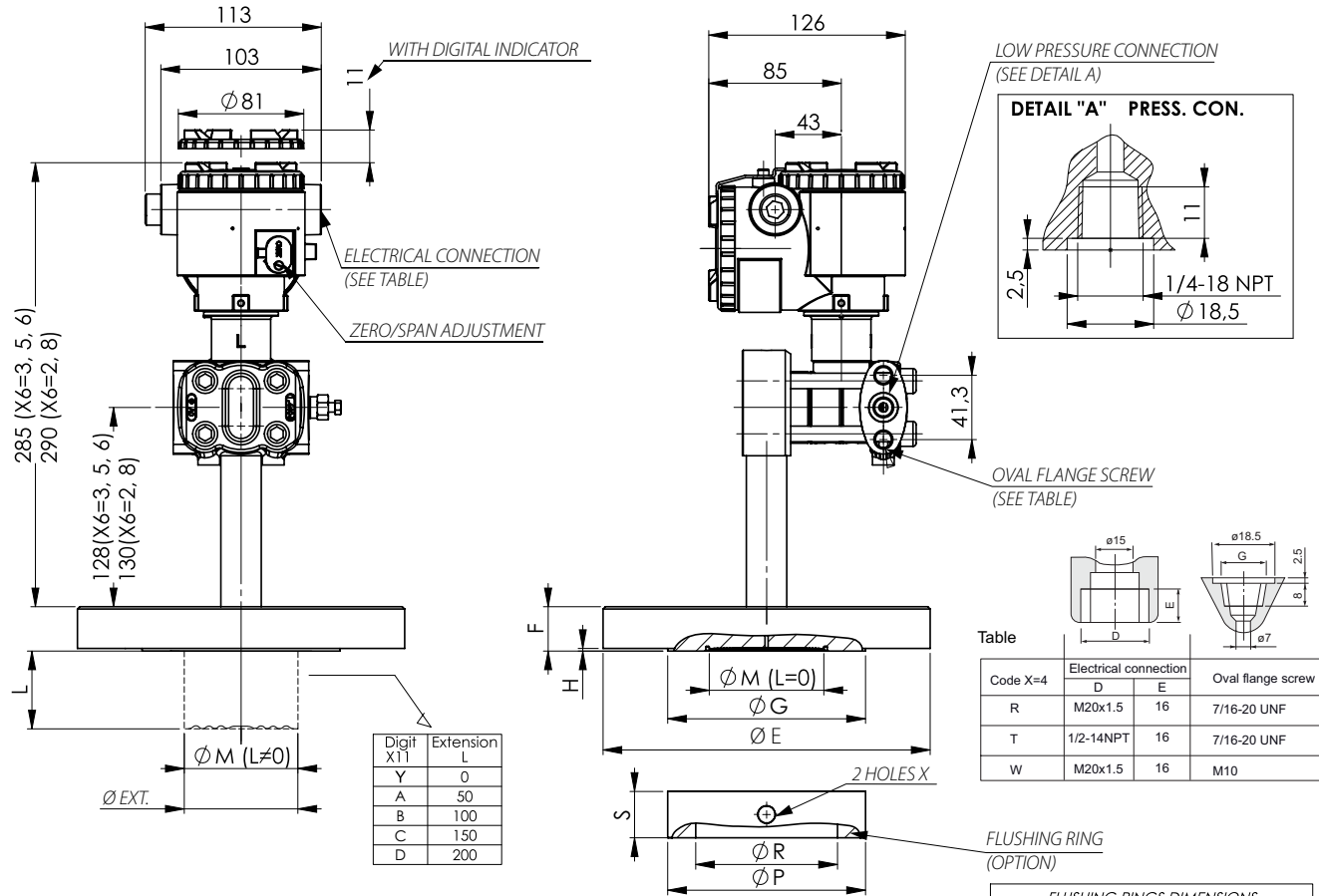
Add :

- 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

| <div><div><div><div><div>X<sub>1</sub></div><div>F</div></div><div><div>X<sub>2</sub></div><div>K</div></div><div><div>X<sub>3</sub></div><div>E</div></div><div><div>X<sub>4</sub></div><div><div></div></div></div><div><div>X<sub>5</sub></div><div><div></div></div></div><div><div>X<sub>6</sub></div><div><div></div></div></div><div><div>X<sub>7</sub></div><div><div></div></div></div><div><div>X<sub>8</sub></div><div>G</div></div><div><div>X<sub>9</sub></div><div>-</div></div><div><div>X<sub>10</sub></div><div><div></div></div></div><div><div>X<sub>11</sub></div><div><div></div></div></div><div><div>X<sub>12</sub></div><div><div></div></div></div><div><div>X<sub>13</sub></div><div><div></div></div></div><div><div>X<sub>14</sub></div><div>-</div></div><div><div>X<sub>15</sub></div><div><div></div></div></div></div><div><div><div>X<sub>7</sub> = H, M, T, P, R</div></div><div><div>X<sub>11</sub> = Y, E, F, G, H, J, K, L, M, P, R, S, T</div></div></div></div></div> | <table><tr><th></th><th colspan="2">SPAN LIMIT</th></tr><tr><th></th><th>Min.</th><th>Max.</th></tr><tr><td>FKE <div><div></div><div></div>2</div></td><td>0,1 KPa (1 mbar)</td><td>6 KPa (60 mbar)</td></tr><tr><td>FKE <div><div></div><div></div>3</div></td><td>0,32 KPa (3,2 mbar)</td><td>32 KPa (320 mbar)</td></tr><tr><td>FKE <div><div></div><div></div>5</div></td><td>1,3 KPa (13 mbar)</td><td>130 KPa (1,3 bar)</td></tr><tr><td>FKE <div><div></div><div></div>6</div></td><td>5 KPa (50 mbar)</td><td>500 KPa (5 bar)</td></tr><tr><td>FKE <div><div></div><div></div>8</div></td><td>30 KPa (300 mbar)</td><td>3 MPa (30 bar)</td></tr></table> |                   | SPAN LIMIT |  |  | Min. | Max. | FKE <div><div></div><div></div>2</div> | 0,1 KPa (1 mbar) | 6 KPa (60 mbar) | FKE <div><div></div><div></div>3</div> | 0,32 KPa (3,2 mbar) | 32 KPa (320 mbar) | FKE <div><div></div><div></div>5</div> | 1,3 KPa (13 mbar) | 130 KPa (1,3 bar) | FKE <div><div></div><div></div>6</div> | 5 KPa (50 mbar) | 500 KPa (5 bar) | FKE <div><div></div><div></div>8</div> | 30 KPa (300 mbar) | 3 MPa (30 bar) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------|--|--|------|------|----------------------------------------|------------------|-----------------|----------------------------------------|---------------------|-------------------|----------------------------------------|-------------------|-------------------|----------------------------------------|-----------------|-----------------|----------------------------------------|-------------------|----------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | SPAN LIMIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Min.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Max.              |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
| FKE <div><div></div><div></div>2</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0,1 KPa (1 mbar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6 KPa (60 mbar)   |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
| FKE <div><div></div><div></div>3</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0,32 KPa (3,2 mbar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 32 KPa (320 mbar) |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
| FKE <div><div></div><div></div>5</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1,3 KPa (13 mbar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 130 KPa (1,3 bar) |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
| FKE <div><div></div><div></div>6</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 5 KPa (50 mbar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 500 KPa (5 bar)   |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |
| FKE <div><div></div><div></div>8</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 30 KPa (300 mbar)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3 MPa (30 bar)    |            |  |  |      |      |                                        |                  |                 |                                        |                     |                   |                                        |                   |                   |                                        |                 |                 |                                        |                   |                |

