

REMOTE SEAL TRANSMITTERS

DATA SHEET

FKB, FKD, FKM...6

FKB, FKD and FKM models of the FCX-AIV series of pressure transmitters accurately measures a gauge, a differential or an absolute pressure and transmits a proportional 4-20 mA output signal.

FCX AIV transmitters use an unique micro-capacitive silicon sensor in combination with a state-of-the-art digital signal processing to provide exceptional performances in terms of accuracy and stability.

FCX-A IV series of pressure transmitters comply with Safety Integrity Level 2 or 3 according to IEC 61508 and IEC 61511 standards.

FEATURES

1. High accuracy

The Fuji Electric's micro-capacitive silicon sensor provides in standard $\pm 0,065\%$ accuracy for differential and gauge transmitter models for all elevated or suppressed calibration ranges without additional adjustments.

2. Minimum inventory and design

Electronics parts, local indicators and electronics housing are interchangeable among all FCX-A IV transmitters.

Fuji Electric remote seals design are based on a welded conception that provides a reduced and optimized volume flange to guarantee a perfect vacuum tightness and high pressure services.

3. Minimum environmental influence

The Advanced Floating Cell technology provides a high immunity against temperature variations and overpressure commonly found in the process industry and substantially reduces the overall measurement error.

4. HART 7 communication protocol

FCX-A IV series of pressure transmitters can communicate using the universal HART communication protocol.

By the use of the HART Device Description files, HART compatible devices can communicate with any FCX-A IV transmitter.

5. Application flexibility

Various options are available to address most of the process industry applications, including:

- Full range of hazardous area approvals
- Built-in RFI filter and lightning arrester
- 5 digits local indicator with engineering unit
- Stainless steel electronics housing
- Wide selection of materials
- High temperature, high vacuum seals

6. Programmable output Linearization Function

The output signal can be linearized using up to 14 pairpoints.

7. Burnout current flexibility

The burnout current value can be adjusted in the ranges of [3.4 ; 3.8] and [20.8 ; 22.5] mA and can be compliant with NAMUR NE43 recommendations.

8. Contactless local adjustment

An optional local configurator with 3 magnetic switches allows to configure the transmitter without opening the indicator cover (flameproof approvals for hazardous locations).



The magnetic pen is required to enable the 3 magnetic switches (Please refer to the "Accessories" section).

FUNCTIONAL SPECIFICATIONS

Type:

- FKB : gauge pressure transmitter with remote seal
- FKD : differential pressure transmitter with remote seal
- FKM : absolute pressure transmitter with remote seal

Service:

Liquid, gas, or vapour

Span, range and overrange limit:

Model	Span limits		Range limits
	Minimum	Maximum	
	FKD		
	[kPa]	[kPa]	[kPa]
FKD□□3	0.32	32	±32
FKD□□5	1.3	130	±130
FKD□□6	5	500	±500
FKD□□8	30	3000	±3000
FKD□□9*	200	20000	±20000
	FKB		
	[kPa]	[kPa]	[kPa]
FKB□□1	1.3	130	-100 to +130
FKB□□2	5	500	-100 to +500
FKB□□3	30	3000	-100 to +3000
FKB□□4	100	10000	-100 to +10000
FKB□□5	500	50000	-100 to +50000
	FKM		
	[kPa abs]	[kPa abs]	[kPa abs]
FKM□□1	1.6	16	0 to +16
FKM□□2	1.3	130	0 to +130
FKM□□3	5	500	0 to +500
FKM□□4	30	3000	0 to +3000
FKM□□5	100	10000	0 to +10000

Remark: Span higher than 1/10 of the URL is recommended for optimal accuracy.

Important: For FKD□49, the maximum possible overload pressure on LP side must be ≤ 100 bar. The accuracy is not guaranteed when when used with negative DP.

Output signal:

4-20 mA with HART communication protocol.

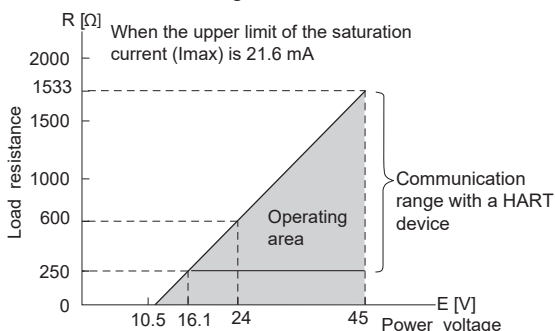
Power supply:

10.5 to 45 V DC at transmitter terminals.

10.5 to 32 V DC with the optional arrester.

Refer to hazardous location table for specific limitations

Load limitations: see figure below



Note 1 : The load resistance varies with the upper limit of the saturation current [I max]

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

Note 2 : For communication with a HART device, a minimum load of 250 Ω is required.

Hazardous locations:

Marking (Digit 10 th)	Protection type	
ATEX	K	Intrinsic Safety "i"
		Ex II1 G/D
		Ex ia IIC T4 Ga (Ta: -40°C to +60°C)
		Ex ia IIC T5 Ga (Ta: -40°C to +50°C)
		Ex ia IIIC T ₂₀₀ 135°C Da (Ta: -40°C to +60°C)
		Ex ia IIIC T ₂₀₀ 100°C Da (Ta: -40°C to +50°C)
		Ui = 28Vdc, li = 110mA, Pi = 0.77W
		Ci = 14.9nF (without optional Arrester)
		Ci = 26.0nF (with optional Arrester)
		Li = 0.181mH
		IP66/67
	X	Flameproof Enclosure "d"
		Ex II2 G
		Ex db IIC T6...T4 Gb
		Temperature class
		Ambient temperature
		T6 -40°C to +65°C
		T5 -40°C to +85°C
		T4 -40°C to +60°C
		IP66/67
	M	Combination (K) + (X) pending
IECEx	T	Intrinsic Safety "i"
		Ex ia IIC T4 Ga (Ta: -40°C to +60°C)
		Ex ia IIC T5 Ga (Ta: -40°C to +50°C)
		Ex ia IIIC T ₂₀₀ 135°C Da (Ta: -40°C to +60°C)
		Ex ia IIIC T ₂₀₀ 100°C Da (Ta: -40°C to +50°C)
		Ui = 28Vdc, li = 110mA, Pi = 0.77W
		Ci = 14.9nF (without optional Arrester)
		Ci = 26.0nF (with optional Arrester)
		Li = 0.181mH
		IP66/67
	R	Flameproof Enclosure "d"
		Ex db IIC T6...T4 Gb
		Temperature class
		Ambient temperature
		T6 -40°C to +65°C
		T5 -40°C to +85°C
		T4 -40°C to +60°C
		IP66/67
	N	Combination (T) + (R) pending

cCSAus pending	J	Intrinsic Safety/Non-Incendive
		IS Class I Division 1 Groups ABCD Ex ia
		Class II Groups EFG, Class III
		NI Class I Division 2 Groups ABCD
		T4 (-40°C ≤ Ta ≤ +60°C)
		T5 (-40°C ≤ Ta ≤ +50°C)
		Ui = 28Vdc, li = 110mA, Pi = 0.77W
		Ci = 14.9nF (without optional Arrester)
	E	Ci = 26.0nF (with optional Arrester)
		Li = 0.181mH
		Flameproof Enclosure
		XP Class I Division 1 Groups CD
		Class II Groups EFG, Class III
		T6 (-40°C ≤ Ta ≤ +65°C)
		T5 (-40°C ≤ Ta ≤ +85°C)
		T4 (-40°C ≤ Ta ≤ +60°C)
	L	Vmax = 45Vdc
		Combination (J) + (E)

Configuration:

Configuration of the FCX-A IV series of pressure transmitters can be carried out by either using a HART device or the optional local configurator.

A third party HART device can be used in combination with Fuji Electric FCX-A IV HART Device Description files. (<https://fieldcommgroup.org>).

Functions		HART Protocol		local configurator	
		Display	Set	Display	Set
Tag Nb		✓	✓	✓	✓
Model Nb		✓	✓	✓	✓
Serial Nb & Software revision		✓	—	✓	—
Engineering units		✓	✓	✓	✓
Upper Range Value		✓	—	✓	—
Measuring Range		✓	✓	✓	✓
Damping		✓	✓	✓	✓
Output signal type	Linear	✓	✓	✓	✓
	Square Root	✓	✓	✓	✓
Burnout current		✓	✓	✓	✓
Calibration		✓	✓	✓	✓
Output Adjust		—	✓	—	✓
Measuring Value		✓	—	✓	—
Self Diagnosis		✓	—	✓	—
External Adj Screw Lock		✓	✓	✓	✓
Transmitter Display		✓	✓	✓	✓
Linearization		✓	✓	✓	✓
Rerange		✓	✓	✓	✓
Saturation Current		✓	✓	✓	✓
Write Protect		✓	✓	✓	✓
History		✓	✓	✓	✓
— Calibration History		✓	✓	✓	✓
— Ambient T° History		✓	—	✓	—

Zero and span adjustment:

Zero and span are remotely adjustable by a HART device or locally by the local configurator or the external adjustment screw.

Damping:

The damping time constant can be adjusted within the range of [0.04 to 32] seconds.

Zero elevation/suppression:

Zero can be adjusted within the range of ±100% of the URL of the sensor.

Normal/reverse action:

Selectable by range setting

Local indicator:

Optional 5-digits LCD unit or local configurator with 3 magnetic switches and push-buttons.

A magnetic pen is required to enable this local configurator function.

(Please refer to the ACCESSORIES section.)

Saturation currents:

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

Upper limit: 20.0 to 21.6mA, Default value: 20.8mA

Burnout direction and output current:

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

When "Output Hold":

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

When "Output Overscale":

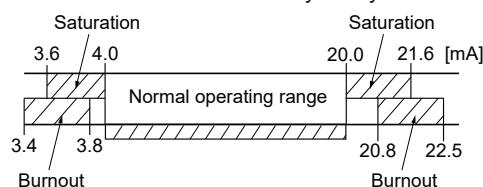
The output signal is set within the range of [20.8 to 22.5] mA, Default value: 21.6mA

When "Output Underscale":

The output signal is set within the range of [3.4 to 3.8] mA, Default value: 3.6mA

IEC 61511 considerations:

For safety applications, the "Output Hold" MUST NOT be used. Only "Output Overscale" and "Output Underscale" must be used to clearly notify a "failure" state.

**Loop-check/fixed output current:**

The transmitter can be configured to provide a constant output signal from 3.4 up to 22.5 mA.

Temperature limit:

Ambient:

-40 to +85°C

-20 to +80°C (with optional LCD unit)

-40 to +60°C (with optional arrester)

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

Process:

According to the filling fluid. Please refer to remote seal datasheet.

Storage: -40 to +90°C

Humidity limit:

0 to 100% RH (Relative Humidity)

PERFORMANCE SPECIFICATIONS

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

Accuracy rating:

(including linearity, hysteresis, and repeatability)

For spans > 1/10 of URL:

± 0.065% of calibrated span (FKB & FKD models)

± 0.1% of calibrated span for FKB□□5V6 model

± 0.2% of calibrated span for FKM model

For span < 1/10 of URL:

± (0.015 + 0.005 x URL/span) % of span (FKB & FKD model)

± (0.1 + 0.01 x URL/span) % of span (FKM model)

Stability:

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

Linearity:

0.05% of calibrated span (FKB & FKD models)

0.1% of calibrated span (FKM model)

Temperature effect:

Effect per 28°C change within the range of - 40°C and +85°C

FKM model:

Zero shift:

±(0.125 + 0.1 x URL/span) % of URL

Total effect:

±(0.15 + 0.1 x URL/span) % of URL

FKB & FKD models:

Zero shift:

±(0.075 + 0.0125% URL/span) %

Total effect:

±(0.095 + 0.0125 URL/span) %

Static pressure effect (FKD model):

Zero shift: ± 0.035% of URL for 69 bar

Overrange effect (FKB & FKM models):

Zero shift:

±0.2% of URL, for any overrange pressures (limited to the max. overrange pressure)

Overrange effect (FKD model):

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

Supply voltage effect:

Less than 0.005% of calibrated span per 1 V

RFI effect:

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

Update rate:

40 msec

Turn on time:

6 sec

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

Time constant: 300 msec (FKD span code "3")

Time constant: 200 msec (others spans and FKB)

Dead time:

60 msec

Response time = time constant + dead time

Electromagnetic compatibility:

FCX-A IV transmitters are in accordance with the following harmonized standards:

EN 61326-1

EN 61326-2-3

EN 61326-3-1

Dielectric strength:

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

Insulation resistance:

More than 100 MΩ / 500 V DC.

Internal resistance for external field indicator:

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

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

According to Article 4.3

PHYSICAL SPECIFICATIONS

Electrical conduit connections:

1/2-14 NPT, M20 × 1.5 or Pg13.5

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, Monel, Tantalum

Non-wetted parts material:

Electronics housing:

Low copper die-cast aluminum alloy with polyester coating or SS 316.

Bolts and nuts:

Carbon Steel ($P \leq 500$ bar)

SS 316L ($P \leq 100$ bar)

SS 660 ($P \leq 500$ bar)

Cell filling fluid :

Silicone oil

Mounting bracket: SS 316L

Environmental protection:

IEC IP66 & IP67 and Type 4X

Mounting:

DN50(2") pipe or wall mounting using the mounting bracket.

Rigid mounting without the mounting bracket.

Mass {weight}:

Refer to outline dimensions according type and model.

Diaphragm seal (s):

Refer to diaphragm seal specifications.

OPTIONAL FEATURES

Local indicator:

An optional 5 digits indicator with engineering units is available.

A local configurator can be carried out using the 3 magnetic switches and push-buttons.

A separately ordered magnet pen is required for adjustment using the magnetic switches. Please refer to the "Accessories" section.

Arrester:

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

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

Tag plate:

An extra stainless steel tag plate with customer tag data

is wired to the transmitter.

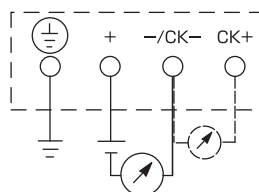
ACCESSORIES

Magnet pen:

To be used with the 3 push -buttons optional indicator.

Order code: ZZP*TQ507742C1

CONNECTION DIAGRAM



MODEL CODE SYMBOLS -FKB-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	DESCRIPTION
F	K	B				V	6	-				Y	-	0	-	
																Type
																Gauge pressure transmitter with remote seal - Smart, 4-20 mA with HART communication protocol
																Connections
																Conduit connection
																Enclosure type
																1/2 - 14NPT
																Pg 13.5
																M 20x 1.5
																1/2" - 14 NPT
																Pg 13.5
																M 20 x 1,5
																(1) Diaphragm seal rating
																PN25
																PN 20 - 150 lbs
																PN 50 - 300 lbs
																PN 40
																PN 16
																PN 100 - 600 lbs
																PN 150 - 900 lbs
																PN 250 - 1500 lbs
																PN 420 - 2500 lbs
																(2) Measuring range
																(3) 0 ... 0.013 to 1.3 barg / 0...0.19 to 18.85 psig
																0 ... 0.05 to 5 barg / 0...0.73 to 72.5 psig
																0 ... 0.3 to 30 barg / 0...4.35 to 435 psig
																0 ... 1 to 100 barg / 0...14.5 to 1450 psig
																0 ... 5 to 500 barg / 72.5 to 7251 psig
																Design version
																Indicator
																Arrester
																none
																None
																none
																Yes
																digital, 0-100%
																None
																digital, Custom scale
																digital, 0-100%
																Yes
																digital, Custom scale
																digital, 0-100% (Local configurator)
																None
																digital, Custom scale (Local configurator)
																digital, 0-100% (Local configurator)
																Yes
																digital, Custom scale (Local configurator)
																Hazardous location approvals
																None
																(4) ATEX - Flameproof
																ATEX - Intrinsic Safety
																(4) ATEX - Combination Flameproof and Intrinsic Safety
																pending
																(4) cCSAus - Explosion proof
																pending
																cCSAus - Intrinsic Safety and Non Incendive
																pending
																(4) cCSAus - Combination Explosion proof, Intrinsic Safety and Non Incendive
																pending
																(4) IECEx - Flameproof
																IECEX - Intrinsic Safety
																(4) IECEx - Combination Flameproof and Intrinsic Safety
																pending
																(4) IECEx - ATEX - cCSAus - Explosion/Flameproof, Intrinsic Safety and Non Incendive pending
																(5) Mounting design
																Ambient temperature correction
																Capillary
																Rigid - Long design (in line)
																Transmitter and diaphragm seal assembly
																Rigid - Short design (90°)
																Capillary
																Rigid - Long design (in line)
																Transmitter
																Rigid - Short design (90°)

Notes* :

- 1- The flange rating is according to the Maximum Working Pressure.
- 2- A Turn Down Ratio ≤ 10 is recommended for optimal performances.
- 3- For DN ≤ 50 please consult Fuji Electric regarding process conditions
- 4- Only with digit 4 = "T", "W", "6", "8"
- 5- For capillary version, the standard mounting bracket is provided. No mounting bracket with the rigid mounting design.
- 6- For rigid assembling, bolts and nuts are required. Please specify bolts and nuts material (12th digit) even if P ≤ 50 bar.
- 7- Standard cell filling fluid = silicone oil. Other filling fluids upon request.
- 8- When no code can be found in the current model code, place "*" in the corresponding digit code as well as in the 16th digit.

MODEL CODE SYMBOLS -FKD-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	DESCRIPTION
F	K	D				V	6									Type
																Differential pressure transmitter with remote seal - Smart, 4-20 mA with HART communication protocol
																Connections
																Conduit connection
																Enclosure type
																1/2 - 14NPT Pg 13.5 M 20x 1.5
																"L" shape
																1/2" - 14 NPT Pg 13.5 M 20 x 1,5
																"T" shape
																(1) Diaphragm seal rating
																PN25
																PN 20 - 150 lbs
																PN 50 - 300 lbs
																PN 40
																PN 16
																PN 100 - 600 lbs
																PN 150 - 900 lbs
																PN 250 - 1500 lbs
																PN 420 - 2500 lbs
																(2) Measuring range
																(3) 0 ... 3,2 to 320 mbar / 0...32 to 3200 mm WC
																(3) 0 ...13 to 1300mbar / 0...0.13 to 13 m WC
																0 ...50 to 5000 mbar / 0...0.5 to 50 m WC
																0...0.3 to 30 bar / 0...3 to 300 m WC
																0...5 to 200 bar / 0...50 to 2000 m WC
																Design version
																Indicator
																Arrester
																none
																None
																none
																Yes
																digital, 0-100%
																None
																digital, Custom scale
																digital, 0-100% √ output
																digital, 0-100%
																Yes
																digital, Custom scale
																digital, 0-100% √ output
																digital, 0-100% (Local configurator)
																None
																digital, Custom scale (Local configurator)
																digital, 0-100% (Local configurator)
																digital, 0-100% (Local configurator)
																digital, Custom scale (Local configurator)
																digital, 0-100% (Local configurator)
																digital, Custom scale (Local configurator)
																Hazardous location approvals
																None
																(4) ATEX - Flameproof
																ATEX - Intrinsic Safety
																(4) ATEX - Combination Flameproof and Intrinsic Safety
																pending
																(4) cCSAus - Explosion proof
																pending
																cCSAus - Intrinsic Safety and Non Incendive
																pending
																(4) cCSAus -Combination Explosion proof, Intrinsic Safety and Non Incendive
																pending
																(4) IECEx - Flameproof
																IECEEx - Intrinsic Safety
																(4) IECEx - Combination Flameproof and Intrinsic Safety
																pending
																(4) IECEx - ATEX - cCSAus - Explosion/flameproof, Intrinsic Safety and Non Incendive
																pending
																(5) Assembling design
																Ambient temperature correction
																Capillary on HP side
																Transmitter and diaphragm seal assembly
																Capillary on HP & LP side
																(6) Rigid short design on HP & capillary on LP side
																Capillary on HP side
																Transmitter
																Capillary on HP & LP side

Notes* :

- 1- The flange rating is according to the Maximum Working Pressure.
- 2- A Turn Down Ratio ≤ 10 is recommended for optimal performances.
- 3- For DN ≤ 50 please consult Fuji Electric regarding process conditions
- 4- Only with digit 4 = "T", "W", "6", "8"
- 5- For capillary version, the standard mounting bracket is provided. No mounting bracket with the rigid mounting design.
- 6- For rigid assembling, bolts and nuts are required. Please specify bolts and nuts material (12th digit) even if P ≤ 50 bar.
- 7- Standard cell filling fluid = silicone oil. Other filling fluids upon request.
- 8- When no code can be found in the current model code, place "*" in the corresponding digit code as well as in the 16th digit.

MODEL CODE SYMBOLS -FKM-

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	DESCRIPTION
F	K	M				V	6	-				Y	-	0	-	
																Type
																Absolute pressure transmitter with remote seal - Smart, 4-20 mA with HART communication protocol
																Electrical conduit
																Enclosure type
																1/2 - 14NPT
																Pg 13.5
																M 20x 1.5
																1/2" - 14 NPT
																Pg 13.5
																M 20 x 1,5
																(1) Diaphragm seal rating
																PN25
																PN 20 - 150 lbs
																PN 50 - 300 lbs
																PN 40
																PN 16
																PN 100 - 600 lbs
																(2) Measuring range
																0 ... 0.016 to 0.160 bar abs / 0...0.23 to 2.32 psi abs
																0 ... 0.013 to 1.30 bar abs / 0...0.19 to 18.85 psi abs
																0 ... 0.05 to 5.00 bar abs / 0...0.73 to 72.52 psi abs
																0 ... 0.3 to 30 bar abs / 0...4.35 to 435.11 psi abs
																0 ... 1 to 100 barg / 0...14.5 to 1450.38 psi abs
																Design version
																Indicator
																Arrester
																none
																None
																none
																Yes
																digital, 0-100%
																None
																digital, Custom scale
																digital, 0-100%
																Yes
																digital, Custom scale
																digital, 0-100% (Local configurator)
																None
																digital, Custom scale (Local configurator)
																digital, 0-100% (Local configurator)
																Yes
																digital, Custom scale (Local configurator)
																Hazardous location approvals
																None
																(4) ATEX - Flameproof
																ATEX - Intrinsic Safety
																(4) ATEX - Combination Flameproof and Intrinsic Safety
																pending
																(4) cCSAus - Explosion proof
																pending
																cCSAus - Intrinsic Safety and Non Incendive
																pending
																(4) cCSAus - Combination Explosion proof, Intrinsic Safety and Non Incendive
																pending
																(4) IECEx - Flameproof
																IECEx - Intrinsic Safety
																(4) IECEx - Combination Flameproof and Intrinsic Safety
																pending
																(4) IECEx - ATEX - cCSAus - Explosion/Flameproof, Intrinsic Safety and Non Incendive
																pending
																(5) Mounting design
																Ambient temperature correction
																Capillary
																Transmitter and diaphragm seal assembly
																(6) Rigid - Long design (in line)
																Rigid - Short design (90°)
																Capillary
																Transmitter
																(6) Rigid - Long design (in line)
																Rigid - Short design (90°)

[illegible]

Notes* :

- 1- The flange rating is according to the Maximum Working Pressure.
- 2- A Turn Down Ratio ≤ 10 is recommended for optimal performances.
- 3- For DN ≤ 50 please consult Fuji Electric regarding process conditions
- 4- Only with digit 4 = "T", "W", "6", "8"
- 5- For capillary version, the standard mounting bracket is provided. No mounting bracket with the rigid mounting design.
- 6- For rigid assembling, bolts and nuts are required. Please specify bolts and nuts material (12th digit) even if $P \leq 50$ bar.
- 7- Standard cell filling fluid = silicone oil. Other filling fluids upon request.
- 8- When no code can be found in the current model code, place "*" in the corresponding digit code as well as in the 16th digit.

REMOTE SEAL DIAPHRAGMS

Fuji Electric remote seal diaphragms are dedicated to accurately measure level, density, flow and line pressure in heavy process conditions.

The use of remote seal diaphragms avoids the measuring cell of the transmitter to be directly in contact with the process conditions.

The various architectures and the full welded construction provide to the Fuji Electric remote seal diaphragm product offer an excellent reliability in harsh processing conditions such as high static pressure, temperature and corrosiveness as well as viscous, clogging or abrasive processes.

FEATURES

1. Construction

Connection of the remote seal to the measuring cell diaphragms can be done either by a rigid (direct) or capillary architectures.

The full welded Fuji Electric design allows a free of gasket path between the remote seal and the differential or gauge measuring cell of the FCX-A IV pressure transmitters.

Depending the nature of the process, specific filling fluids are available to ensure the optimal transmission of the process pressure to the measuring cell.

2. Operating principle

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

3. Wide variety of materials selection

Depending the process conditions, wetted or non-wetted parts and filling fluids can be selected thanks to the model code definition.

Wetted parts:

SS 316L, Tantalum, Hastelloy, Monel, Titanium, Zirconium, SS 316L with Gold or PFA coating.

Non wetted parts:

SS 316L

Filling fluids:

Standard silicone, fluorinated, sanitary, high temperature and vacuum specific oils.

For specific process conditions, please consult Fuji Electric.

4. Diaphragm seal types

According to the connection type and operating conditions different seal types can be defined:

Flush mounting design from DN40 to DN100.

Seals with extensions (50 to 200 mm).

Flanged, screwed or welded neck adapters

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

For specifics needs, please consult Fuji Electric.



FUNCTIONAL SPECIFICATIONS

Remote seal diaphragm assembling:

The remote seal can be assembled on the transmitter either by a direct (rigid) connection (as for level measurement at the bottom of a tank) or by capillary (distant measuring point, high temperature process).

The rigid assembling can be either "long design" (in line) or "short design" (90°) as shown in the outline dimension drawings.

	Rigid mounting	Capillary mounting
FKB	Short or long design	HP side
FKM	Short or long design	HP side
FKD	Short design on HP side and capillary on LP side	HP and LP side HP 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 protection sheath:

PVC (-10 °C...+80 °C)

Stainless steel (-40 °C...+350 °C)

Type of process connections:

- Flush mounting
- With diaphragm extension
- With adapter (flanged, screwed or welded).

The adapter is dedicated either to adapt the remote seal connection to a specific process connection or to increase the diameter of the membrane and the sensitivity of the measurement

Temperature limits:

Ambient temperature:

-40 to 85°C for transmitter

Process temperature:

Rigid assembly: -40 to 150°C ($P \geq 1$ atm)

Capillary assembly: Refer to the "Filling fluids and temperatures" section

Pressure limits:

Working pressure:

Limited by the smallest value between the nominal flange rating of the seal diaphragm and the maximum working pressure of the transmitter.

Vacuum limit :

Depends on the limit of the measuring cell and the filling fluid of the remote seal. For the differential or gauge pressure transmitter with the silicone oil, the vacuum limit is 20 Torr or 27 mbar abs.

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

For process pressure < 20 Torr, please consult Fuji Electric.

PERFORMANCE SPECIFICATIONS

To evaluate the global performances, both the transmitter and the remote seal diaphragm performances must be considered under the reference conditions : standard silicone oil filling, SS 316L seal diaphragm, 4-20 mA output in linear mode.

Accuracy:

Assembling 1 or 2 remote seal diaphragms on a transmitter increases the accuracy error at reference conditions by 0,1% of the span.

Ambient temperature effect:

Effect when only transmitter is corrected.

(See 11th model code G, S, T of the FKB and FKM model codes and code G, H of the FKD model code).

Seals	Transmitters	Effect (mbar/10°C)			
		FKB/FKM Gauge/Abs. pressure	Capillary (/m)	FKD Differential pressure	Capillary (/m)
DN 50/2" - SS 316L diaphragm		2.03	1.5	0.48	0.32
DN 80/3" - SS 316L diaphragm		0.11	0.08	0.04	0.03
DN80/3" - other diaphragm materials		0.22	0.2	0.05	0.07
DN100/4" - SS 316L diaphragm		0.04	0.03	0.02	0.01
Adaptor - SS 316L diaphragm		0.11	0.08	0.04	0.03

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

Effect when both the transmitter and the seal assembly are corrected. (See codes B,C,L,M digit 11 of the FKB, FKD and FKM model codes).

The correction of the zero drift can be done at factory level on the complete system (transmitter and remote seals) by an additional temperature correction operation.

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

Process temperature effect:

Seals	Transmitters	Effect (mbar/10°C)	
		FKB/FKM Gauge pressure	FKD Differential pressure
DN 50/2" SS 316L diaphragm		1.24	0.5
DN 80/3" SS 316L diaphragm		0.17	0.09
DN80/3" other diaphragm materials		0.73	0.22
DN100/4" SS 316L diaphragm		0.08	0.05
Adaptor SS 316L diaphragm		0.17	0.09

Static pressure effect

(Differential pressure transmitter FKD with DN80 and DN100 stainless steel diaphragm seals).

Zero shift: $\pm 0.2\%$ of URL for flange rating, up to 40 bar

Response time: (mean values)

Filling fluid	7th model code	Response time constant (sec)	
		0 to 320 mbar	0 to 1.3 bar
Standard silicone oil	Y, G, N	0.15	0.037
Fluorinated oil	W, A, D	0.17	0.04
Oil for vacuum or high temperature	U, X	0.25	0.065

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 fluids and temperatures:

7th model code	Designation	Temperature range (°C)		Density (25°C)
		P abs ≥ 1 bar	P abs < 1 bar	
Y, G, N	Silicone oil	-40 to 180	-40 to 120	0.95
W, D, A	Fluorinated oil	-20 to 200	-20 to 120	1.84
F	Sanitary oil	-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.

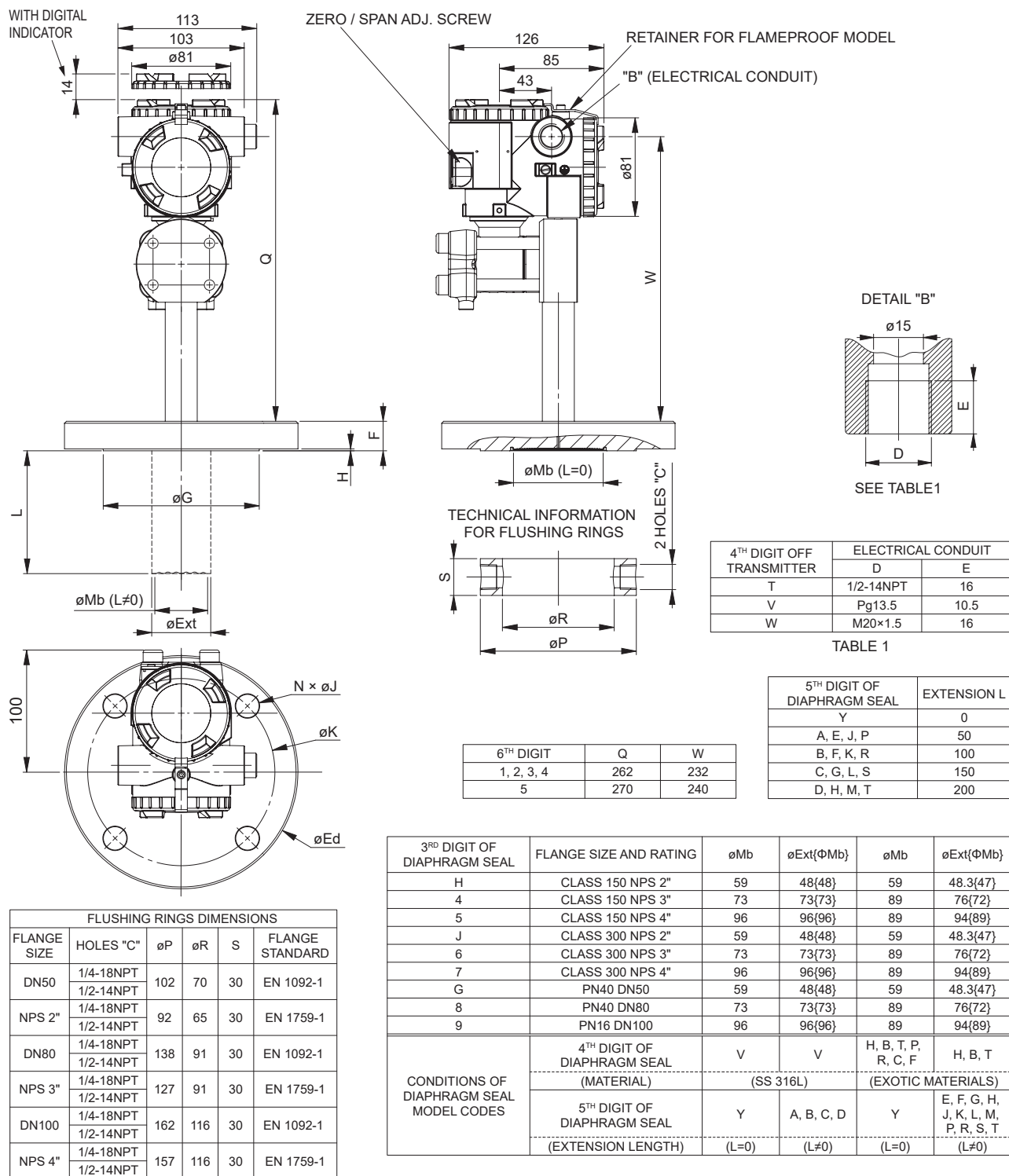
MODEL CODE SYMBOLS -S-

1	2	3	4	5	6	7	8					
S							-	DESCRIPTION				
								Remote seal diaphragms				
								Flange / Capillary connection				
A								Axial				
R								Radial - Not possible with rigid assembling design(6th code = "R")				
W								Wafer type - Not possible with rigid assembling design(6th code = "R")				
							(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				
G							(2)	DIN PN40 DN50				
U								PN 25 / DN 50 - coupling nut	DIN 11851	Digit 4 = "V" only -		
V								PN 40 / DN 50 -coupling nut	SMS	Digit 4 = "V" only		
W								PN40 DN50 - seal only	Clamp	Digit 4 = "V" only		
X								No dead volume	Sanitary	Digit 4 = "V" only		
A							(3)	Flange adaptor PN 40 DN 25		Digit 4 = "V" only - others upon request		
B							(3)	Flange adaptor ISO PN 20 DN 25 (1" - 150 ANSI)		Digit 4 = "V" only - others upon request		
C							(3)	Flange adaptor ISO PN 50 DN 25 (1" - 300 ANSI)		Digit 4 = "V" only - others upon request		
D							(3)	Flange adaptor PN 40 DN 40		Digit 4 = "V" only - others upon request		
E							(3)	Flange adaptor ISO PN 20 DN 40 (1"1/2 - 150 ANSI)		Digit 4 = "V" only - others upon request		
F							(3)	Flange adaptor ISO PN 50 DN 40 (1"1/2 - 300 ANSI)		Digit 4 = "V" only - others upon request		
S							(3)	Screwed 1/2 NPTE		Digit 4 = "V" only - others upon request		
								Diaphragm seal material				
								Diaphragm	Flange land face	Flange		
V								SS 316 L	SS 316 L	SS 316 L		
H								Hastelloy-C	Hastelloy-C			
B								Monel	Monel			
T								Tantalum	Tantalum			
P							(4)	Titanium	Titanium			
R							(4)	Zirconium	Zirconium			
C								SS 316 L + gold coat	SS 316 L			
F							(5)	SS 316L + PFA lining	SS 316 L + PFA lining			

(8)	*	special, no code available
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1. Standard : RF flange, stock finish. For other flange type and finishing, please consult Fuji Electric. Smooth finishing for material code H, B, T, P, R, F
2. For P > 1 bar. Please consult Fuji Electric regarding the process condition
3. Only for axial type (digit 2 = "A"), no extension possible
4. Maximum process temperature: 150 °C
5. Not possible with digit 7 = "V", "U" and "X"
6. Extension only with digit 3 = "4", "5", "6", "7", "8", "9", "H", "J" and "G". All wetted parts in the same material (diaphragm, extension and gasket surface)
7. Process temperature < 120 °C
8. When no code can be found for a digit value, place "" in the corresponding digit as well as in the 16th digit.