## Level transmitter : FKE...VG

## Long Design Mounting



Weight :  
10.2 to 19.2 kg (without option)

Add :

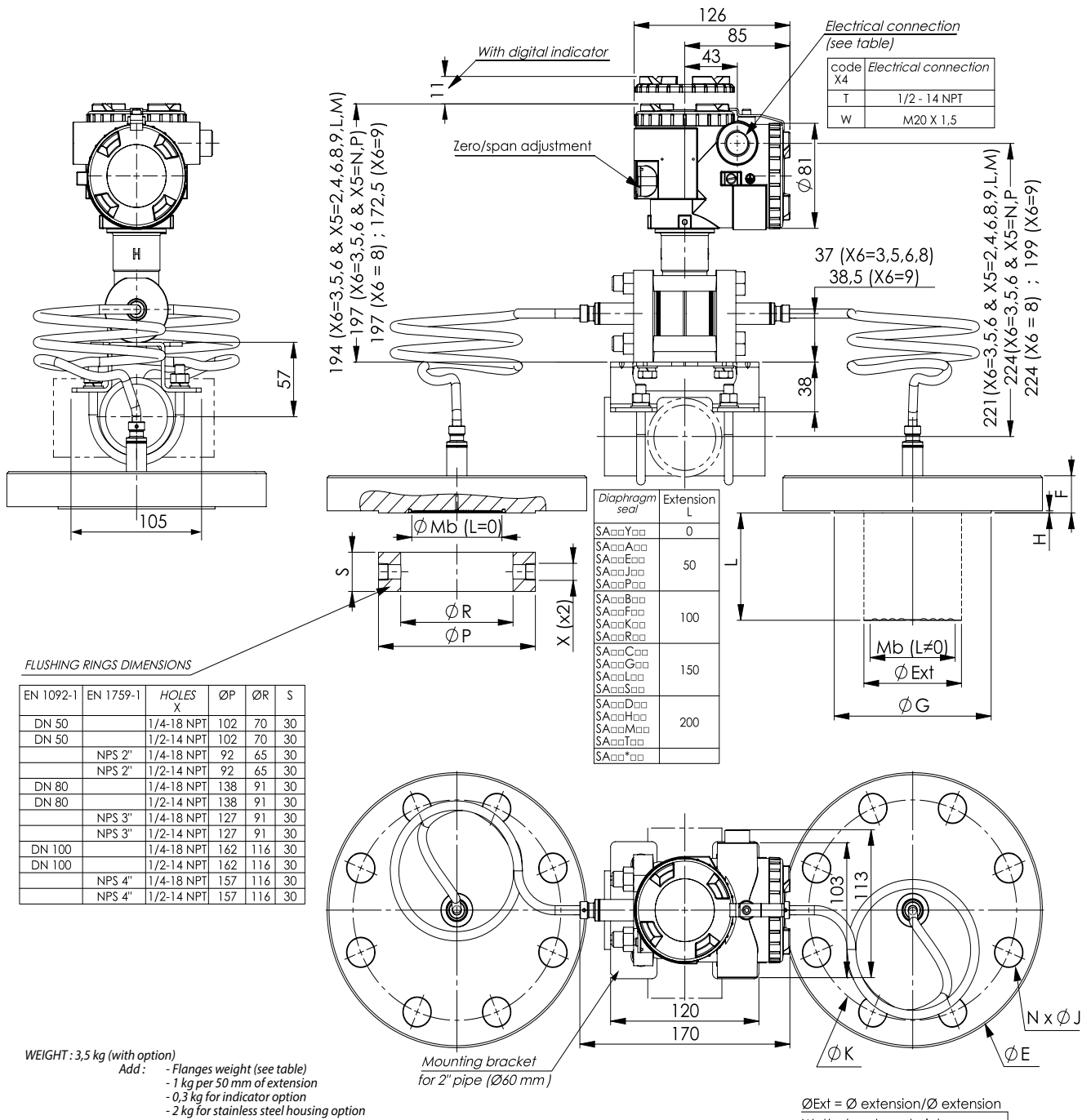
- Flange's weight (see table)
- 1 kg per 50 mm of extension
- 0.3 kg for indicator (option)
- 2 kg for SS mounting bracket (option)
- 0.5 kg for mounting bracket

| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |                  |          |       |          |     |              |          | Diaphragm & extension |                                   | Weight (kg) |
|-------------------------------------------------------|------------------|----------|-------|----------|-----|--------------|----------|-----------------------|-----------------------------------|-------------|
| EN 1092-1                                             | EN 1759-1        | $\Phi E$ | F min | $\Phi G$ | H   | N x $\Phi J$ | $\Phi K$ | L=0<br>$\Phi M$       | L $\neq$ 0<br>$\Phi M = \Phi Ext$ |             |
| 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                                                                                                                                                                                                                                                                                                                                                                                 |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|
| F K E <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> G - <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>                    |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> -X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub> -X <sub>14</sub> X <sub>15</sub>                                                                                                                                                   |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X7 = V, W, A, B                                                                                                                                                                                                                                                                                                                                                                            |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| X11 = Y, A, B, C, D                                                                                                                                                                                                                                                                                                                                                                        |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Min. Max.                                                                                                                                                                                                                                                                                                                                                                                  |                                       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FKE <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 0,1 KPa (1 mbar) 6 KPa (60 mbar)      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FKE <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 0,32 KPa (3,2 mbar) 32 KPa (320 mbar) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FKE <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 1,3 KPa (13 mbar) 130 KPa (1,3 bar)   |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FKE <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 5 KPa (50 mbar) 500 KPa (5 bar)       |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FKE <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> | 30 KPa (300 mbar) 3 MPa (30 bar)      |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Remote seal type differential pressure transmitter : FKD...VG