Gauge and absolute pressure transmitter FKB, FKM [<L shape>, rigid assembly, long design, flange with PN ≤ 50 bar]



WEIGHT :
TRANSMITTER ONLY : - 4.0 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

F K B □ □ □ V 6 - □ □ □ □ Y - 0 □

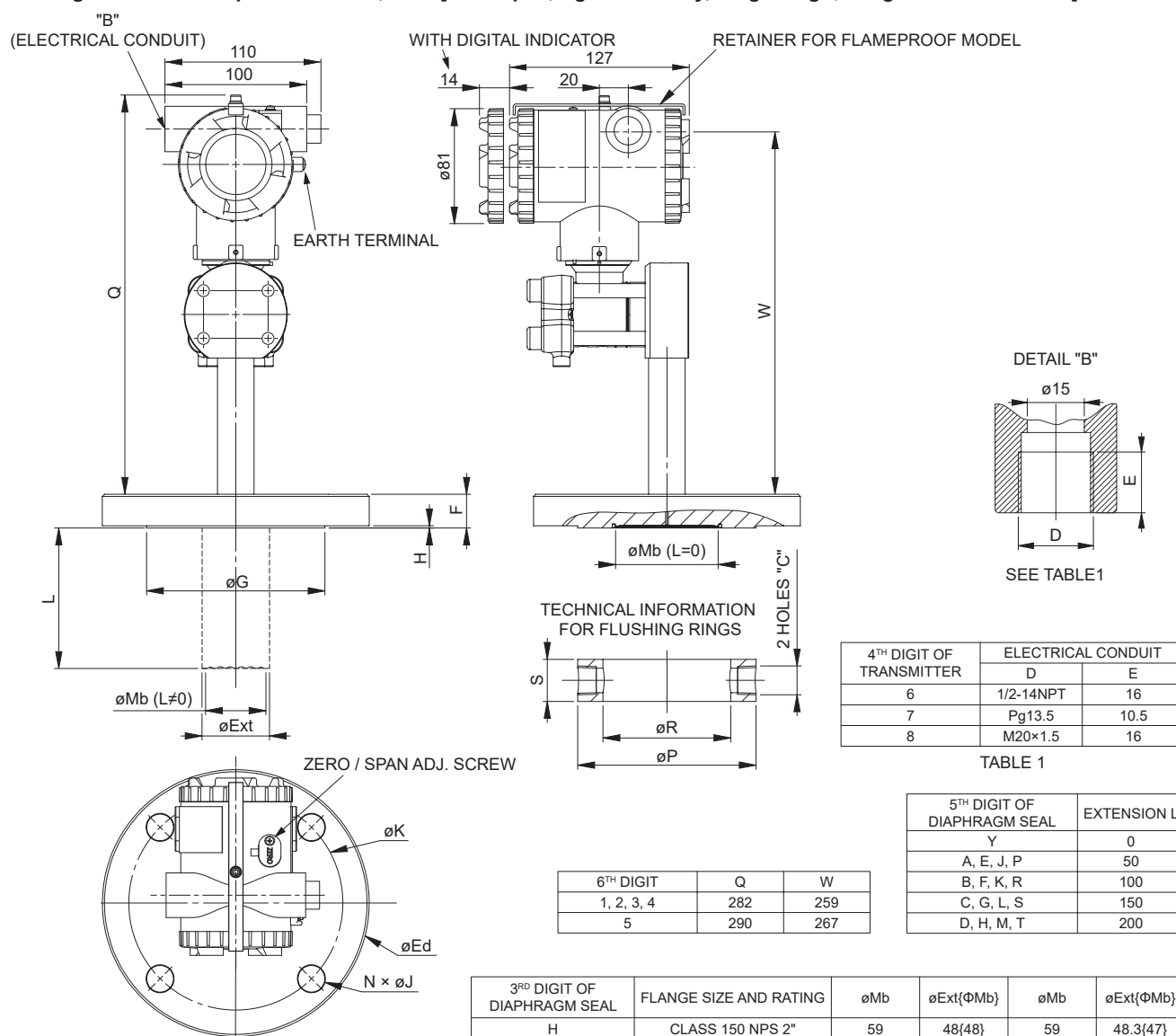
F K M

DIAPHRAGM SEAL MODEL CODE

1 2 3 4 5 6 7

S A □ □ □ R □

Gauge and absolute pressure: FKB, FKM [<T shape>, rigid assembly, long design, flange with PN ≤ 50 bar]



FLUSHING RINGS DIMENSIONS					
FLANGE SIZE	HOLES "C"	øP	øR	S	FLANGE STANDARD
DN50	1/4-18NPT 1/2-14NPT	102	70	30	EN 1092-1
NPS 2"	1/4-18NPT 1/2-14NPT	92	65	30	EN 1759-1
DN80	1/4-18NPT 1/2-14NPT	138	91	30	EN 1092-1
NPS 3"	1/4-18NPT 1/2-14NPT	127	91	30	EN 1759-1
DN100	1/4-18NPT 1/2-14NPT	162	116	30	EN 1092-1
NPS 4"	1/4-18NPT 1/2-14NPT	157	116	30	EN 1759-1

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øMb	øExt{ΦMb}	øMb	øExt{ΦMb}
H	CLASS 150 NPS 2"	59	48{48}	59	48.3{47}
4	CLASS 150 NPS 3"	73	73{73}	89	76{72}
5	CLASS 150 NPS 4"	96	96{96}	89	94{89}
J	CLASS 300 NPS 2"	59	48{48}	59	48.3{47}
6	CLASS 300 NPS 3"	73	73{73}	89	76{72}
7	CLASS 300 NPS 4"	96	96{96}	89	94{89}
G	PN40 DN50	59	48{48}	59	48.3{47}
8	PN40 DN80	73	73{73}	89	76{72}
9	PN16 DN100	96	96{96}	89	94{89}
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT OF DIAPHRAGM SEAL	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT OF DIAPHRAGM SEAL	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(L=0)	(L≠0)	(L=0)	(L≠0)

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øEd	F MIN	øG	H	N×øJ	øK	WEIGHT (kg)	FLANGE STANDARD
H	CLASS 150 NPS 2"	152	21	92	1.6	4×19	120.6	2.7	EN 1759-1
4	CLASS 150 NPS 3"	190	24	127	1.6	4×19	152.4	5.3	EN 1759-1
5	CLASS 150 NPS 4"	229	24	157	1.6	8×19	190.5	7.7	EN 1759-1
J	CLASS 300 NPS 2"	165	22.5	92	1.6	8×19	127	3.7	EN 1759-1
6	CLASS 300 NPS 3"	210	28.5	127	1.6	8×22.2	168.3	7.8	EN 1759-1
7	CLASS 300 NPS 4"	254	32	157	1.6	8×22.2	200	12.7	EN 1759-1
G	PN40 DN50	165	20	102	2	4×18	125	3.3	EN 1092-1
8	PN40 DN80	200	24	138	2	8×18	160	5.8	EN 1092-1
9	PN16 DN100	220	22	158	2	8×18	180	5.9	EN 1092-1

WEIGHT :
TRANSMITTER ONLY : - 4.0 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL
HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE

[illegible]

DIAPHRAGM SEAL MODEL CODE

1 2 3 4 5 6 7
S A R

WITH DIGITAL INDICATOR

113

103

Ø81

14

Q

W

37

57

L

ØG

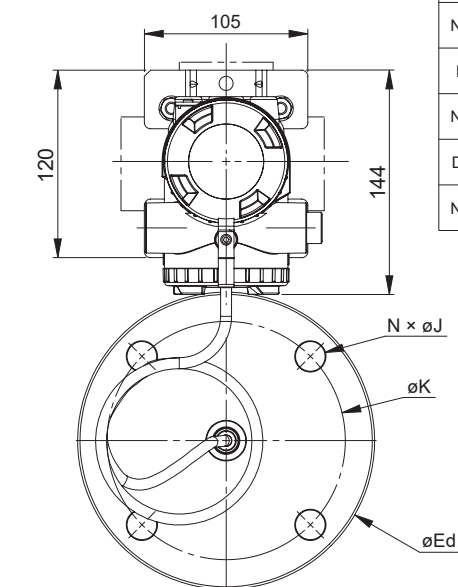
H

F

ØMb (L≠0)

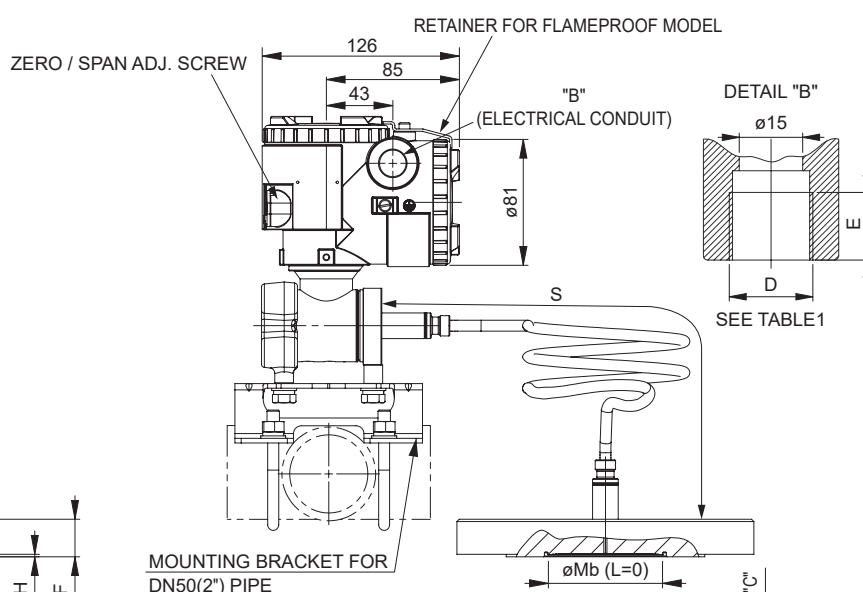
ØExt

ZERO /



5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST



FLUSHING RINGS DIMENSIONS					
FLANGE SIZE	HOLES "C"	øP	øR	S	FLANGE STANDARD
DN50	1/4-18NPT 1/2-14NPT	102	70	30	EN 1092-1
NPS 2"	1/4-18NPT 1/2-14NPT	92	65	30	EN 1759-1
DN80	1/4-18NPT 1/2-14NPT	138	91	30	EN 1092-1
NPS 3"	1/4-18NPT 1/2-14NPT	127	91	30	EN 1759-1
DN100	1/4-18NPT 1/2-14NPT	162	116	30	EN 1092-1
NPS 4"	1/4-18NPT 1/2-14NPT	157	116	30	EN 1759-1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

TABLE 1

6 TH DIGIT	CONDUIT CONNECTION	
	Q	W
1 2 3	171	198

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øMb	øExt{(ΦMb)}	øMb	øExt{(ΦMb)}
H	CLASS 150 NPS 2"	59	48{48}	59	48.3{47}
4	CLASS 150 NPS 3"	73	73{73}	89	76{72}
5	CLASS 150 NPS 4"	96	96{96}	89	94{89}
J	CLASS 300 NPS 2"	59	48{48}	59	48.3{47}
6	CLASS 300 NPS 3"	73	73{73}	89	76{72}
7	CLASS 300 NPS 4"	96	96{96}	89	94{89}
G	DIN PN40 DN50	59	48{48}	59	48.3{47}
8	DIN PN40 DN80	73	73{73}	89	76{72}
9	DIN PN16 DN100	96	96{96}	89	94{89}
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT OF DIAPHRAGM SEAL	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT OF DIAPHRAGM SEAL	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(L=0)	(L≠0)	(L=0)	(L≠0)

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øEd	F MIN	øG	H	N×øJ	øK	WEIGHT (kg)	FLANGE STANDARD
H	CLASS 150 NPS 2"	152	21	92	1.6	4×19	120.6	2.7	EN 1759-1
4	CLASS 150 NPS 3"	190	24	127	1.6	4×19	152.4	5.3	EN 1759-1
5	CLASS 150 NPS 4"	229	24	157	1.6	8×19	190.5	7.7	EN 1759-1
J	CLASS 300 NPS 2"	165	22.5	92	1.6	8×19	127	3.7	EN 1759-1
6	CLASS 300 NPS 3"	210	28.5	127	1.6	8×22.2	168.3	7.8	EN 1759-1
7	CLASS 300 NPS 4"	254	32	157	1.6	8×22.2	200	12.7	EN 1759-1
G	PN40 DN50	165	20	102	2	4×18	125	3.3	EN 1092-1
8	PN40 DN80	200	24	138	2	8×18	160	5.8	EN 1092-1
9	PN16 DN100	220	22	158	2	8×18	180	5.9	EN 1092-1

MODEL CODE

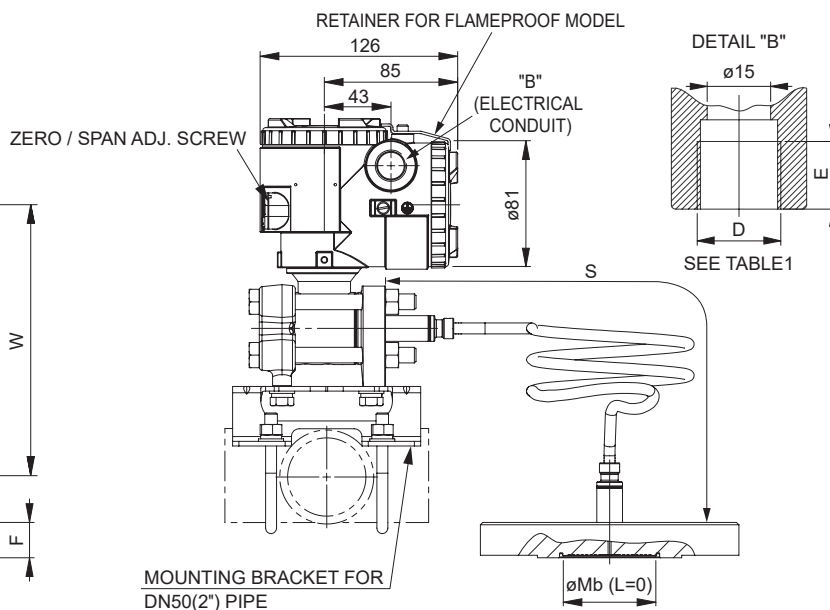
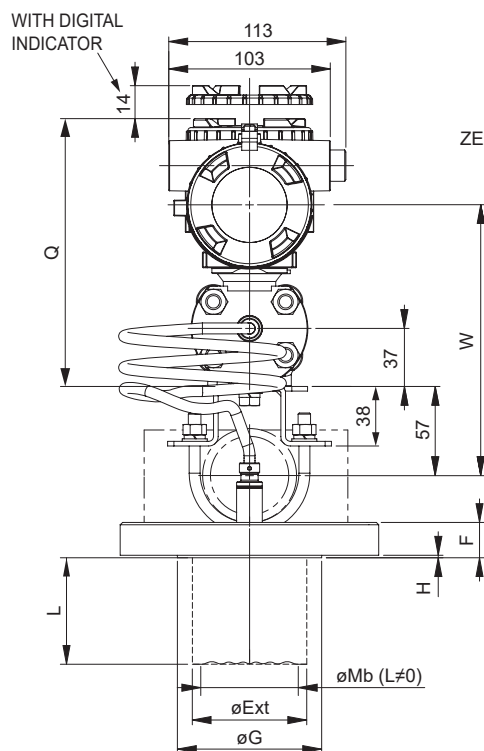
MAIN PART MODEL CODE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B	☐	☐	☐	V	6	-	☐	☐	☐	☐	Y	- 0 ☐
F	K	M												

DIAPHRAGM SEAL MODEL CODE

1	2	3	4	5	6	7
S	A		V	Y		

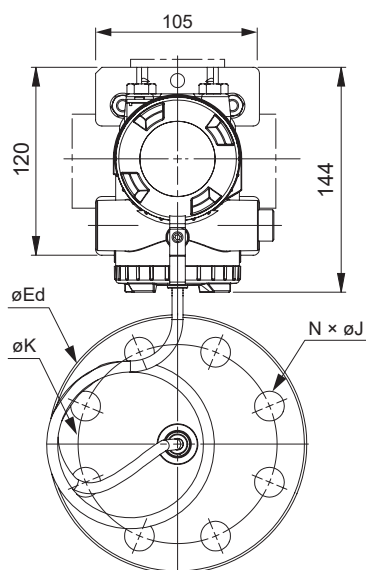
Gauge and absolute pressure: FKB, FKM [<L shape>, capillary assembly, flange with PN > 50 bar]



6 TH DIGIT	Q	W
1, 2, 3, 4	171	198
5	173	200

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20x1.5	16

TABLE 1



3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øMb	øExt{ΦMb}	øMb	øExt{ΦMb}
*	CLASS 600 (PN100) NPS 2"	59	48{48}	Please contact us	Please contact us
*	CLASS 900 (PN150) NPS 2"	59	48{48}		
*	CLASS 1500 (PN250) NPS 2"	59	48{48}		
*	CLASS 2500 (PN420) NPS 2"	59	48{48}		
*	DN50 PN100	59	48{48}		
*	CLASS 600 (PN100) NPS 3"	73	73{73}		
*	CLASS 900 (PN150) NPS 3"	73	73{73}		
*	CLASS 1500 (PN250) NPS 3"	73	73{73}		
*	CLASS 2500 (PN420) NPS 3"	73	73{73}		
*	DN80 PN100	73	73{73}		
*	CLASS 600 (PN100) NPS 4"	96	96{96}		
*	CLASS 900 (PN150) NPS 4"	96	96{96}		
*	CLASS 1500 (PN250) NPS 4"	96	96{96}		
*	CLASS 2500 (PN420) NPS 4"	96	96{96}		
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT OF DIAPHRAGM SEAL	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT OF DIAPHRAGM SEAL	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(l = 0)	(l ≠ 0)	(l = 0)	(l ≠ 0)

5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION L
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øEd	F MIN	øG	H	N×øJ	øK	WEIGHT (kg) (*)	FLANGE STANDARD
*	CLASS 600 (PN100) NPS 2"	165	31.8	92	6.4	8×19	127	5.7	EN 1759-1
*	CLASS 900 (PN150) NPS 2"	216	44.5	92	6.4	8×25.4	165.1	13.2	EN 1759-1
*	CLASS 1500 (PN250) NPS 2"								EN 1759-1
*	CLASS 2500 (PN420) NPS 2"	235	57.2	92	6.4	8×28.6	171.4	19.8	EN 1759-1
*	DN50 PN100	195	29	102	3	4×26	145	5.8	EN 1092-1
*	CLASS 600 (PN100) NPS 3"	210	38.5	127	6.4	8×22.2	168.3	11	EN 1759-1
*	CLASS 900 (PN150) NPS 3"	241	44.5	127	6.4	8×25.4	190.5	16.7	EN 1759-1
*	CLASS 1500 (PN250) NPS 3"	267	54	127	6.4	8×32	203.2	24.5	EN 1759-1
*	CLASS 2500 (PN420) NPS 3"	305	73.5	127	6.4	8×35	228.6	42.7	EN 1759-1
*	DN80 PN100	230	32	138	3	8×26	180	9	EN 1092-1
*	CLASS 600 (PN100) NPS 4"	273	45	157.2	6.4	8×25.4	216	21.5	EN 1759-1
*	CLASS 900 (PN150) NPS 4"	292	50.8	157.2	6.4	4×31.8	235	27.7	EN 1759-1
*	CLASS 1500 (PN250) NPS 4"	311	60.4	157.2	6.4	8×35	241.3	37	EN 1759-1
*	CLASS 2500 (PN420) NPS 4"	356	82.6	157.2	6.4	8×41.3	273	65.7	EN 1759-1

(*) For the extension length = 0 and material in SS 316L.

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL
HOUSING OPTION

MODEL CODE

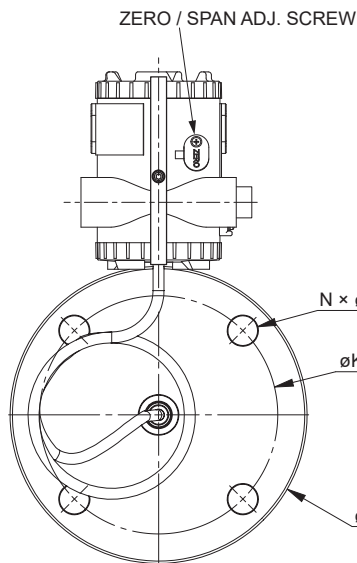
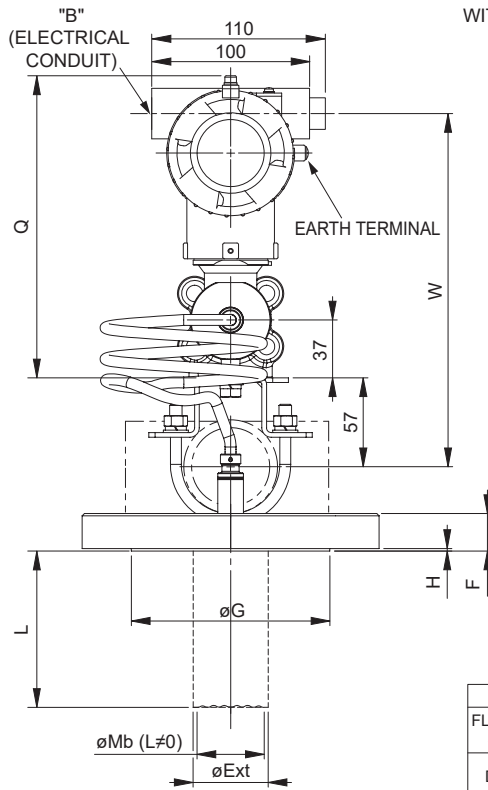
MAIN PART MODEL CODE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B	☐	☐	☐	V	6	-	☐	☐	☐	☐	Y	- 0 ☐
F	K	M												

DIAPHRAGM SEAL MODEL CODE

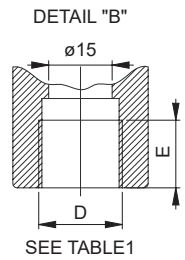
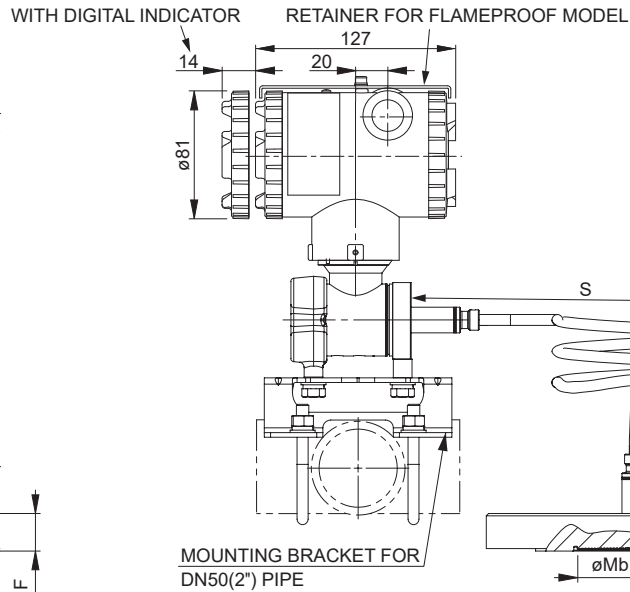
1	2	3	4	5	6	7
S	A					

Gauge and absolute pressure: FKB, FKM [<T shape>, capillary assembly, flange with PN ≤ 50 bar]

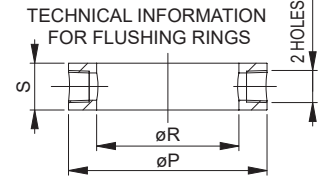


5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION L
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST



FLUSHING RINGS DIMENSIONS					
FLANGE SIZE	HOLES "C"	ØP	ØR	S	FLANGE STANDARD
DN50	1/4-18NPT	102	70	30	EN 1092-1
	1/2-14NPT				
NPS 2"	1/4-18NPT	92	65	30	EN 1759-1
	1/2-14NPT				
DN80	1/4-18NPT	138	91	30	EN 1092-1
	1/2-14NPT				
NPS 3"	1/4-18NPT	127	91	30	EN 1759-1
	1/2-14NPT				
DN100	1/4-18NPT	162	116	30	EN 1092-1
	1/2-14NPT				
NPS 4"	1/4-18NPT	157	116	30	EN 1759-1
	1/2-14NPT				



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

6 TH DIGIT	Q	W
1, 2, 3	190	225

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	ØMb	ØExt{ØMb}	ØMb	ØExt{ØMb}
H	CLASS 150 NPS 2"	59	48{48}	59	48.3{47}
4	CLASS 150 NPS 3"	73	73{73}	89	76{72}
5	CLASS 150 NPS 4"	96	96{96}	89	94{89}
J	CLASS 300 NPS 2"	59	48{48}	59	48.3{47}
6	CLASS 300 NPS 3"	73	73{73}	89	76{72}
7	CLASS 300 NPS 4"	96	96{96}	89	94{89}
G	PN40 DN50	59	48{48}	59	48.3{47}
8	PN40 DN80	73	73{73}	89	76{72}
9	PN16 DN100	96	96{96}	89	94{89}
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT OF DIAPHRAGM SEAL	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT OF DIAPHRAGM SEAL	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(L=0)	(L≠0)	(L=0)	(L≠0)

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	ØEd	F MIN	ØG	H	N×ØJ	ØK	WEIGHT (kg)	FLANGE STANDARD
H	CLASS 150 NPS 2"	152	21	92	1.6	4×19	120.6	2.7	EN 1759-1
4	CLASS 150 NPS 3"	190	24	127	1.6	4×19	152.4	5.3	EN 1759-1
5	CLASS 150 NPS 4"	229	24	157	1.6	8×19	190.5	7.7	EN 1759-1
J	CLASS 300 NPS 2"	165	22.5	92	1.6	8×19	127	3.7	EN 1759-1
6	CLASS 300 NPS 3"	210	28.5	127	1.6	8×22.2	168.3	7.8	EN 1759-1
7	CLASS 300 NPS 4"	254	32	157	1.6	8×22.2	200	12.7	EN 1759-1
G	PN40 DN50	165	20	102	2	4×18	125	3.3	EN 1092-1
8	PN40 DN80	200	24	138	2	8×18	160	5.8	EN 1092-1
9	PN16 DN100	220	22	158	2	8×18	180	5.9	EN 1092-1

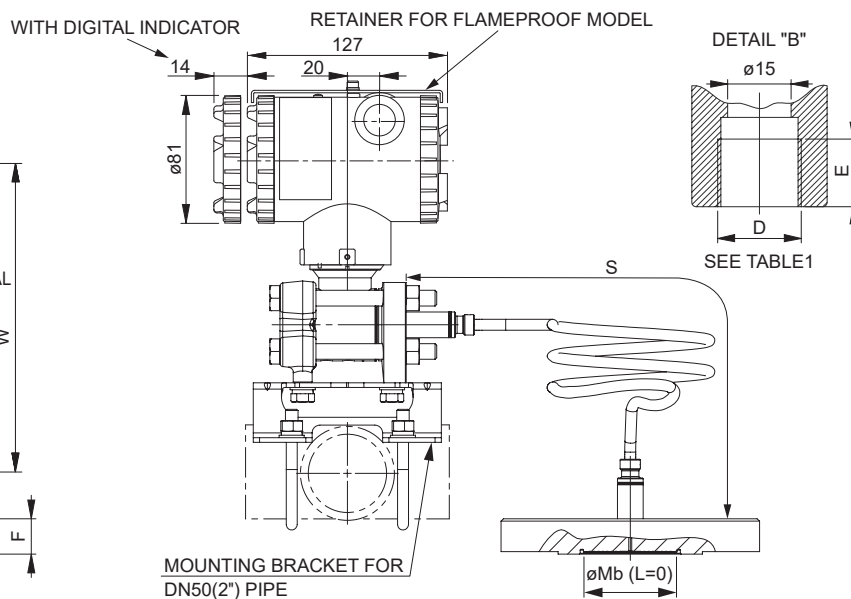
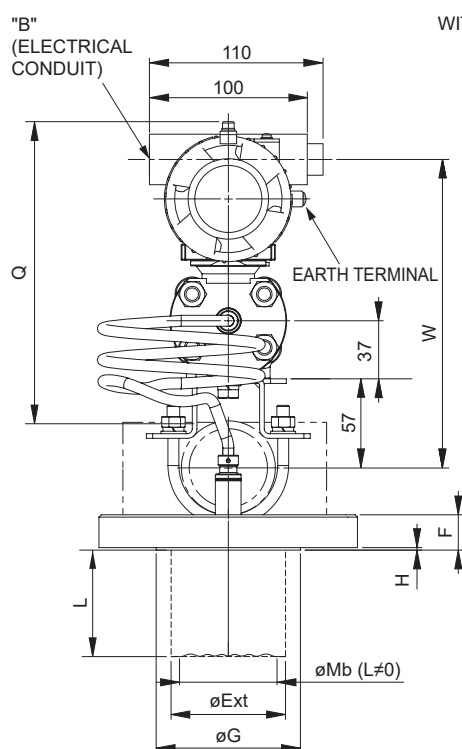
WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B	□	□	V	6	-	□	□	□	Y	-	0	□
F	K	M												

DIAPHRAGM SEAL MODEL CODE						
1	2	3	4	5	6	7
S	A	□	□	□	□	□

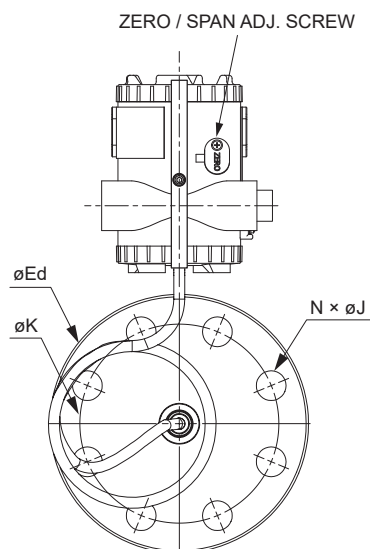
Gauge and absolute pressure: FKB, FKM [T shape], capillary assembly, flange with PN > 50 bar]



6 TH DIGIT	Q	W
1, 2, 3, 4	191	225
5	193	227

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20x1.5	16

TABLE 1



3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øMb	øExt{ΦMb}	øMb	øExt{ΦMb}
*	CLASS 600 (PN100) NPS 2"	59	48{48}	Please contact us	Please contact us
*	CLASS 900 (PN150) NPS 2"	59	48{48}		
*	CLASS 1500 (PN250) NPS 2"	59	48{48}		
*	CLASS 2500 (PN420) NPS 2"	59	48{48}		
*	DN50 PN100	59	48{48}		
*	CLASS 600 (PN100) NPS 3"	73	73{73}		
*	CLASS 900 (PN150) NPS 3"	73	73{73}		
*	CLASS 1500 (PN250) NPS 3"	73	73{73}		
*	CLASS 2500 (PN420) NPS 3"	73	73{73}		
*	DN80 PN100	73	73{73}		
*	CLASS 600 (PN100) NPS 4"	96	96{96}		
*	CLASS 900 (PN150) NPS 4"	96	96{96}		
*	CLASS 1500 (PN250) NPS 4"	96	96{96}		
*	CLASS 2500 (PN420) NPS 4"	96	96{96}		
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT OF DIAPHRAGM SEAL	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT OF DIAPHRAGM SEAL	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(L=0)	(L≠0)	(L=0)	(L≠0)

5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION L
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øEd	F MIN	øG	H	N×øJ	øK	WEIGHT (kg) (*)	FLANGE STANDARD
*	CLASS 600 (PN100) NPS 2"	165	31.8	92	6.4	8×19	127	5.7	EN 1759-1
*	CLASS 900 (PN150) NPS 2"	216	44.5	92	6.4	8×25.4	165.1	13.2	EN 1759-1
*	CLASS 1500 (PN250) NPS 2"								EN 1759-1
*	CLASS 2500 (PN420) NPS 2"	235	57.2	92	6.4	8×28.6	171.4	19.8	EN 1759-1
*	DN50 PN100	195	29	102	3	4×26	145	5.8	EN 1092-1
*	CLASS 600 (PN100) NPS 3"	210	38.5	127	6.4	8×22.2	168.3	11	EN 1759-1
*	CLASS 900 (PN150) NPS 3"	241	44.5	127	6.4	8×25.4	190.5	16.7	EN 1759-1
*	CLASS 1500 (PN250) NPS 3"	267	54	127	6.4	8×32	203.2	24.5	EN 1759-1
*	CLASS 2500 (PN420) NPS 3"	305	73.5	127	6.4	8×35	228.6	42.7	EN 1759-1
*	DN80 PN100	230	32	138	3	8×26	180	9	EN 1092-1
*	CLASS 600 (PN100) NPS 4"	273	45	157.2	6.4	8×25.4	216	21.5	EN 1759-1
*	CLASS 900 (PN150) NPS 4"	292	50.8	157.2	6.4	4×31.8	235	27.7	EN 1759-1
*	CLASS 1500 (PN250) NPS 4"	311	60.4	157.2	6.4	8×35	241.3	37	EN 1759-1
*	CLASS 2500 (PN420) NPS 4"	356	82.6	157.2	6.4	8×41.3	273	65.7	EN 1759-1

(*) For the extension length = 0 and material in SS 316L.