For PN ≤ 50bar : reduced volume flanges are welded on the measuring cell

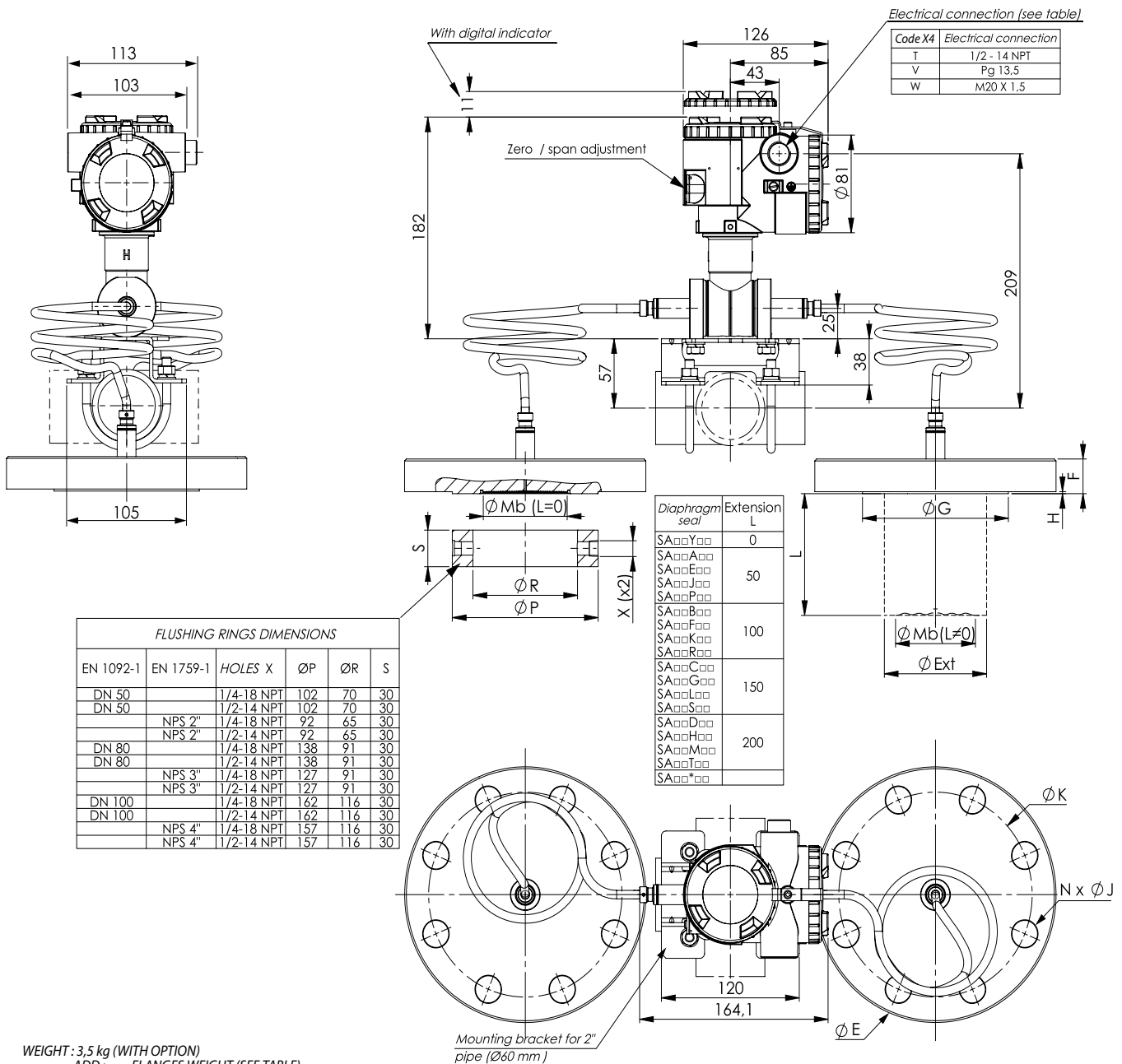


| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |            |              |     |       |     |     |          |       |             | SS 316L Exotic material |              |         |               |
|-------------------------------------------------------|------------|--------------|-----|-------|-----|-----|----------|-------|-------------|-------------------------|--------------|---------|---------------|
| diaphragm seal                                        | EN 1092-1  | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Weight (kg) | L=0 ØMb                 | L≠0 ØExt=ØMb | L=0 ØMb | L≠0 ØExt(ØMb) |
| SAG□□□□                                               | DN50 PN40  |              | 165 | 20    | 102 | 2   | 4 x 18   | 125   | 3,3         | 59                      | 48           | 59      | 48,3 (47)     |
| SAH□□□□                                               |            | 2" CLASS 150 | 152 | 21    | 92  | 1,6 | 4 x 19   | 120,6 | 2,7         | 59                      | 48           | 59      | 48,3 (47)     |
| SAJ□□□□                                               |            | 2" CLASS 300 | 165 | 22,5  | 92  | 1,6 | 8 x 19   | 127   | 3,7         | 59                      | 48           | 59      | 48,3 (47)     |
| SA8□□□□                                               | DN80 PN40  |              | 200 | 24    | 138 | 2   | 8 x 18   | 160   | 5,8         | 73                      | 73           | 89      | 76 (72)       |
| SA4□□□□                                               |            | 3" CLASS 150 | 190 | 24    | 127 | 1,6 | 4 x 19   | 152,4 | 5,3         | 73                      | 73           | 89      | 76 (72)       |
| SA6□□□□                                               |            | 3" CLASS 300 | 210 | 28,5  | 127 | 1,6 | 8 x 22,2 | 168,3 | 7,8         | 73                      | 73           | 89      | 76 (72)       |
| SA9□□□□                                               | DN100 PN16 |              | 220 | 22    | 158 | 2   | 8 x 18   | 180   | 5,9         | 96                      | 96           | 89      | 94 (89)       |
| SA5□□□□                                               |            | 4" CLASS 150 | 229 | 24    | 157 | 1,6 | 8 x 19   | 190,5 | 7,7         | 96                      | 96           | 89      | 94 (89)       |
| SA7□□□□                                               |            | 4" CLASS 300 | 254 | 32    | 157 | 1,6 | 8 x 22,2 | 200   | 12,7        | 96                      | 96           | 89      | 94 (89)       |

| SPAN LIMIT |  |  |  |  |  |  |  |  |  | Min. Max.           |                   |
|------------|--|--|--|--|--|--|--|--|--|---------------------|-------------------|
| FKD□□□     |  |  |  |  |  |  |  |  |  | 0,32 KPa (3,2 mbar) | 32 KPa (320 mbar) |
| FKD□□□     |  |  |  |  |  |  |  |  |  | 1,3 KPa (13 mbar)   | 130 KPa (1,3 bar) |
| FKD□□□     |  |  |  |  |  |  |  |  |  | 5 KPa (50 mbar)     | 500 KPa (5 bar)   |
| FKD□□□     |  |  |  |  |  |  |  |  |  | 30 KPa (300 mbar)   | 3 MPa (30 bar)    |

## Remote seal type differential pressure transmitter : FKD...VG

For PN &gt; 50bar : reduced volume flanges are welded and bolted on the measuring cell



WEIGHT : 3,5 kg (WITH OPTION)

ADD: - FLANGES WEIGHT (SEE TABLE)

- 1 kg PER 50 mm EXTENSION

- 0,3 kg FOR INDICATOR OPTION

- 2 kg FOR STAINLESS STEEL HOUSING OPTION

ØMb= Ødiaphragm

ØExt = Ø extension

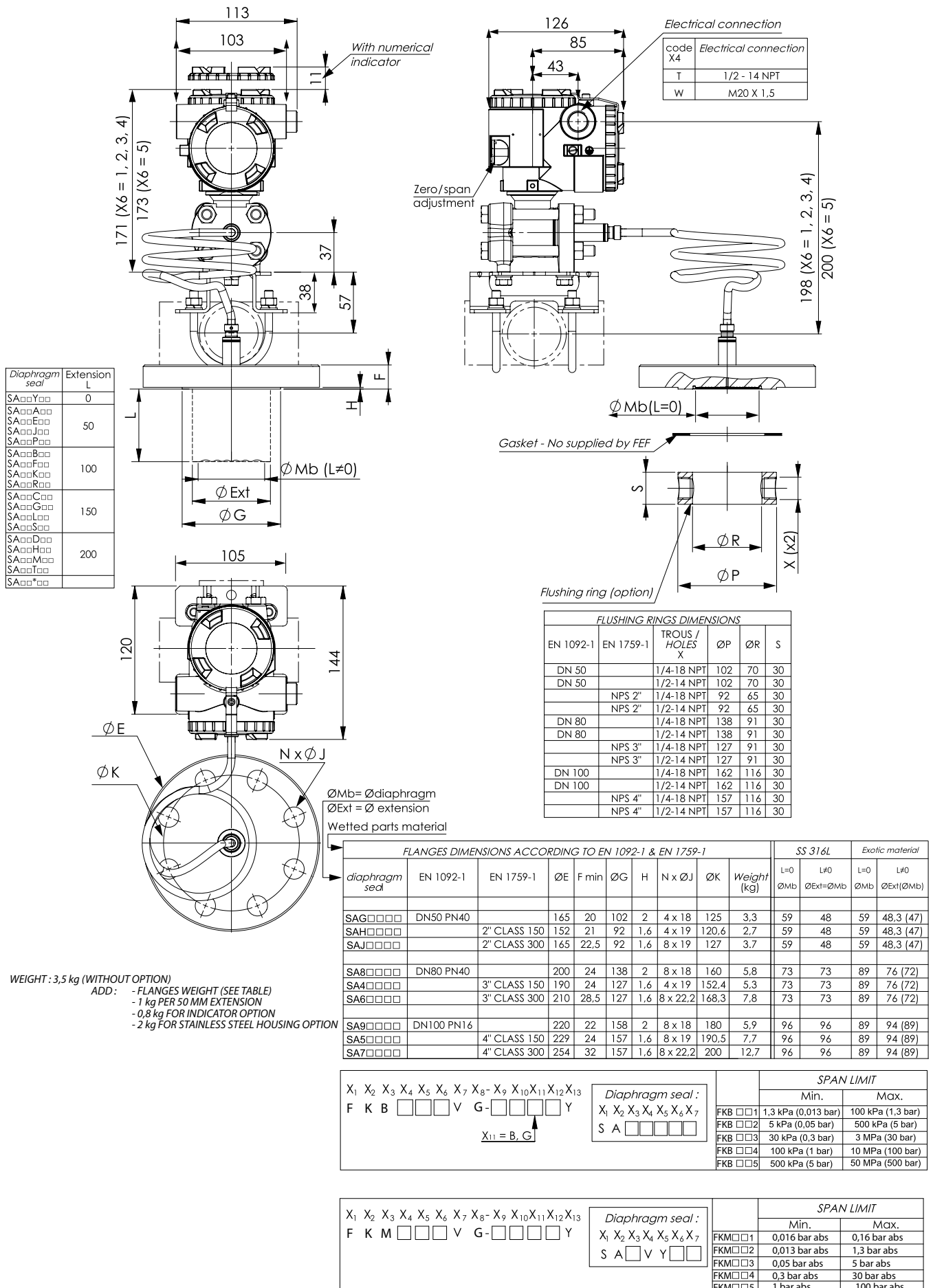
Wetted parts material

| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |            |              |     |       |     |     |          |       |             | SS 316L    |                 | Exotic material |                  |
|-------------------------------------------------------|------------|--------------|-----|-------|-----|-----|----------|-------|-------------|------------|-----------------|-----------------|------------------|
| diaphragm seal                                        | EN 1092-1  | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Weight (kg) | L=0<br>ØMb | L≠0<br>ØExt=ØMb | L=0<br>ØMb      | L≠0<br>ØExt(ØMb) |
| SA□□□□                                                | DN50 PN40  |              | 165 | 20    | 102 | 2   | 4 x 18   | 125   | 3.3         | 59         | 48              | 59              | 48,3 (47)        |
| SAH□□□□                                               |            | 2" CLASS 150 | 152 | 21    | 92  | 1,6 | 4 x 19   | 120,6 | 2,7         | 59         | 48              | 59              | 48,3 (47)        |
| SAJ□□□□                                               |            | 2" CLASS 300 | 165 | 22,5  | 92  | 1,6 | 8 x 19   | 127   | 3,7         | 59         | 48              | 59              | 48,3 (47)        |
| SA8□□□□                                               | DN80 PN40  |              | 200 | 24    | 138 | 2   | 8 x 18   | 160   | 5,8         | 73         | 73              | 89              | 76 (72)          |
| SA4□□□□                                               |            | 3" CLASS 150 | 190 | 24    | 127 | 1,6 | 4 x 19   | 152,4 | 5,3         | 73         | 73              | 89              | 76 (72)          |
| SA6□□□□                                               |            | 3" CLASS 300 | 210 | 28,5  | 127 | 1,6 | 8 x 22,2 | 168,3 | 7,8         | 73         | 73              | 89              | 76 (72)          |
| SA9□□□□                                               | DN100 PN16 |              | 220 | 22    | 158 | 2   | 8 x 18   | 180   | 5,9         | 96         | 96              | 89              | 94 (89)          |
| SA5□□□□                                               |            | 4" CLASS 150 | 229 | 24    | 157 | 1,6 | 8 x 19   | 190,5 | 7,7         | 96         | 96              | 89              | 94 (89)          |
| SA7□□□□                                               |            | 4" CLASS 300 | 254 | 32    | 157 | 1,6 | 8 x 22,2 | 200   | 12,7        | 96         | 96              | 89              | 94 (89)          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div><div>X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub> X<sub>6</sub> X<sub>7</sub> X<sub>8</sub>-X<sub>9</sub> X<sub>10</sub>X<sub>11</sub>X<sub>12</sub>X<sub>13</sub></div><div>F K D <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> V G <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/> Y</div><div>X<sub>5</sub> = 2, 4, 6, 8, 9</div><div>X<sub>11</sub> = C, H</div></div> | <div>Diaphragm seals :</div> <div><div>HP</div><div>X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub> X<sub>6</sub> X<sub>7</sub></div><div>S A <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div></div> <div><div>LP</div><div>X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub> X<sub>6</sub> X<sub>7</sub></div><div>S A <input type="checkbox"/><input type="checkbox"/><input type="checkbox"/><input type="checkbox"/></div></div> | <div>SPAN LIMIT</div> <div><div>Min.</div><div>FKD003</div><div>FKD005</div><div>FKD006</div></div> <div><div>Max.</div><div>32 KPa (320 mbar)</div><div>130 KPa (1,3 bar)</div><div>500 KPa (5 bar)</div></div> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <div>0,32 KPa (3,2 mbar)</div> <div>1,3 KPa (13 mbar)</div> <div>5 KPa (50 mbar)</div>                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                  |