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL
HOUSING OPTION

MODEL CODE

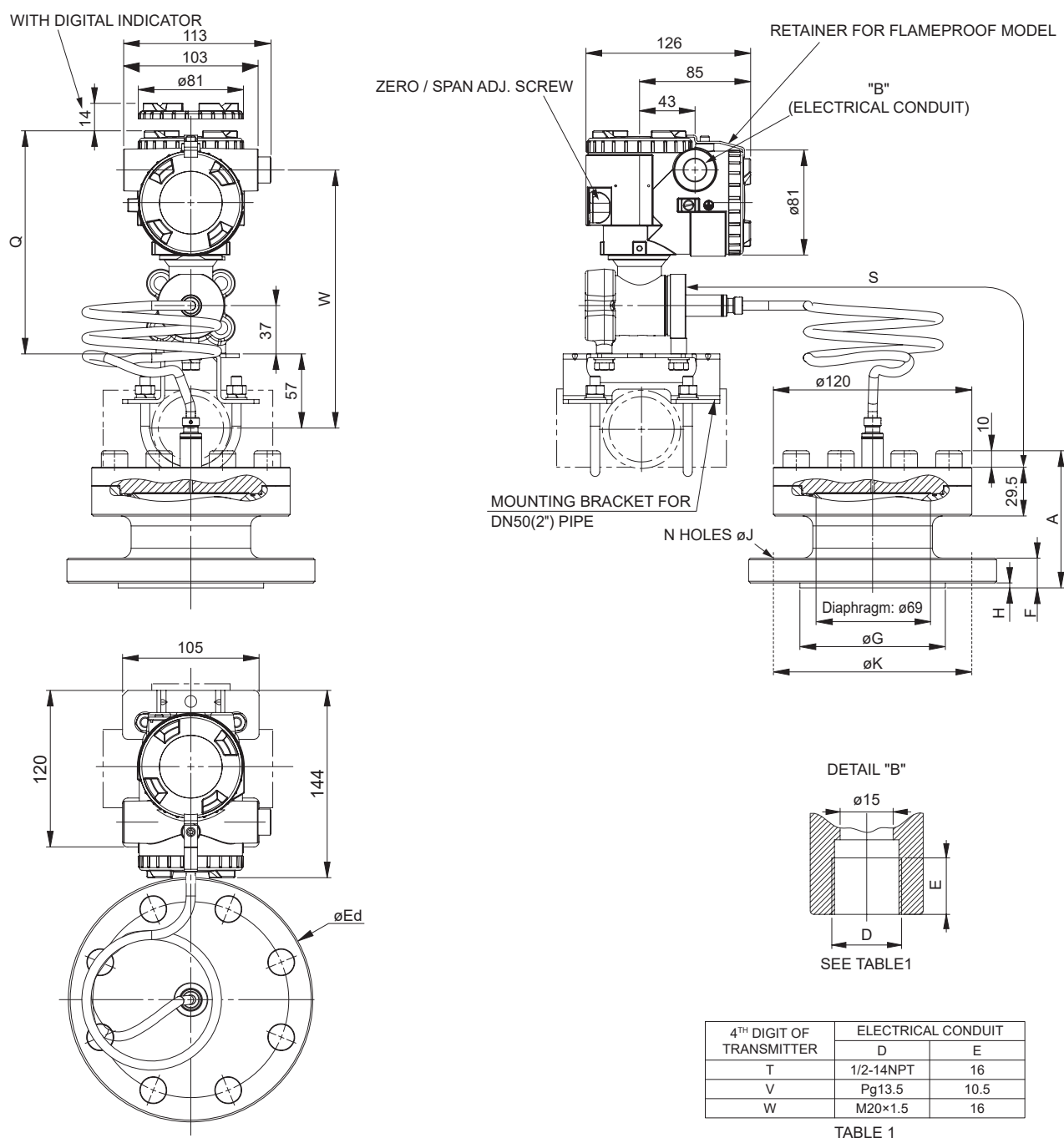
MAIN PART MODEL CODE

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B				V	6	-					Y	- 0
F	K	M												

DIAPHRAGM SEAL MODEL CODE

1	2	3	4	5	6	7
S	A					

Gauge and absolute pressure: FKB, FKM [<L shape>, capillary assembly, flange adapter with PN ≤ 50 bar]



6 TH DIGIT	Q	W
1, 2, 3	171	198

6 TH DIGIT OF SEAL DIAPHRAGM	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	øK	N	J	øG	F	H	A	EN1092-1		EN1759-1	
									PN	DN	CLASS	NPS
A	115	85	4	14	68	18	2	82	40	25	—	—
B	108	79.4	4	15.8	50.8	16	1.6	81	—	—	150	1"
C	124	88.9	4	19	50.8	18	1.6	89	—	—	300	1"
D	150	110	4	18	88	18	3	83	40	40	—	—
E	127	98.4	4	15.8	73	18	1.6	84	—	—	150	1 1/2"
F	156	114.3	4	22.2	73	21	1.6	85	—	—	300	1 1/2"

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

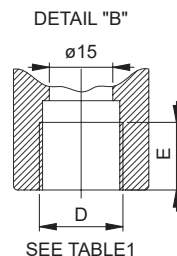
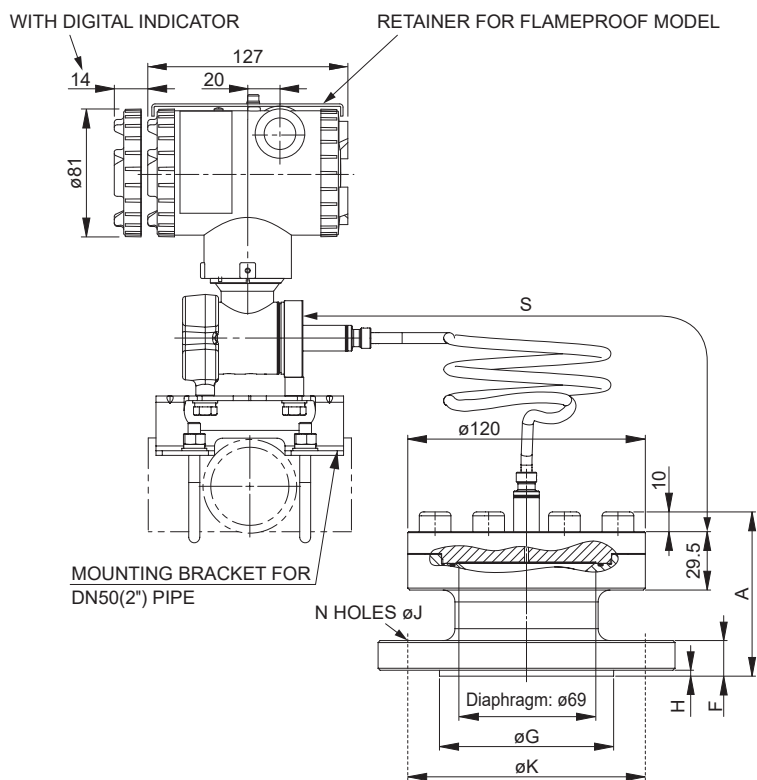
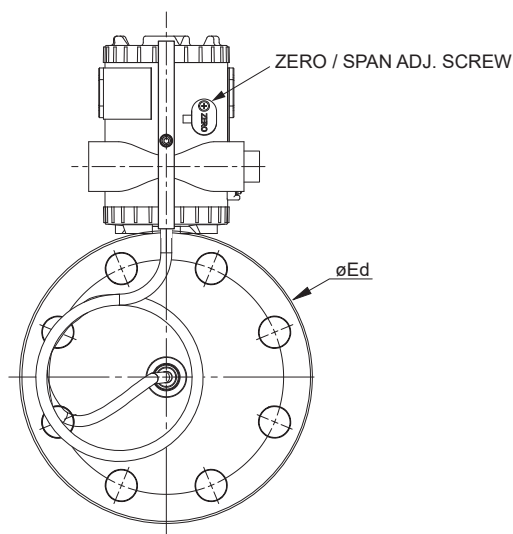
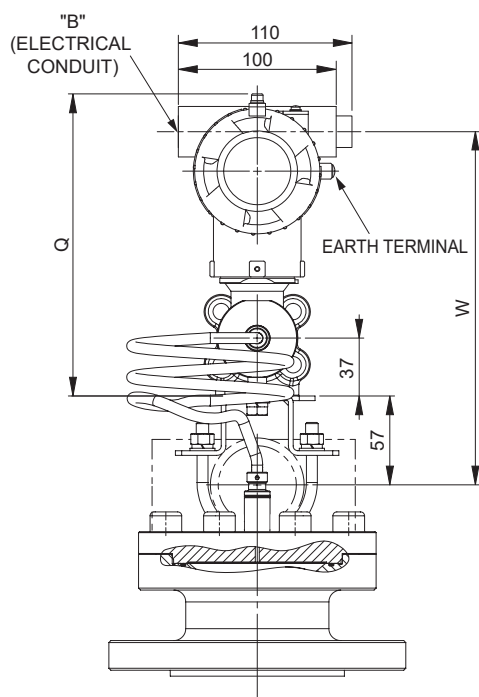
MAIN PART MODEL CODE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
F K B □ □ □ V 6 - □ □ □ □ Y - 0 □
F K M

DIAPHRAGM SEAL MODEL CODE

1 2 3 4 5 6 7
S A □ V Y □ □

Gauge and absolute pressure: FKB, FKM [<T shape>, capillary assembly, flange adapter with PN ≤ 50 bar]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

TABLE 1

6 TH DIGIT	Q	W
1, 2, 3	190	225

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	øK	N	J	øG	F	H	A	EN1092-1		EN1759-1	
									PN	DN	CLASS	NPS
A	115	85	4	14	68	18	2	82	40	25	—	—
B	108	79.4	4	15.8	50.8	16	1.6	81	—	—	150	1"
C	124	88.9	4	19	50.8	18	1.6	89	—	—	300	1"
D	150	110	4	18	88	18	3	83	40	40	—	—
E	127	98.4	4	15.8	73	18	1.6	84	—	—	150	1 1/2"
F	156	114.3	4	22.2	73	21	1.6	85	—	—	300	1 1/2"

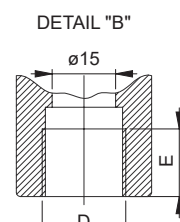
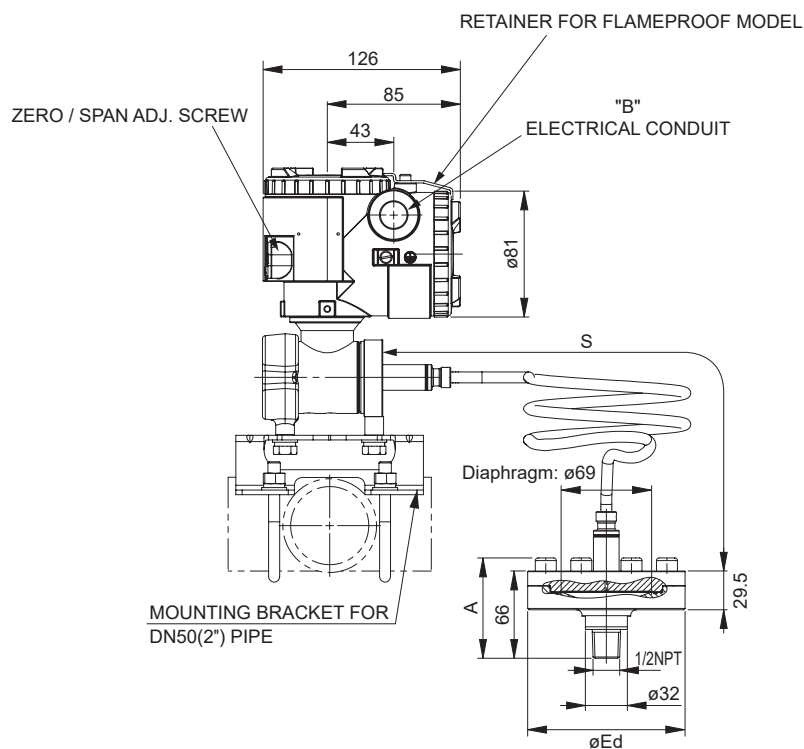
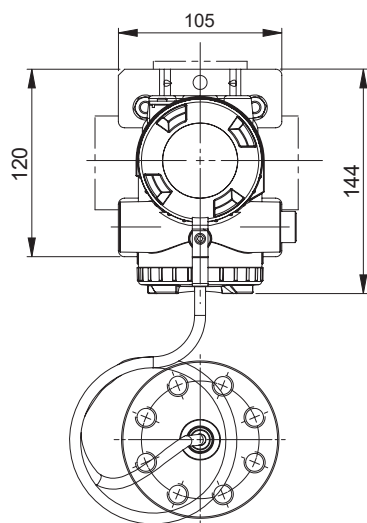
WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL
HOUSING OPTION

MODEL CODE

[illegible]

DIAPHRAGM SEAL MODEL CODE

1	2	3	4	5	6	7
S	A		V	Y		



SEE TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	CONNECTION
S	120	76	SCREWED 1/2 NPT

6 TH DIGIT	Q	W
1 2 3	171	198

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

MODEL CODE

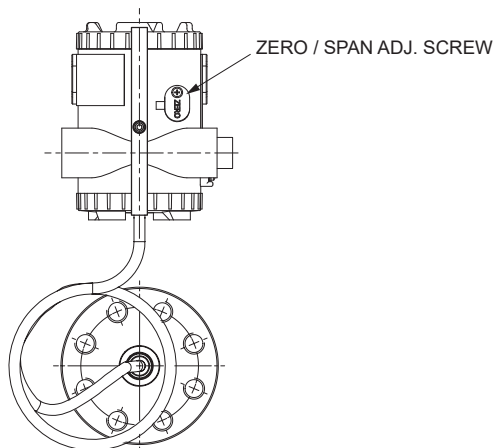
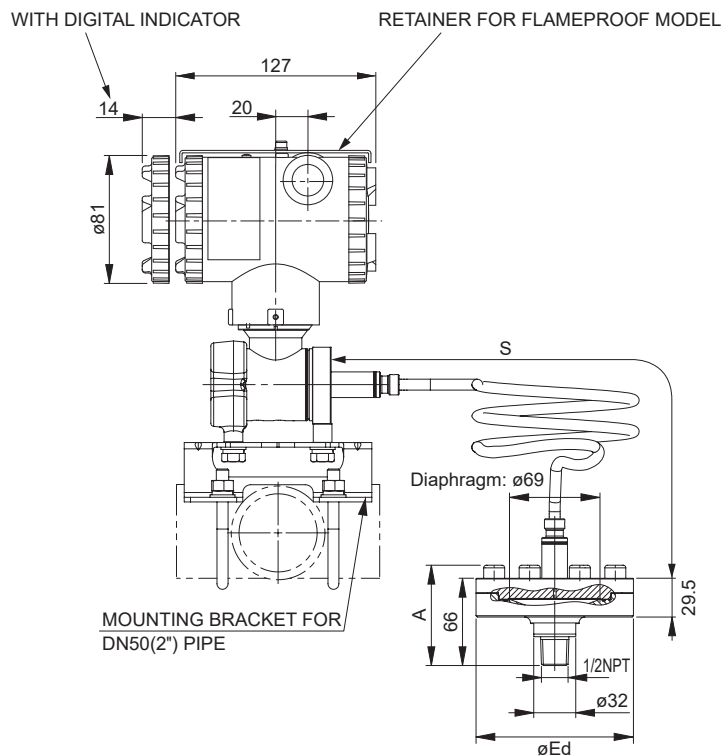
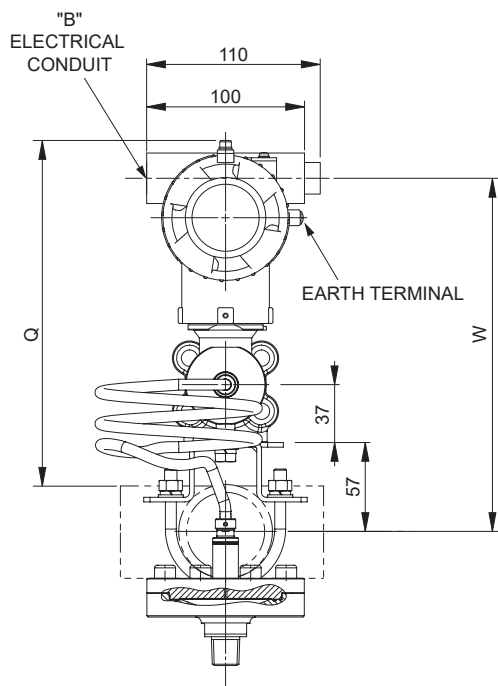
MAIN PART MODEL CODE

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F K B □ □ □ V 6 - □ □ □ □ Y - 0 □
F K M

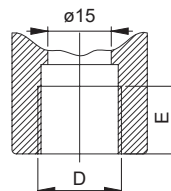
DIAPHRAGM SEAL MODEL CODE

1	2	3	4	5	6	7
S	A		V	Y		

Gauge and absolute pressure: FKB, FKM [<T shape>, Capillary mounting, Screwed adapter]



DETAIL "B"



SEE TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	Ed	A	CONNECTION
S	120	76	SCREWED 1/2 NPT