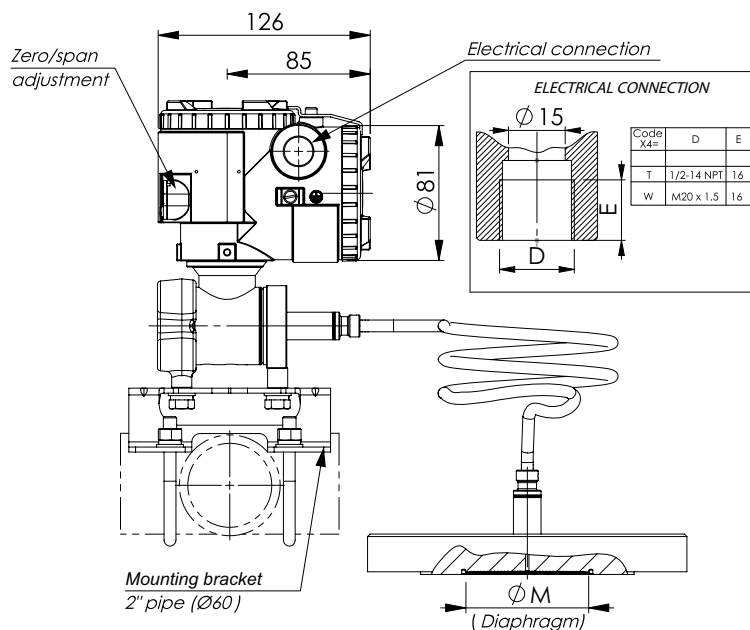
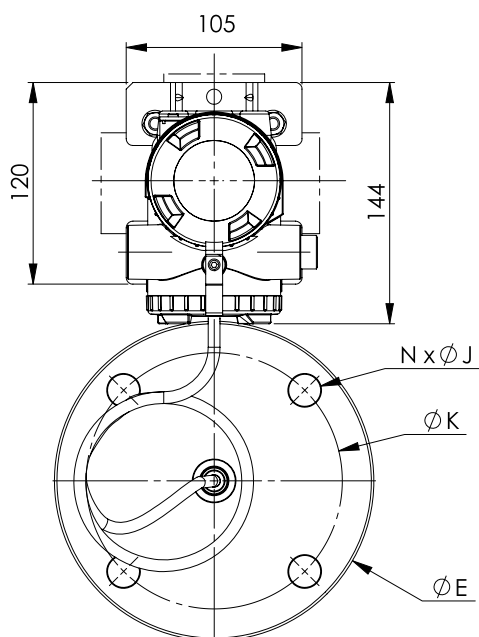
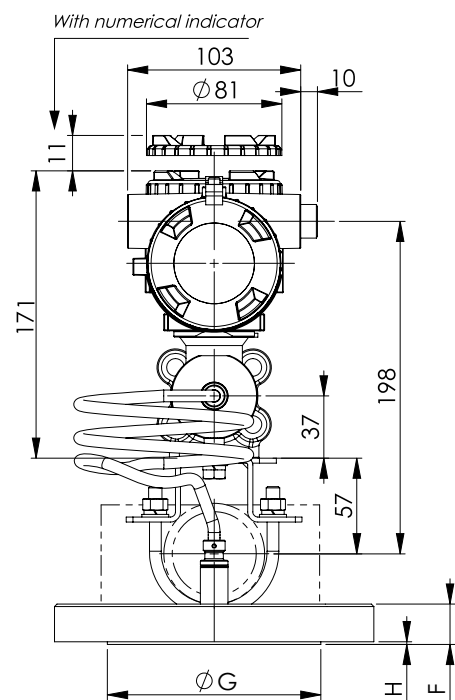
## Remote seal type absolute or gauge pressure transmitter : FKB / FKM...VG

For PN > 50bar : reduced volume flanges are welded and bolted on the measuring cell



## Remote seal type absolute or gauge pressure transmitter : FKB / FKM...VG

For PN ≤ 50bar : reduced volume flanges are welded on the measuring cell



WEIGHT : 3,5 kg (WITHOUT OPTION)

ADD : - FLANGES WEIGHT (SEE TABLE)

- 0,8 kg FOR INDICATOR OPTION

- 2 kg FOR STAINLESS STEEL HOUSING OPTION

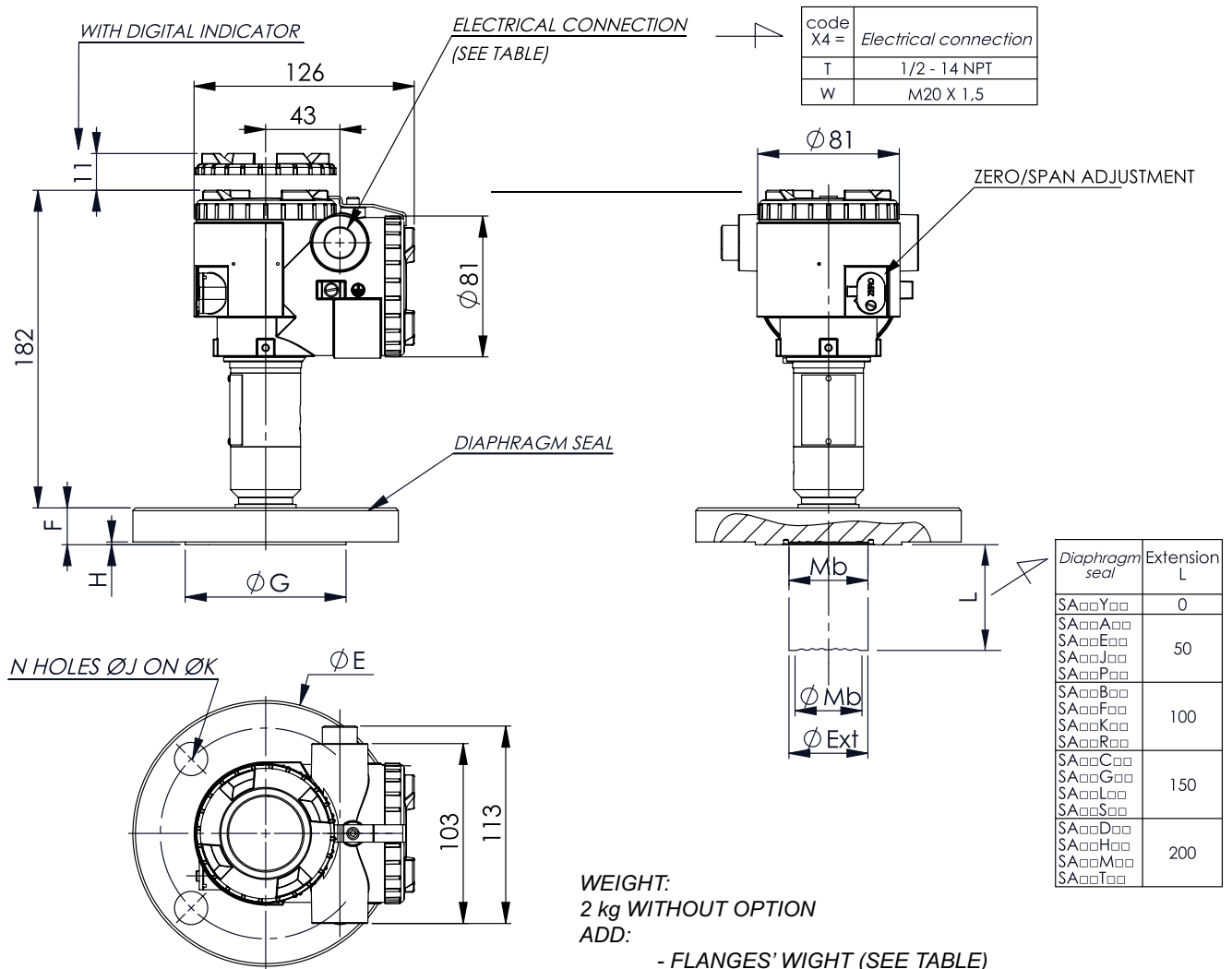
| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |                |                  |     |       |     |     |          |       |    |             |
|-------------------------------------------------------|----------------|------------------|-----|-------|-----|-----|----------|-------|----|-------------|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

|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  |                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------|--|---------------------|--|
| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> - X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub><br>F K B □ □ □ V G- □ □ □ □ Y |  |  |  |  |  |  |  |  |  | Diaphragm seal :                                                                                         |  | SPAN LIMIT          |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> |  | Min.                |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | S A □ V Y □ □                                                                                            |  | Max.                |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKB □ □ 1                                                                                                |  | 1,3 kPa (0,013 bar) |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKB □ □ 2                                                                                                |  | 5 kPa (0,05 bar)    |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKB □ □ 3                                                                                                |  | 30 kPa (0,3 bar)    |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 100 kPa (1,3 bar)   |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 500 kPa (5 bar)     |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 3 MPa (30 bar)      |  |

|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  |               |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|----------------------------------------------------------------------------------------------------------|--|---------------|--|
| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> - X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub><br>F K M □ □ □ V G- □ □ □ □ Y |  |  |  |  |  |  |  |  |  | Diaphragm seal :                                                                                         |  | SPAN LIMIT    |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> |  | Min.          |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | S A □ V Y □ □                                                                                            |  | Max.          |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKM □ □ 1                                                                                                |  | 0,016 bar abs |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKM □ □ 2                                                                                                |  | 0,013 bar abs |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKM □ □ 3                                                                                                |  | 0,05 bar abs  |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  | FKM □ □ 4                                                                                                |  | 0,3 bar abs   |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 0,16 bar abs  |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 1,3 bar abs   |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 5 bar abs     |  |
|                                                                                                                                                                                                                                        |  |  |  |  |  |  |  |  |  |                                                                                                          |  | 30 bar abs    |  |

**Outline dimensions for rigid mounted on a gauge or pressure pressure transmitter (units : mm)**  
**FKP...VG**



| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |            |              |     |       |     |     |          |       |                   | SS 316L |              | Exotic material |               |
|-------------------------------------------------------|------------|--------------|-----|-------|-----|-----|----------|-------|-------------------|---------|--------------|-----------------|---------------|
| diaphragm seal                                        | EN 1092-1  | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Poids Weight (kg) | L=0 ØMb | L≠0 ØExt=ØMb | L=0 ØMb         | L≠0 ØExt(ØMb) |
| SAG                                                   | DN50 PN40  |              | 165 | 20    | 102 | 2   | 4 x 18   | 125   | 3,3               | 59      | 48           | 59              | 48,3 (47)     |
| SAH                                                   |            | 2" CLASS 150 | 152 | 21    | 92  | 1,6 | 4 x 19   | 120,6 | 2,7               | 59      | 48           | 59              | 48,3 (47)     |
| SAJ                                                   |            | 2" CLASS 300 | 165 | 22,5  | 92  | 1,6 | 8 x 19   | 127   | 3,7               | 59      | 48           | 59              | 48,3 (47)     |
| SA8                                                   | DN80 PN40  |              | 200 | 24    | 138 | 2   | 8 x 18   | 160   | 5,8               | 73      | 73           | 89              | 76 (72)       |
| SA4                                                   |            | 3" CLASS 150 | 190 | 24    | 127 | 1,6 | 4 x 19   | 152,4 | 5,3               | 73      | 73           | 89              | 76 (72)       |
| SA6                                                   |            | 3" CLASS 300 | 210 | 28,5  | 127 | 1,6 | 8 x 22,2 | 168,3 | 7,8               | 73      | 73           | 89              | 76 (72)       |
| SA9                                                   | DN100 PN16 |              | 220 | 22    | 158 | 2   | 8 x 18   | 180   | 5,9               | 96      | 96           | 89              | 94 (89)       |
| SA5                                                   |            | 4" CLASS 150 | 229 | 24    | 157 | 1,6 | 8 x 19   | 190,5 | 7,7               | 96      | 96           | 89              | 94 (89)       |
| SA7                                                   |            | 4" CLASS 300 | 254 | 32    | 157 | 1,6 | 8 x 22,2 | 200   | 12,7              | 96      | 96           | 89              | 94 (89)       |

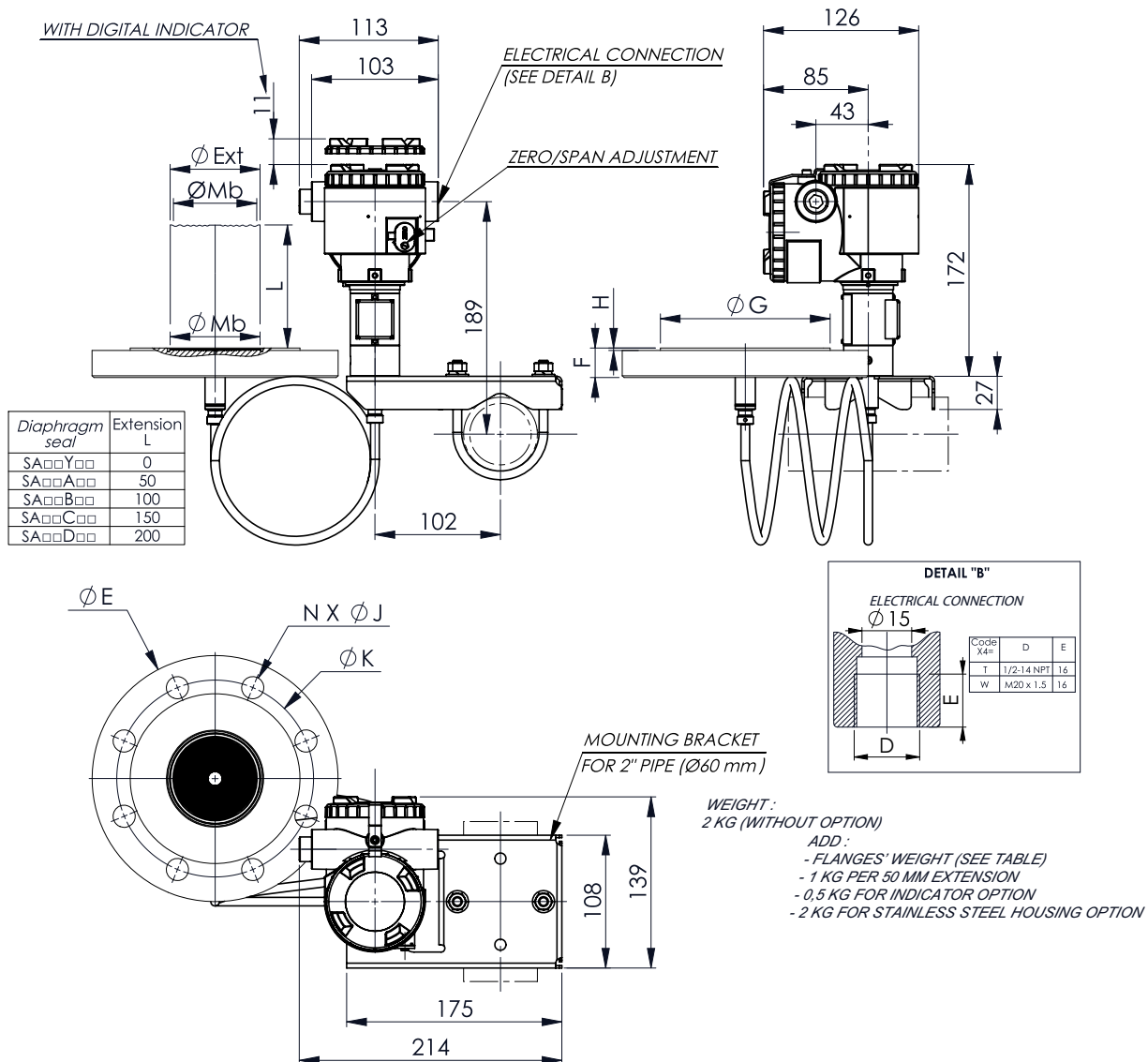
Wetted parts material

ØMb = Ø diaphragm  
 ØExt = extension

| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> - X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub> |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|
| Model : F K P <input type="text"/> <input type="text"/> <input type="text"/> V G - <input type="text"/> <input type="text"/> <input type="text"/> Y                                                      |  |  |  |  |  |  |  |  |  |  |  |  |
| X <sub>11</sub> = L, S                                                                                                                                                                                   |  |  |  |  |  |  |  |  |  |  |  |  |
| Diaphragm seal : X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub>                                                                                |  |  |  |  |  |  |  |  |  |  |  |  |
| S A <input type="text"/> <input type="text"/> <input type="text"/> S <input type="text"/>                                                                                                                |  |  |  |  |  |  |  |  |  |  |  |  |
| SPAN LIMIT                                                                                                                                                                                               |  |  |  |  |  |  |  |  |  |  |  |  |
| Min. Max.                                                                                                                                                                                                |  |  |  |  |  |  |  |  |  |  |  |  |
| FKP1 8,125 kPa (0,08125 bar) 130 kPa (1,3 bar)                                                                                                                                                           |  |  |  |  |  |  |  |  |  |  |  |  |
| FKP2 31,25 kPa (0,3125 bar) 500 kPa (5 bar)                                                                                                                                                              |  |  |  |  |  |  |  |  |  |  |  |  |
| FKP3 187,5 kPa (1,875 bar) 3000 kPa (30 bar)                                                                                                                                                             |  |  |  |  |  |  |  |  |  |  |  |  |
| FKP4 625 kPa (6,25 bar) 10000 kPa (100 bar)                                                                                                                                                              |  |  |  |  |  |  |  |  |  |  |  |  |