6 TH DIGIT	Q	W
1, 2, 3	190	225

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B			V	6	-					Y	0	
F	K	M												

DIAPHRAGM SEAL MODEL CODE

1	2	3	4	5	6	7
S	A		V			

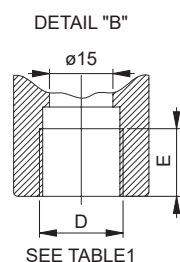
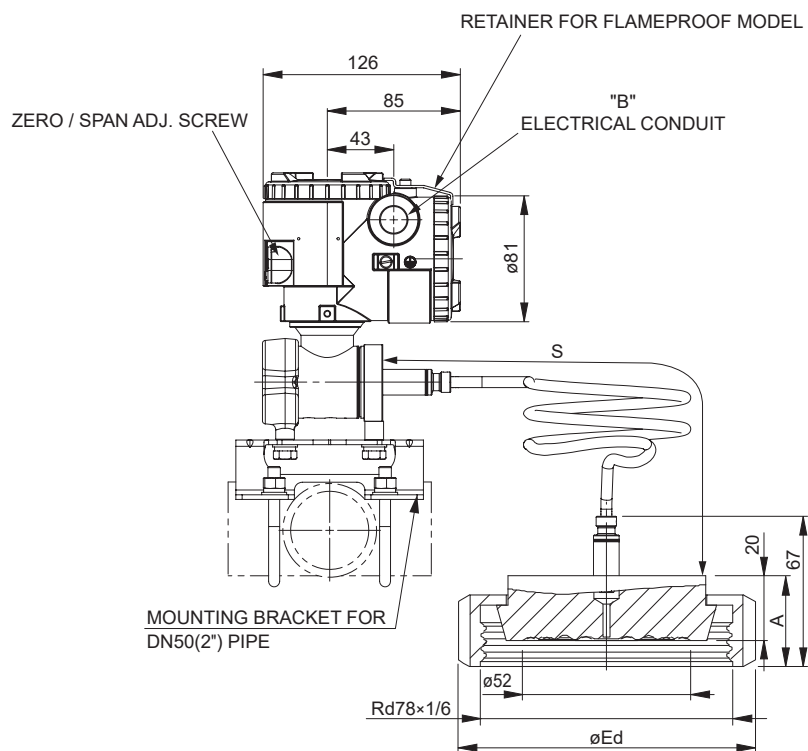
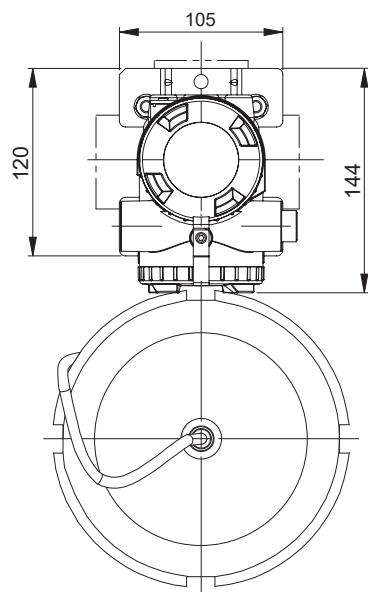


TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

AL	øEd	A	DIN 11851 COUPLING NUT	
			PN	DN
	92	28	20	50

6 TH DIGIT	Q	W
1. 2. 3	171	198

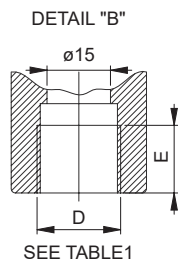
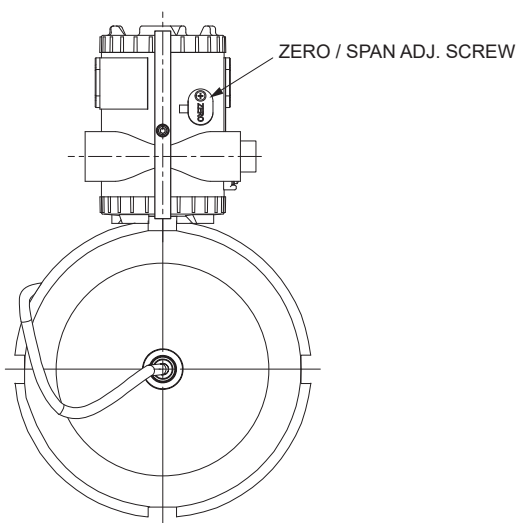
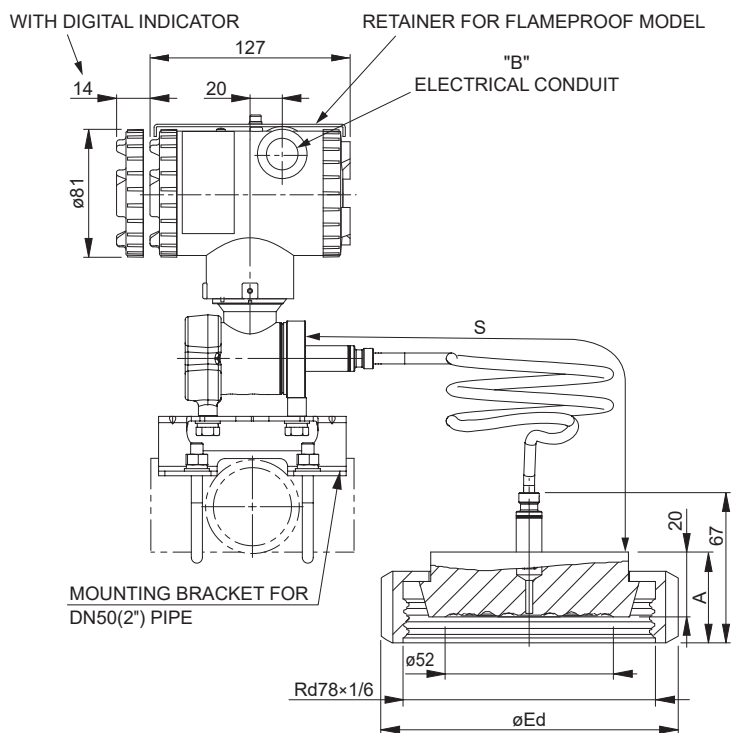
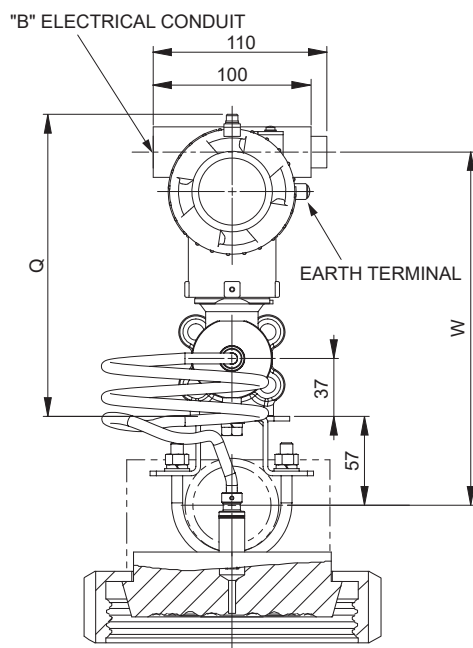
6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL
HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL CODE						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	2	3	4	5	6	7
F	K	B				V	6	-				Y	-	0	S	A		V	Y		
F	K	M																			

Gauge and absolute pressure: FKB, FKM [<T shape>, Capillary mounting, DIN 11851 coupling nut]



SEE TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20x1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	DIN 11851 COUPLING NUT	
			PN	DN
U	92	28	20	50

6 TH DIGIT	Q	W
1, 2, 3	190	225

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

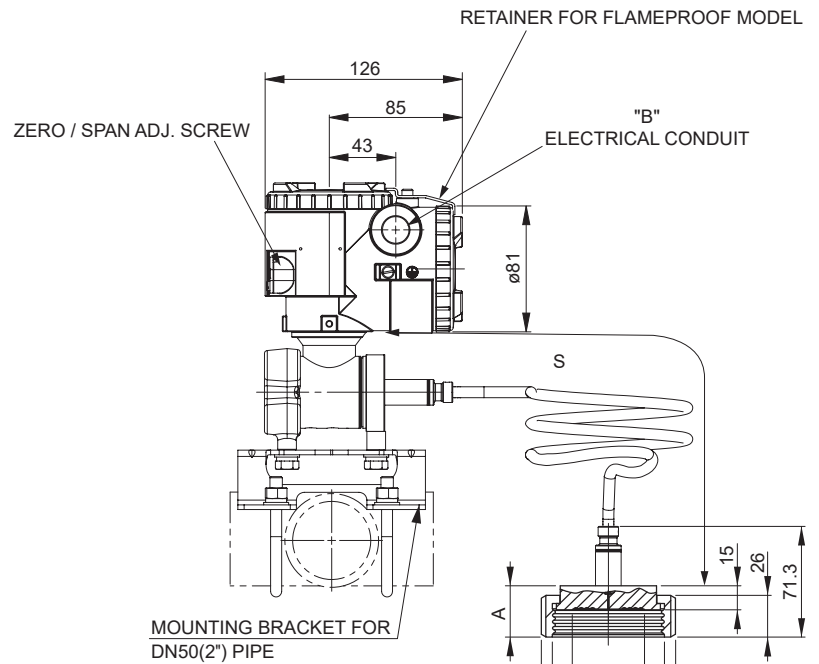
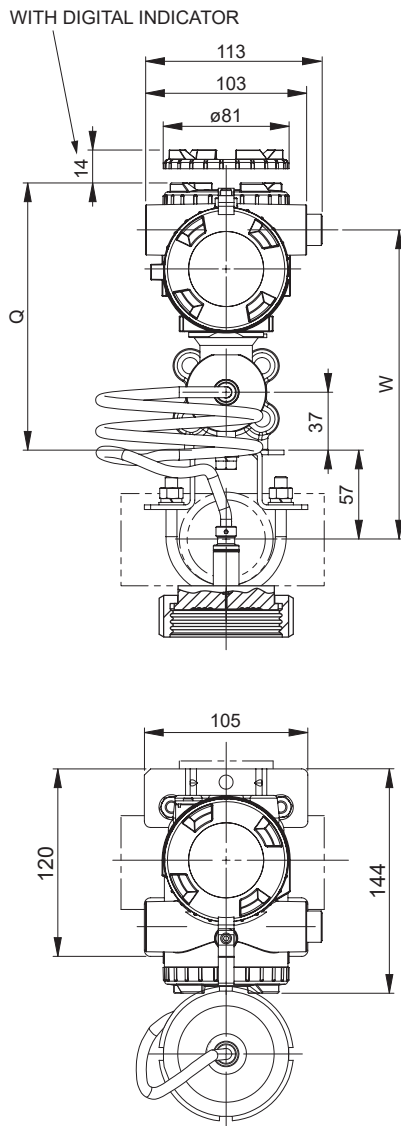
WEIGHT :
 TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
 ADD :
 - FLANGES WEIGHT
 - 0.2 kg FOR INDICATOR
 - 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

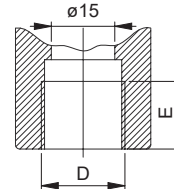
MAIN PART MODEL CODE														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B			V	6	-				Y	-	0	
F	K	M												

DIAPHRAGM SEAL MODEL CODE						
1	2	3	4	5	6	7
S	A		V	Y		

Gauge and absolute pressure FKB, FKM [L shape], capillary assembly, SMS coupling nut]



DETAIL "B"



SEE TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	øD	A	DIN 11851 COUPLING NUT	
			PN	DN
V	84	32	40	50

6 TH DIGIT	Q	W
1, 2, 3	171	198

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

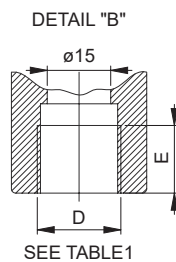
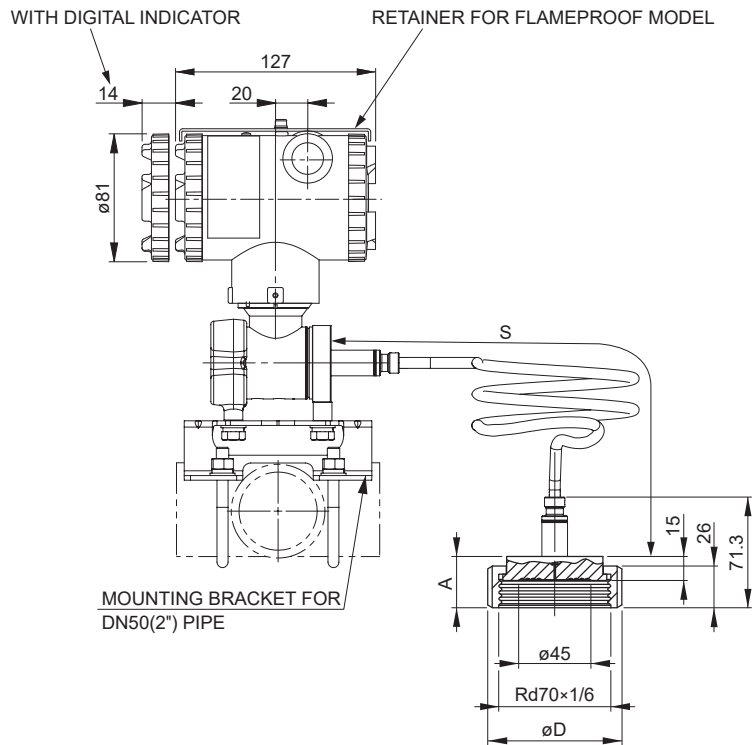
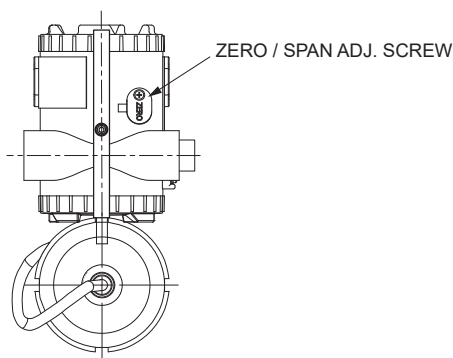
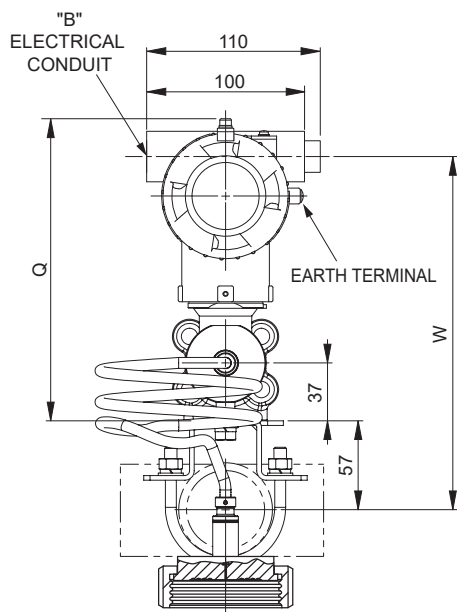
MAIN PART MODEL CODE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
F K B □ □ □ V 6 - □ □ □ □ Y - 0 □
F K M

DIAPHRAGM SEAL MODEL CODE

1 2 3 4 5 6 7
S A □ V Y □ □

Gauge and absolute pressure FKB, FKM [<T shape>, capillary assembly, SMS coupling nut]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20x1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	ØD	A	DIN 11851 COUPLING NUT	
			PN	DN
V	84	32	40	50

6 TH DIGIT	Q	W
1, 2, 3	190	225

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	B			V	6	-					Y	-	0
F	K	M												

DIAPHRAGM SEAL MODEL CODE						
1	2	3	4	5	6	7
S	A		V	Y		

WITH DIGITAL INDICATOR

113

103

ø81

14

Q

H

25

57

W

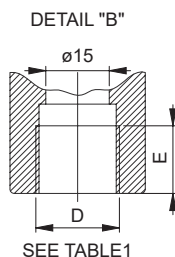
105

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

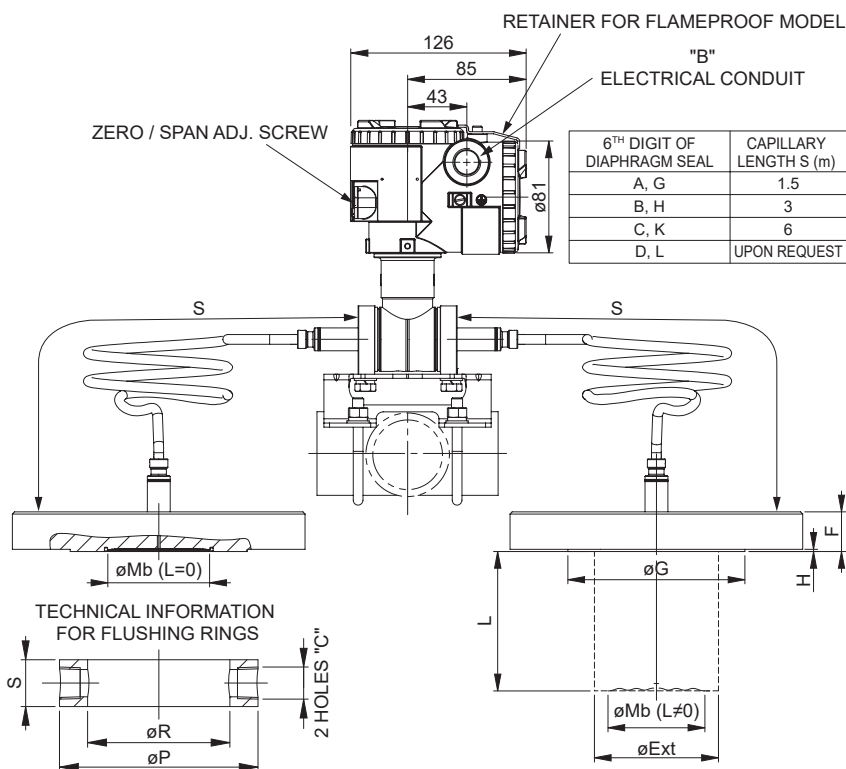
TABLE 1

6 TH DIGIT	Q	W
3, 5, 6, 8	182	209

5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION L
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200



SEE TABLE 1



WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :

- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MAIN PART MODEL CODE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
F K D V 6 - Y - 0