## Remote seal type gauge or absolute pressure transmitter (capillary mounted) : FKP / FKH...VG

## Outline dimensions for capillary mounted diaphragm seal



| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |            |              |     |       |     |     |          |       |             | SS 316L    |                 | Exotic material |                  |
|-------------------------------------------------------|------------|--------------|-----|-------|-----|-----|----------|-------|-------------|------------|-----------------|-----------------|------------------|
| diaphragm seal                                        | EN 1092-1  | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Weight (kg) | L=0<br>ØMb | L≠0<br>ØExt=ØMb | L=0<br>ØMb      | L≠0<br>ØExt[ØMb] |
| SAG□□□□                                               | DN50 PN40  |              | 165 | 20    | 102 | 2   | 4 x 18   | 125   | 3,3         | 59         | 48              | 59              | 48,3 (47)        |
| SAH□□□□                                               |            | 2" CLASS 150 | 152 | 21    | 92  | 1,6 | 4 x 19   | 120,6 | 2,7         | 59         | 48              | 59              | 48,3 (47)        |
| SAJ□□□□                                               |            | 2" CLASS 300 | 165 | 22,5  | 92  | 1,6 | 8 x 19   | 127   | 3,7         | 59         | 48              | 59              | 48,3 (47)        |
| SA8□□□□                                               | DN80 PN40  |              | 200 | 24    | 138 | 2   | 8 x 18   | 160   | 5,8         | 73         | 73              | 89              | 76 (72)          |
| SA4□□□□                                               |            | 3" CLASS 150 | 190 | 24    | 127 | 1,6 | 4 x 19   | 152,4 | 5,3         | 73         | 73              | 89              | 76 (72)          |
| SA6□□□□                                               |            | 3" CLASS 300 | 210 | 28,5  | 127 | 1,6 | 8 x 22,2 | 168,3 | 7,8         | 73         | 73              | 89              | 76 (72)          |
| SA9□□□□                                               | DN100 PN16 |              | 220 | 22    | 158 | 2   | 8 x 18   | 180   | 5,9         | 96         | 96              | 89              | 94 (89)          |
| SA5□□□□                                               |            | 4" CLASS 150 | 229 | 24    | 157 | 1,6 | 8 x 19   | 190,5 | 7,7         | 96         | 96              | 89              | 94 (89)          |
| SA7□□□□                                               |            | 4" CLASS 300 | 254 | 32    | 157 | 1,6 | 8 x 22,2 | 200   | 12,7        | 96         | 96              | 89              | 94 (89)          |

ØMb = Ø diaphragm  
ØExt = extension

Wetted parts material

ØMb = Ø diaphragm  
ØExt = extension

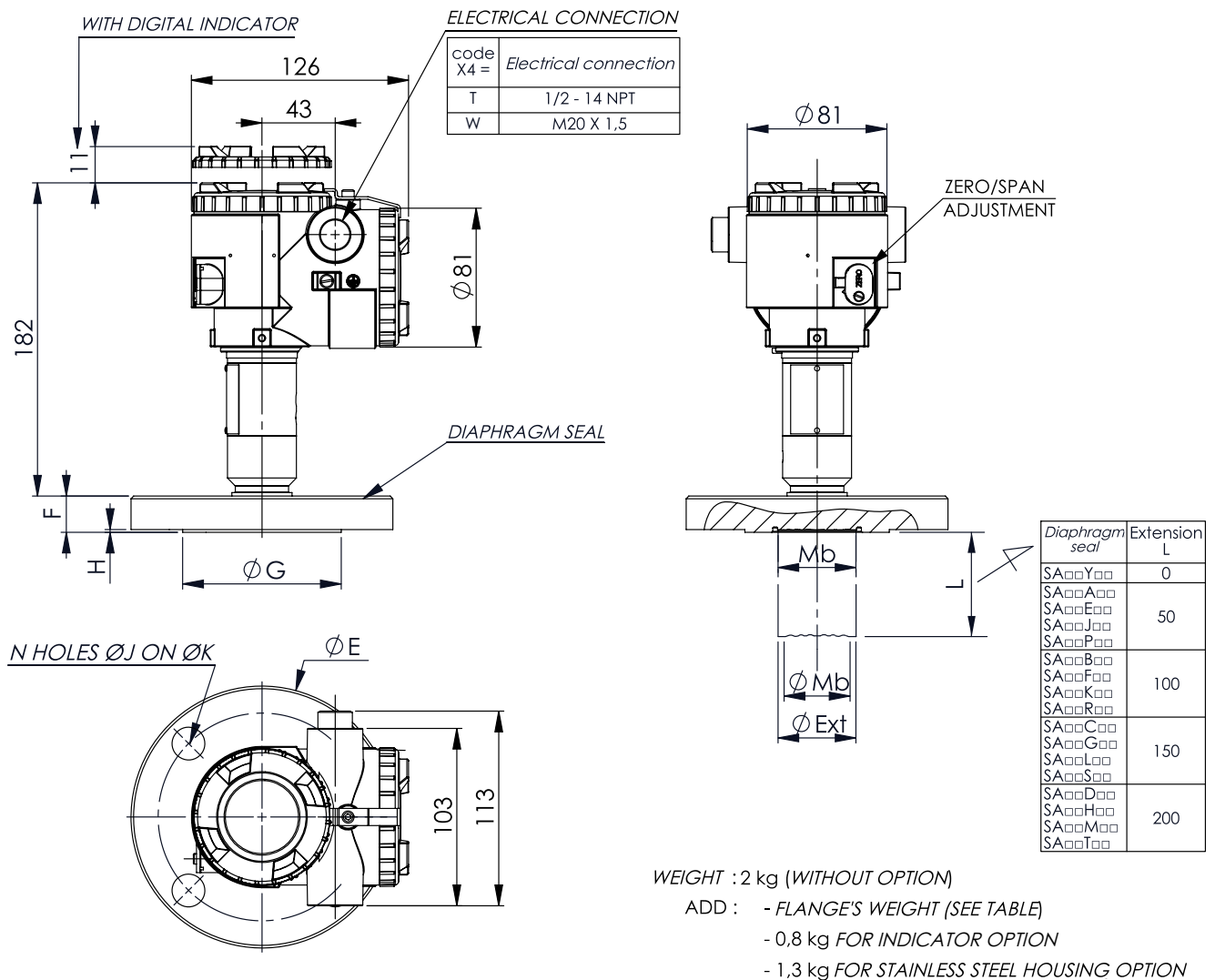
Wetted parts material

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        |                     |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------|------|
| <div><div>X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub> X<sub>6</sub> X<sub>7</sub> X<sub>8</sub>-X<sub>9</sub> X<sub>10</sub>X<sub>11</sub>X<sub>12</sub>X<sub>13</sub></div><div>F K H <div></div><div></div><div></div> V G-<div></div><div></div><div></div><div></div> Y</div><div>X<sub>11</sub> = B, G</div><div>Diaphragm seal :</div><div><div>X<sub>1</sub> X<sub>2</sub> X<sub>3</sub> X<sub>4</sub> X<sub>5</sub> X<sub>6</sub> X<sub>7</sub></div><div>S A <div></div><div></div><div></div><div></div><div></div></div><div>X<sub>11</sub> = A, B, C, D, G, H, K, L</div></div></div> |                        | SPAN LIMIT          |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                        | Min.                | Max. |
| FKH <div></div> <div></div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 8,125 kPa (81,25 mbar) | 130 kPa (1300 mbar) |      |
| FKH <div></div> <div></div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 31,25 kPa (0,3125 bar) | 500 kPa (5 bar)     |      |
| FKH <div></div> <div></div> <div></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 187,5 kPa (1,875 bar)  | 3000 kPa (30 bar)   |      |

|                                                                                                                                                                                                         |   |   |  |  |  |   |   |  |  |  |  |   |                        |  |                        |                     |            |  |  |  |  |  |      |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|--|--|--|---|---|--|--|--|--|---|------------------------|--|------------------------|---------------------|------------|--|--|--|--|--|------|------|
| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> -X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub> |   |   |  |  |  |   |   |  |  |  |  |   | Diaphragm seal :       |  |                        |                     | SPAN LIMIT |  |  |  |  |  |      |      |
| F                                                                                                                                                                                                       | K | P |  |  |  | V | G |  |  |  |  | Y | X <sub>11</sub> = B, G |  | S A                    |                     |            |  |  |  |  |  | Min. | Max. |
|                                                                                                                                                                                                         |   |   |  |  |  |   |   |  |  |  |  |   | FKP □□1                |  | 8,125 kPa (81,25 mbar) | 130 kPa (1300 mbar) |            |  |  |  |  |  |      |      |
|                                                                                                                                                                                                         |   |   |  |  |  |   |   |  |  |  |  |   | FKP □□2                |  | 31,25 kPa (0,3125 bar) | 500 kPa (5 bar)     |            |  |  |  |  |  |      |      |
|                                                                                                                                                                                                         |   |   |  |  |  |   |   |  |  |  |  |   | FKP □□3                |  | 187,5 kPa (1,875 bar)  | 3000 kPa (30 bar)   |            |  |  |  |  |  |      |      |
|                                                                                                                                                                                                         |   |   |  |  |  |   |   |  |  |  |  |   | FKP □□4                |  | 625 kPa (6,25 bar)     | 10000 kPa (100 bar) |            |  |  |  |  |  |      |      |

## Remote seal type gauge pressure transmitter (rigid mounted) : FKP / FKH...VG

### Outline dimensions for rigid mounted



| FLANGES DIMENSIONS ACCORDING TO EN 1092-1 & EN 1759-1 |            |              |     |       |     |     |          |       |                   | Inox 1.4404<br>SS 316L |                 | Exotic material |                  |
|-------------------------------------------------------|------------|--------------|-----|-------|-----|-----|----------|-------|-------------------|------------------------|-----------------|-----------------|------------------|
| diaphragm seal                                        | EN 1092-1  | EN 1759-1    | ØE  | F min | ØG  | H   | N x ØJ   | ØK    | Poids Weight (kg) | L=0<br>ØMb             | L#0<br>ØExt=ØMb | L=0<br>ØMb      | L#0<br>ØExt(ØMb) |
| SA80000                                               | DN50 PN40  |              | 165 | 20    | 102 | 2   | 4 x 18   | 125   | 3,3               | 59                     | 48              | 59              | 48,3 (47)        |
| SAH0000                                               |            | 2" CLASS 150 | 152 | 21    | 92  | 1,6 | 4 x 19   | 120,6 | 2,7               | 59                     | 48              | 59              | 48,3 (47)        |
| SAJ0000                                               |            | 2" CLASS 300 | 165 | 22,5  | 92  | 1,6 | 8 x 19   | 127   | 3,7               | 59                     | 48              | 59              | 48,3 (47)        |
| SA80000                                               | DN80 PN40  |              | 200 | 24    | 138 | 2   | 8 x 18   | 160   | 5,8               | 73                     | 73              | 89              | 76 (72)          |
| SA40000                                               |            | 3" CLASS 150 | 190 | 24    | 127 | 1,6 | 4 x 19   | 152,4 | 5,3               | 73                     | 73              | 89              | 76 (72)          |
| SA60000                                               |            | 3" CLASS 300 | 210 | 28,5  | 127 | 1,6 | 8 x 22,2 | 168,3 | 7,8               | 73                     | 73              | 89              | 76 (72)          |
| SA90000                                               | DN100 PN16 |              | 220 | 22    | 158 | 2   | 8 x 18   | 180   | 5,9               | 96                     | 96              | 89              | 94 (89)          |
| SA50000                                               |            | 4" CLASS 150 | 229 | 24    | 157 | 1,6 | 8 x 19   | 190,5 | 7,7               | 96                     | 96              | 89              | 94 (89)          |
| SA70000                                               |            | 4" CLASS 300 | 254 | 32    | 157 | 1,6 | 8 x 22,2 | 200   | 12,7              | 96                     | 96              | 89              | 94 (89)          |

Wetted parts material

ØMb = Ø diaphragm  
ØExt = extension

| X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub> X <sub>8</sub> - X <sub>9</sub> X <sub>10</sub> X <sub>11</sub> X <sub>12</sub> X <sub>13</sub> |                         |  |  |  |  |  |  |  |  |  |                     |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--|--|--|--|--|--|--|--|--|---------------------|--|
| Model : F K P <input type="text"/> <input type="text"/> <input type="text"/> V G - <input type="text"/> <input type="text"/> <input type="text"/> Y                                                      |                         |  |  |  |  |  |  |  |  |  |                     |  |
| Diaphragm seal : X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub> X <sub>6</sub> X <sub>7</sub>                                                                                |                         |  |  |  |  |  |  |  |  |  |                     |  |
| S A <input type="text"/> <input type="text"/> <input type="text"/> S <input type="text"/>                                                                                                                |                         |  |  |  |  |  |  |  |  |  |                     |  |
| X <sub>11</sub> = L, S                                                                                                                                                                                   |                         |  |  |  |  |  |  |  |  |  |                     |  |
| SPAN LIMIT                                                                                                                                                                                               |                         |  |  |  |  |  |  |  |  |  |                     |  |
| Min.                                                                                                                                                                                                     |                         |  |  |  |  |  |  |  |  |  |                     |  |
| Max.                                                                                                                                                                                                     |                         |  |  |  |  |  |  |  |  |  |                     |  |
| FKP <input type="text"/> <input type="text"/> 1                                                                                                                                                          | 8,125 kPa (0,08125 bar) |  |  |  |  |  |  |  |  |  | 130 kPa (1,3 bar)   |  |
| FKP <input type="text"/> <input type="text"/> 2                                                                                                                                                          | 31,25 kPa (0,3125 bar)  |  |  |  |  |  |  |  |  |  | 500 kPa (5 bar)     |  |
| FKP <input type="text"/> <input type="text"/> 3                                                                                                                                                          | 187,5 kPa (1,875 bar)   |  |  |  |  |  |  |  |  |  | 3000 kPa (30 bar)   |  |
| FKP <input type="text"/> <input type="text"/> 4                                                                                                                                                          | 625 kPa (6,25 bar)      |  |  |  |  |  |  |  |  |  | 10000 kPa (100 bar) |  |



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