HP							LP						
1	2	3	4	5	6	7	1	2	3	4	5	6	7
S	A						S	A					

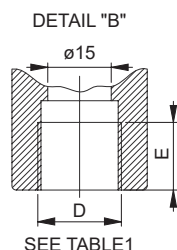
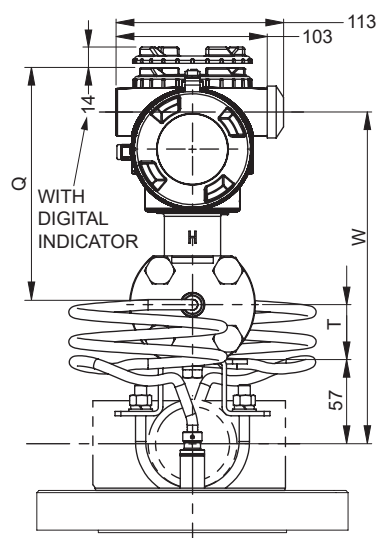
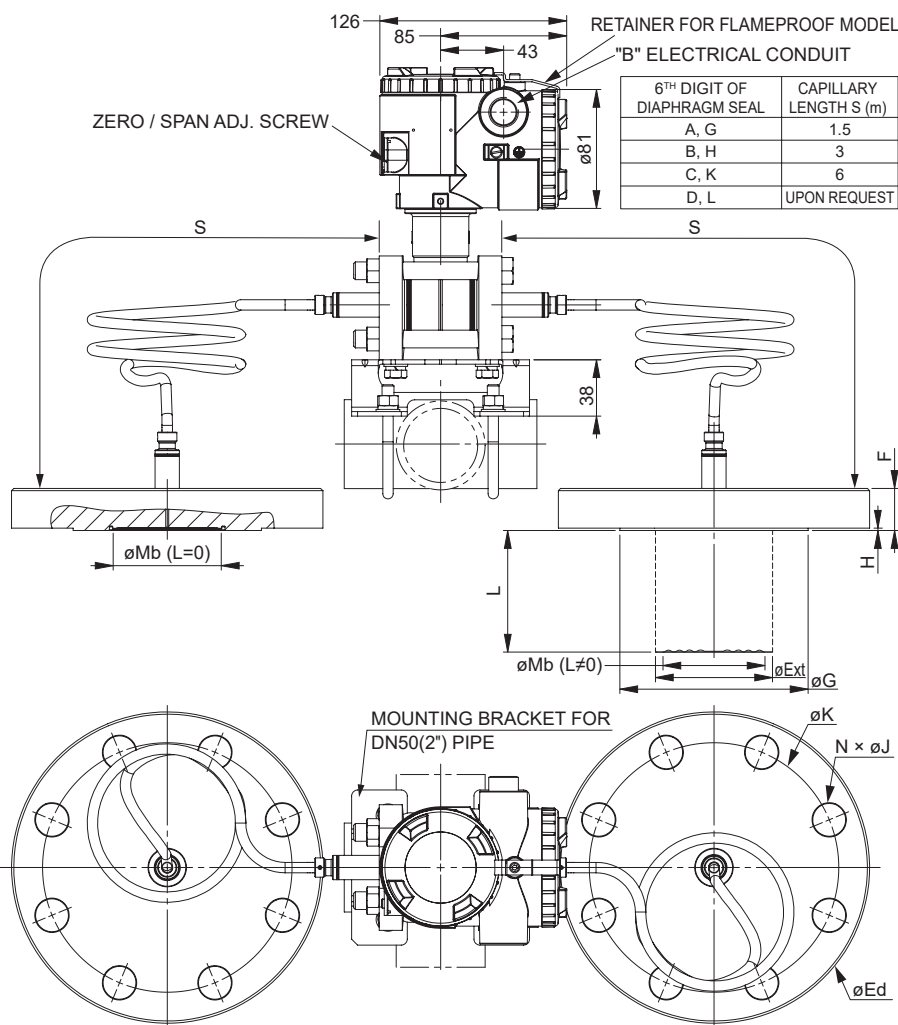
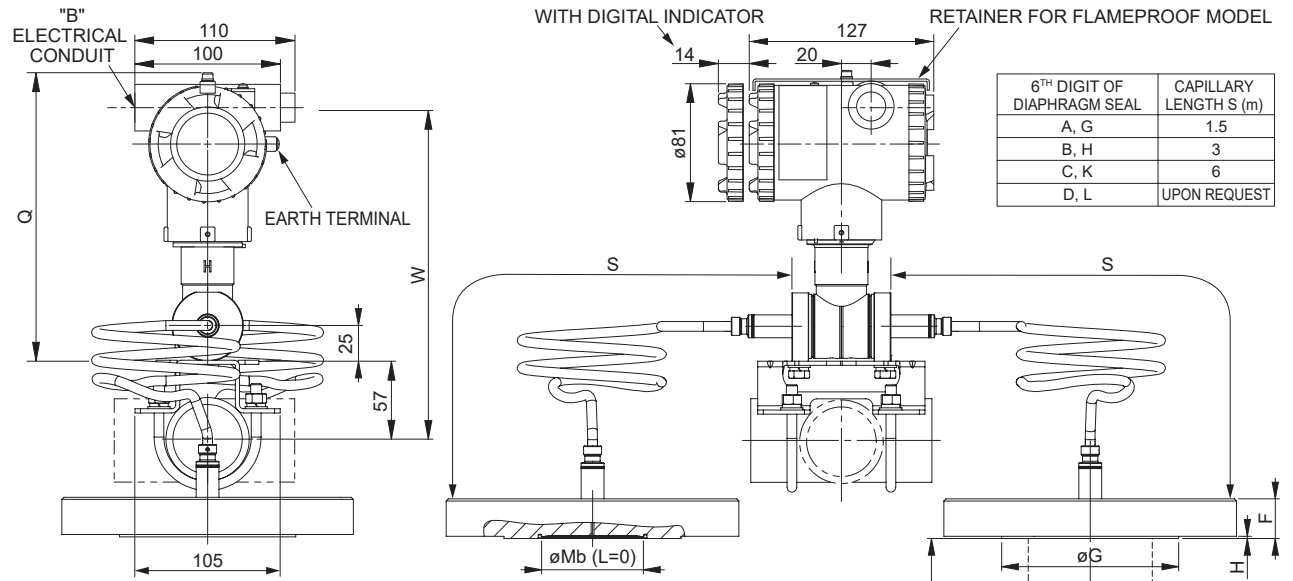


TABLE 1



Differential pressure: FKD [<T shape>, capillary assembly, flange with PN ≤ 50 bar]

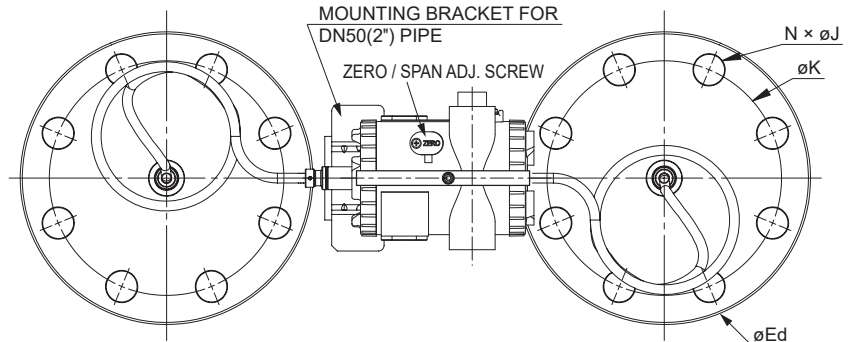
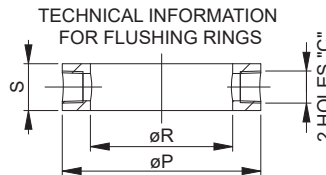


6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

TABLE 1

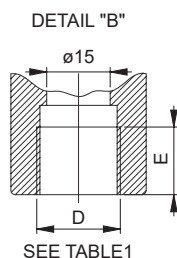
FLUSHING RINGS DIMENSIONS					
FLANGE SIZE	HOLES "C"	ØP	ØR	S	FLANGE STANDARD
DN50	1/4-18NPT 1/2-14NPT	102	70	30	EN 1092-1
NPS 2"	1/4-18NPT 1/2-14NPT	92	65	30	EN 1759-1
DN80	1/4-18NPT 1/2-14NPT	138	91	30	EN 1092-1
NPS 3"	1/4-18NPT 1/2-14NPT	127	91	30	EN 1759-1
DN100	1/4-18NPT 1/2-14NPT	162	116	30	EN 1092-1
NPS 4"	1/4-18NPT 1/2-14NPT	157	116	30	EN 1759-1



6 TH DIGIT	Q	W
3, 5, 6, 8	201	237

5 TH DIGIT OF DIAPHRAGM SEAL	EXTENSION L
Y	0
A, E, J, P	50
B, F, K, R	100
C, G, L, S	150
D, H, M, T	200

3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	ØEd	F MIN	ØG	H	N×ØJ	ØK	WEIGHT (kg)	FLANGE STANDARD
H	CLASS 150 NPS 2"	152	21	92	1.6	4×19	120.6	2.7	EN 1759-1
4	CLASS 150 NPS 3"	190	24	127	1.6	4×19	152.4	5.3	EN 1759-1
5	CLASS 150 NPS 4"	229	24	157	1.6	8×19	190.5	7.7	EN 1759-1
J	CLASS 300 NPS 2"	165	22.5	92	1.6	8×19	127	3.7	EN 1759-1
6	CLASS 300 NPS 3"	210	28.5	127	1.6	8×22.2	168.3	7.8	EN 1759-1
7	CLASS 300 NPS 4"	254	32	157	1.6	8×22.2	200	12.7	EN 1759-1
G	PN40 DN50	165	20	102	2	4×18	125	3.3	EN 1092-1
8	PN40 DN80	200	24	138	2	8×18	160	5.8	EN 1092-1
9	PN16 DN100	220	22	158	2	8×18	180	5.9	EN 1092-1



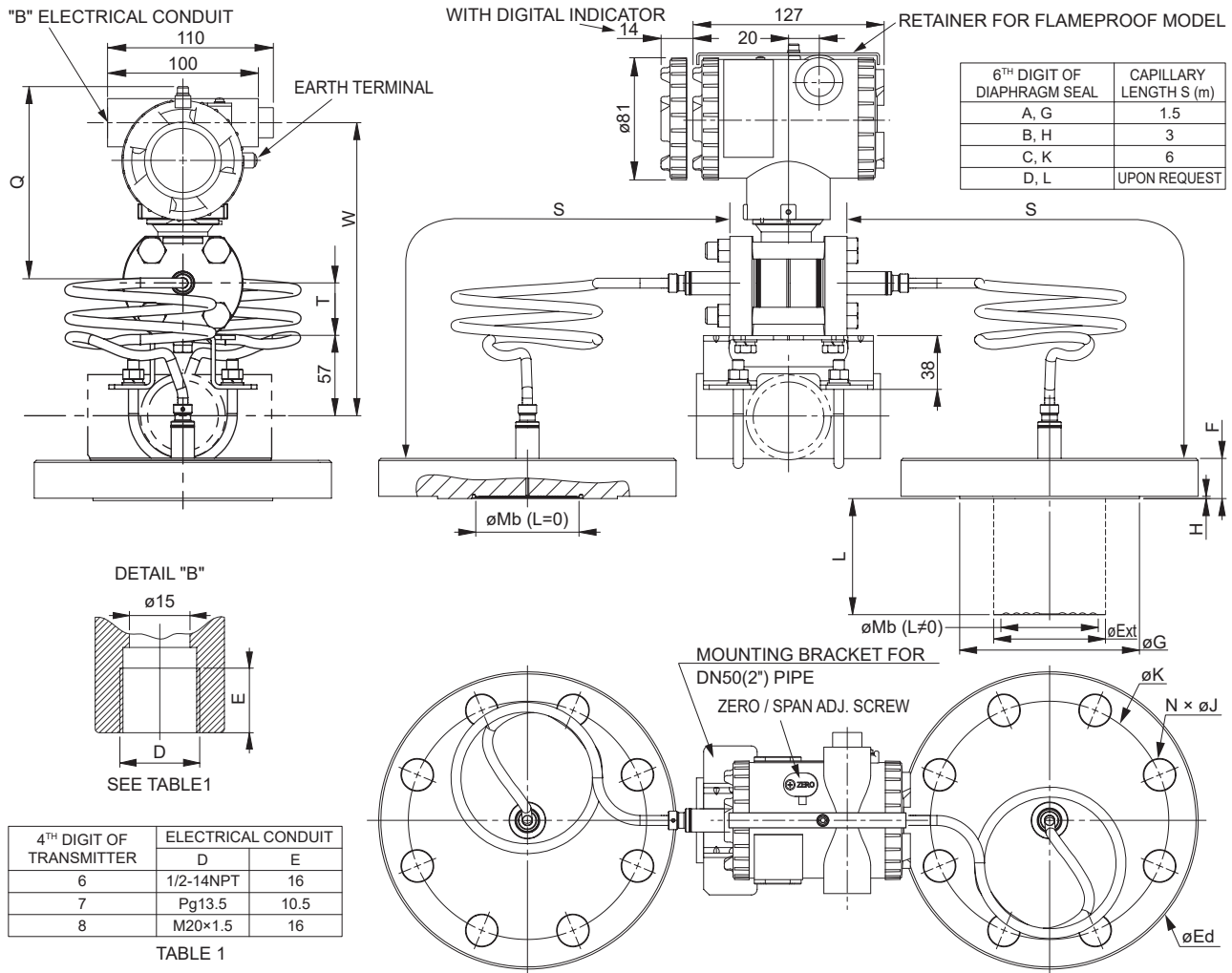
3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	ØMb	ØExt{ØMb}	ØMb	ØExt{ØMb}
H	CLASS 150 NPS 2"	59	48{48}	59	48.3{47}
4	CLASS 150 NPS 3"	73	73{73}	89	76{72}
5	CLASS 150 NPS 4"	96	96{96}	89	94{89}
J	CLASS 300 NPS 2"	59	48{48}	59	48.3{47}
6	CLASS 300 NPS 3"	73	73{73}	89	76{72}
7	CLASS 300 NPS 4"	96	96{96}	89	94{89}
G	PN40 DN50	59	48{48}	59	48.3{47}
8	PN40 DN80	73	73{73}	89	76{72}
9	PN16 DN100	96	96{96}	89	94{89}
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT	V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)	(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT	Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)	(L=0)	(L≠0)	(L=0)	(L≠0)

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	HP							LP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
F	K	D					V	6	-					Y	-	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								

Differential pressure: FKD [<T shape>, capillary assembly, flange with PN > 50 bar]



	3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øMb	øExt{ΦMb}	øMb	øExt{ΦMb}
	*	CLASS 600 (PN100) NPS 2"	59	48{48}	Please contact us	Please contact us
	*	CLASS 900 (PN150) NPS 2"	59	48{48}		
	*	CLASS 1500 (PN250) NPS 2"	59	48{48}		
	*	CLASS 2500 (PN420) NPS 2"	59	48{48}		
	*	DN50 PN100	59	48{48}		
	*	CLASS 600 (PN100) NPS 3"	73	73{73}		
	*	CLASS 900 (PN150) NPS 3"	73	73{73}		
	*	CLASS 1500 (PN250) NPS 3"	73	73{73}		
	*	CLASS 2500 (PN420) NPS 3"	73	73{73}		
	*	DN80 PN100	73	73{73}		
	*	CLASS 600 (PN100) NPS 4"	96	96{96}		
	*	CLASS 900 (PN150) NPS 4"	96	96{96}		
	*	CLASS 1500 (PN250) NPS 4"	96	96{96}		
	*	CLASS 2500 (PN420) NPS 4"	96	96{96}		
CONDITIONS OF DIAPHRAGM SEAL MODEL CODES	4 TH DIGIT		V	V	H, B, T, P, R, C, F	H, B, T
	(MATERIAL)		(SS 316L)		(EXOTIC MATERIALS)	
	5 TH DIGIT		Y	A, B, C, D	Y	E, F, G, H, J, K, L, M, P, R, S, T
	(EXTENSION LENGTH)		(L=0)	(L≠0)	(L=0)	(L≠0)

DIGIT	Q	W	T	3 RD DIGIT OF DIAPHRAGM SEAL	FLANGE SIZE AND RATING	øEd	F MIN	øG	H	N×øJ	øK	WEIGHT (kg) (*)	FLANGE STANDARD
5 TH	6 TH			*	CLASS 600 (PN100) NPS 2"	165	31.8	92	6.4	8×19	127	5.7	EN 1759-1
2, 4, 6, 8, 9, L, M	3, 5, 6	194	221	*	CLASS 900 (PN150) NPS 2"	216	44.5	92	6.4	8×25.4	165.1	13.2	EN 1759-1
N, P	3, 5, 6	197	224	*	CLASS 1500 (PN250) NPS 2"	235	57.2	92	6.4	8×28.6	171.4	19.8	EN 1759-1
	8	197	224	*	CLASS 2500 (PN420) NPS 2"	195	29	102	3	4×26	145	5.8	EN 1092-1
	9	172.5	199	*	DN50 PN100	210	38.5	127	6.4	8×22.2	168.3	11	EN 1759-1
				*	CLASS 600 (PN100) NPS 3"	241	44.5	127	6.4	8×25.4	190.5	16.7	EN 1759-1
				*	CLASS 900 (PN150) NPS 3"	267	54	127	6.4	8×32	203.2	24.5	EN 1759-1
				*	CLASS 1500 (PN250) NPS 3"	305	73.5	127	6.4	8×35	228.6	42.7	EN 1759-1
				*	CLASS 2500 (PN420) NPS 3"	230	32	138	3	8×26	180	9	EN 1092-1
				*	DN80 PN100	273	45	157.2	6.4	8×25.4	216	21.5	EN 1759-1
				*	CLASS 600 (PN100) NPS 4"	292	50.8	157.2	6.4	4×31.8	235	27.7	EN 1759-1
				*	CLASS 900 (PN150) NPS 4"	311	60.4	157.2	6.4	8×35	241.3	37	EN 1759-1
				*	CLASS 1500 (PN250) NPS 4"	356	82.6	157.2	6.4	8×41.3	273	65.7	EN 1759-1
				*	CLASS 2500 (PN420) NPS 4"								

(*) For the extension length = 0 and material in SS 316L.

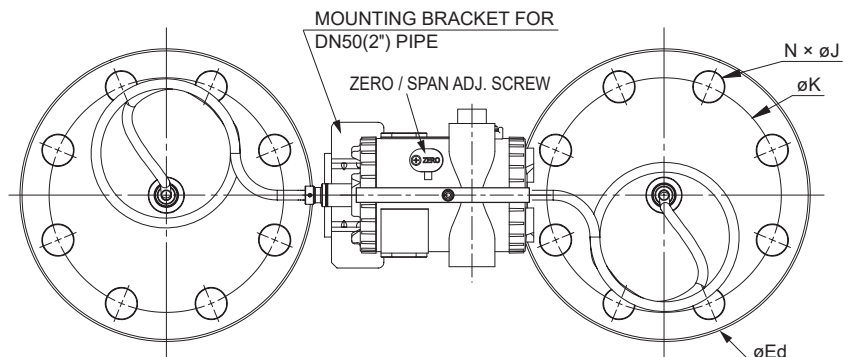
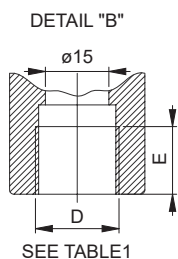
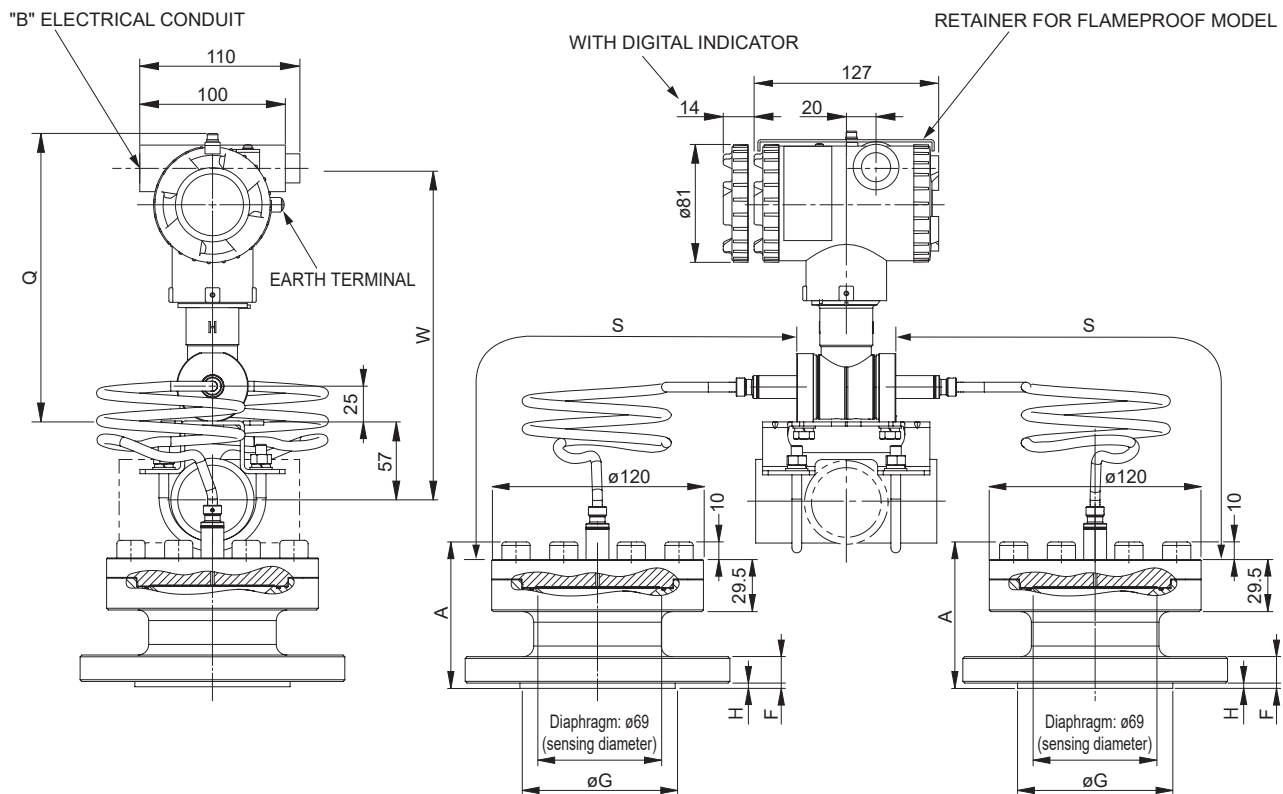
WEIGHT :
 TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
 ADD :
 - FLANGES WEIGHT
 - 1.0 kg PER 50 MM EXTENSION
 - 0.2 kg FOR INDICATOR
 - 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
F	K	D				V	6	-				Y	-	0

DIAPHRAGM SEAL MODEL CODE														
1	2	3	4	5	6	7	1	2	3	4	5	6	7	
S	A						S	A						

Differential pressure: FKD [<T shape>, capillary assembly, flange adapter]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

TABLE 1

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

6 TH DIGIT	Q	W
3, 5, 6, 8	182	209

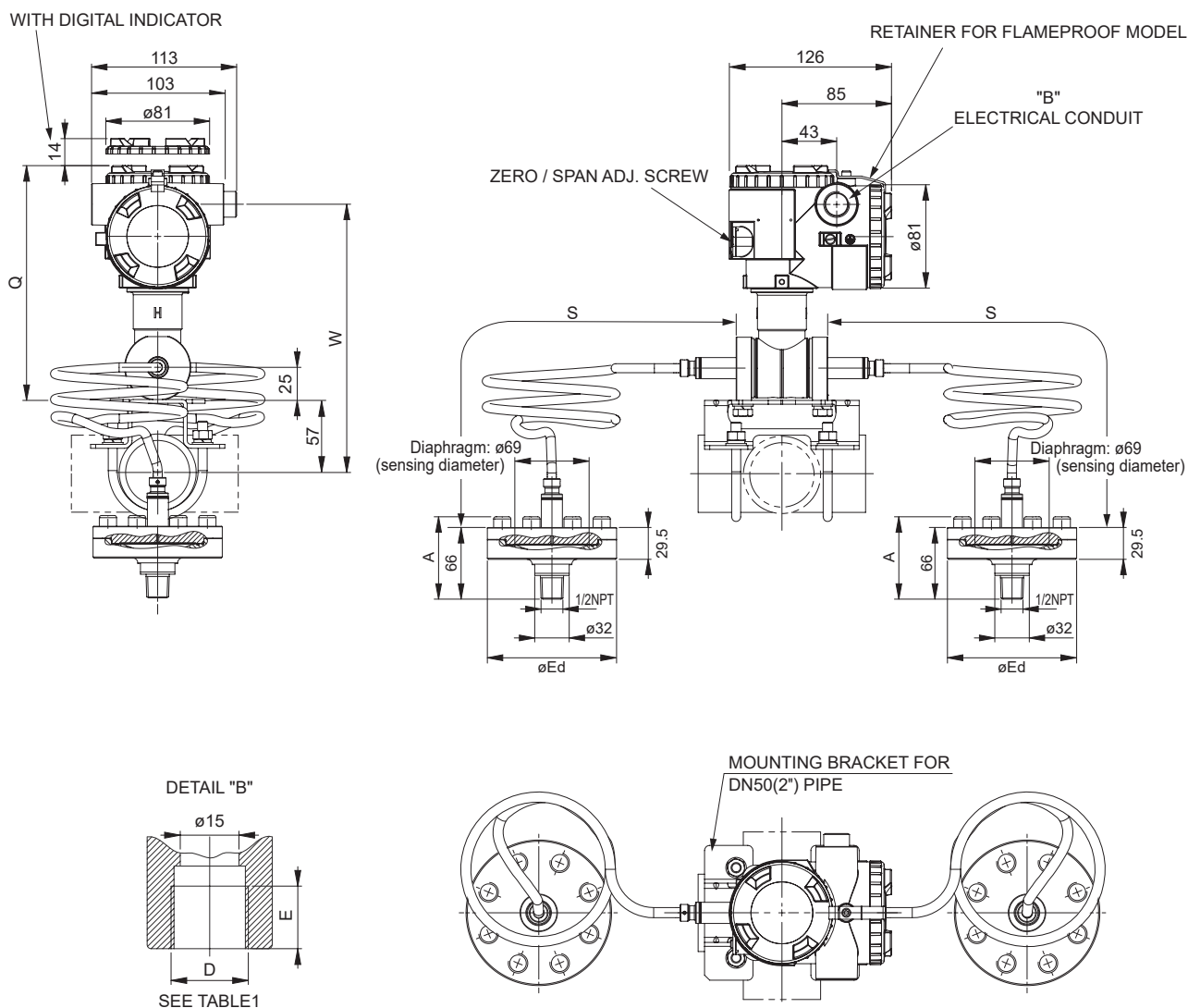
3 RD DIGIT OF DIAPHRAGM SEAL	øEd	øK	N	J	øG	F	H	A	EN1092-1		EN1759-1	
									PN	DN	CLASS	NPS
A	115	85	4	14	68	18	2	82	40	25	—	—
B	108	79.4	4	15.8	50.8	16	1.6	81	—	—	150	1"
C	124	88.9	4	19	50.8	18	1.6	89	—	—	300	1"
D	150	110	4	18	88	18	3	83	40	40	—	—
E	127	98.4	4	15.8	73	18	1.6	84	—	—	150	1 1/2"
F	156	114.3	4	22.2	73	21	1.6	85	—	—	300	1 1/2"

WEIGHT :
 TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
 ADD :
 - FLANGES WEIGHT
 - 1.0 kg PER 50 MM EXTENSION
 - 0.2 kg FOR INDICATOR
 - 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	HP							LP						
F	K	D					V	6	-					Y	0	S	A					S	A					

Differential pressure: FKD [<L shape>, capillary assembly, screwed adapter]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	CONNECTION
S	120	76	SCREWED 1/2 NPT

6 TH DIGIT	Q	W
3, 5, 6, 8	182	209

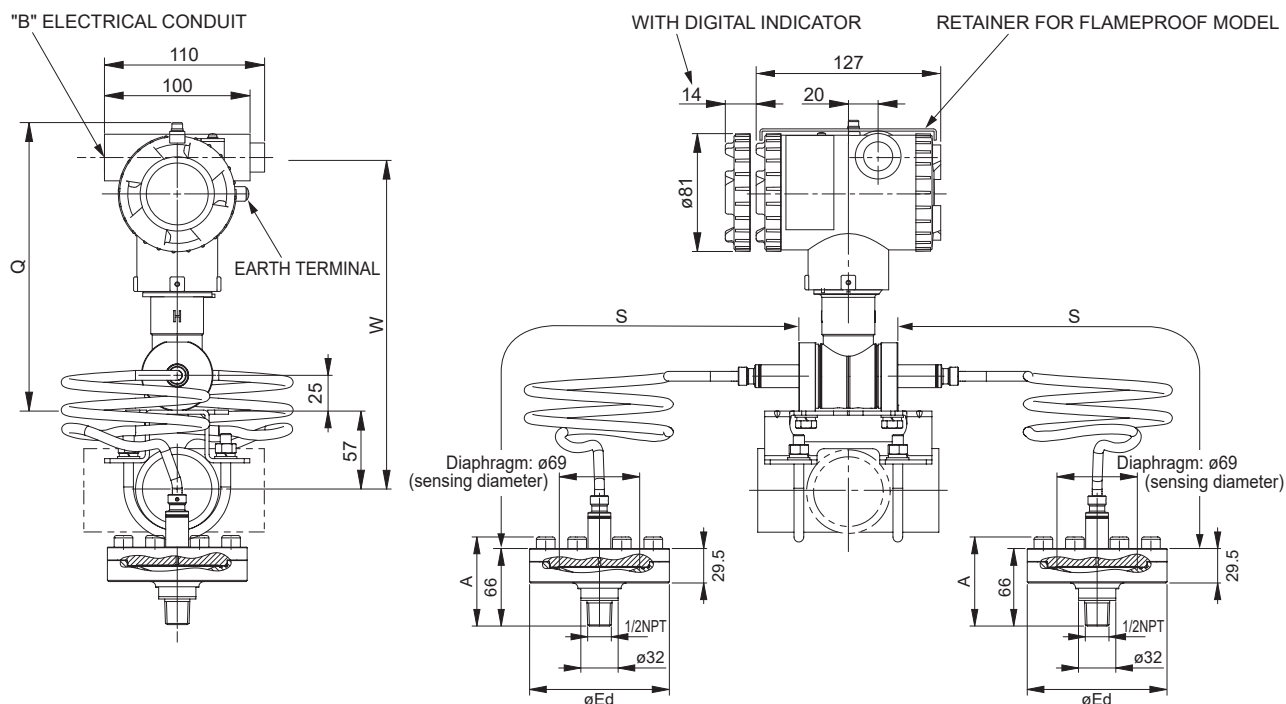
6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
 TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
 ADD :
 - FLANGES WEIGHT
 - 1.0 kg PER 50 MM EXTENSION
 - 0.2 kg FOR INDICATOR
 - 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

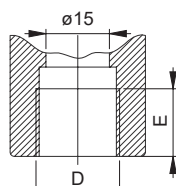
MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE																		
															HP							LP											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	1	2	3	4	5	6	7					
F	K	D					V	6	-					Y	0							S	A					S	A				

Differential pressure: FKD [<T shape>, capillary assembly, screwed adapter]



DETAIL "B"



SEE TABLE 1

4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
6	1/2-14NPT	16
7	Pg13.5	10.5
8	M20×1.5	16

TABLE 1

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	CONNECTION
S	120	76	SCREWED 1/2 NPT

6 TH DIGIT	Q	W
3, 5, 6, 8	201	237

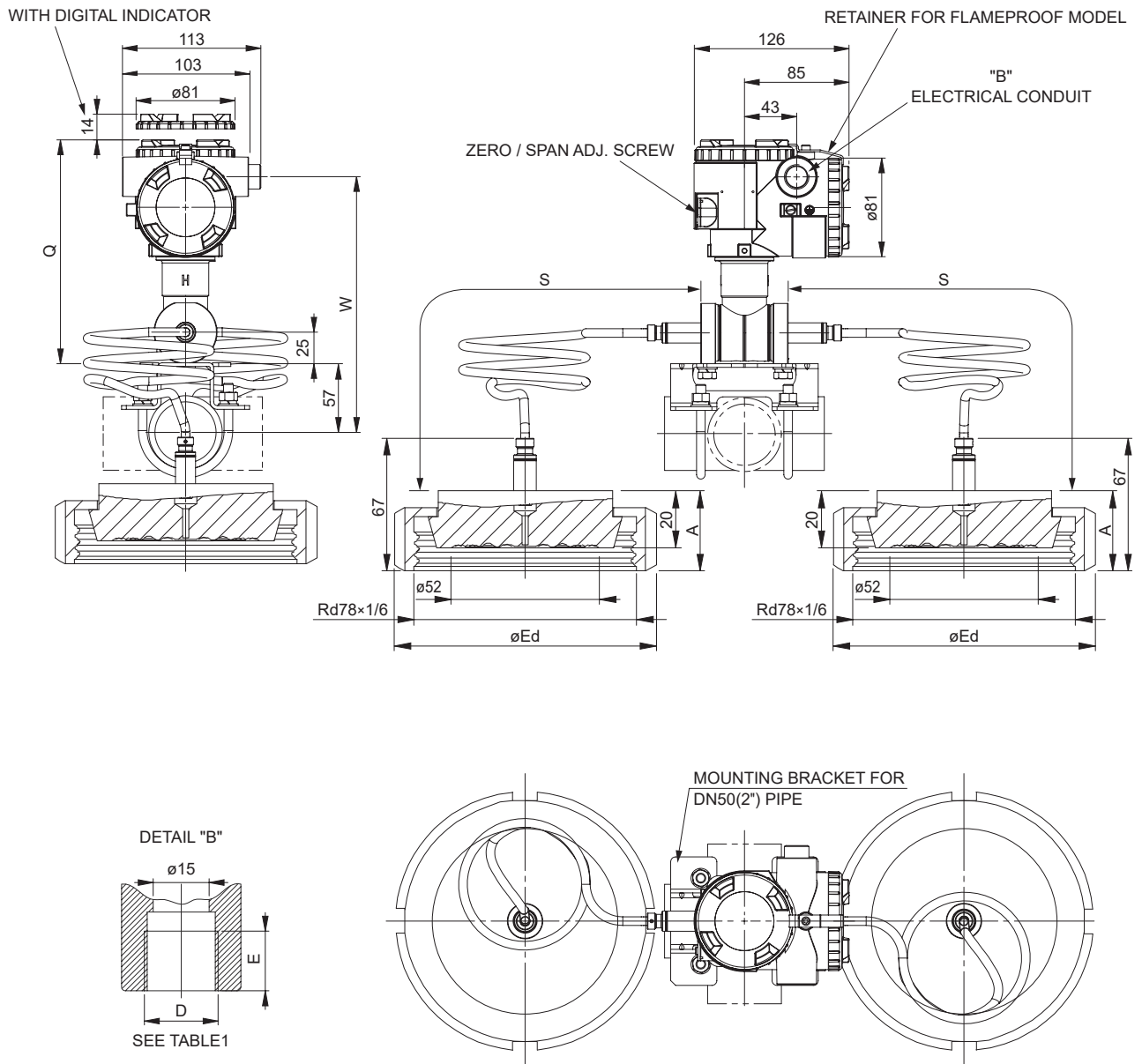
6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	HP							LP																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Differential pressure: FKD [<L shape>, capillary assembly, DIN 11851 coupling nut]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
T	1/2-14NPT	16
V	Pg13.5	10.5
W	M20×1.5	16

TABLE 1

6 TH DIGIT OF DIAPHRAGM SEAL	CAPILLARY LENGTH S (m)
A, G	1.5
B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	DIN 11851 COUPLING NUT	
U	92	28	PN	DN
			20	50

6 TH DIGIT	Q	W
3, 4, 6, 8	182	209

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

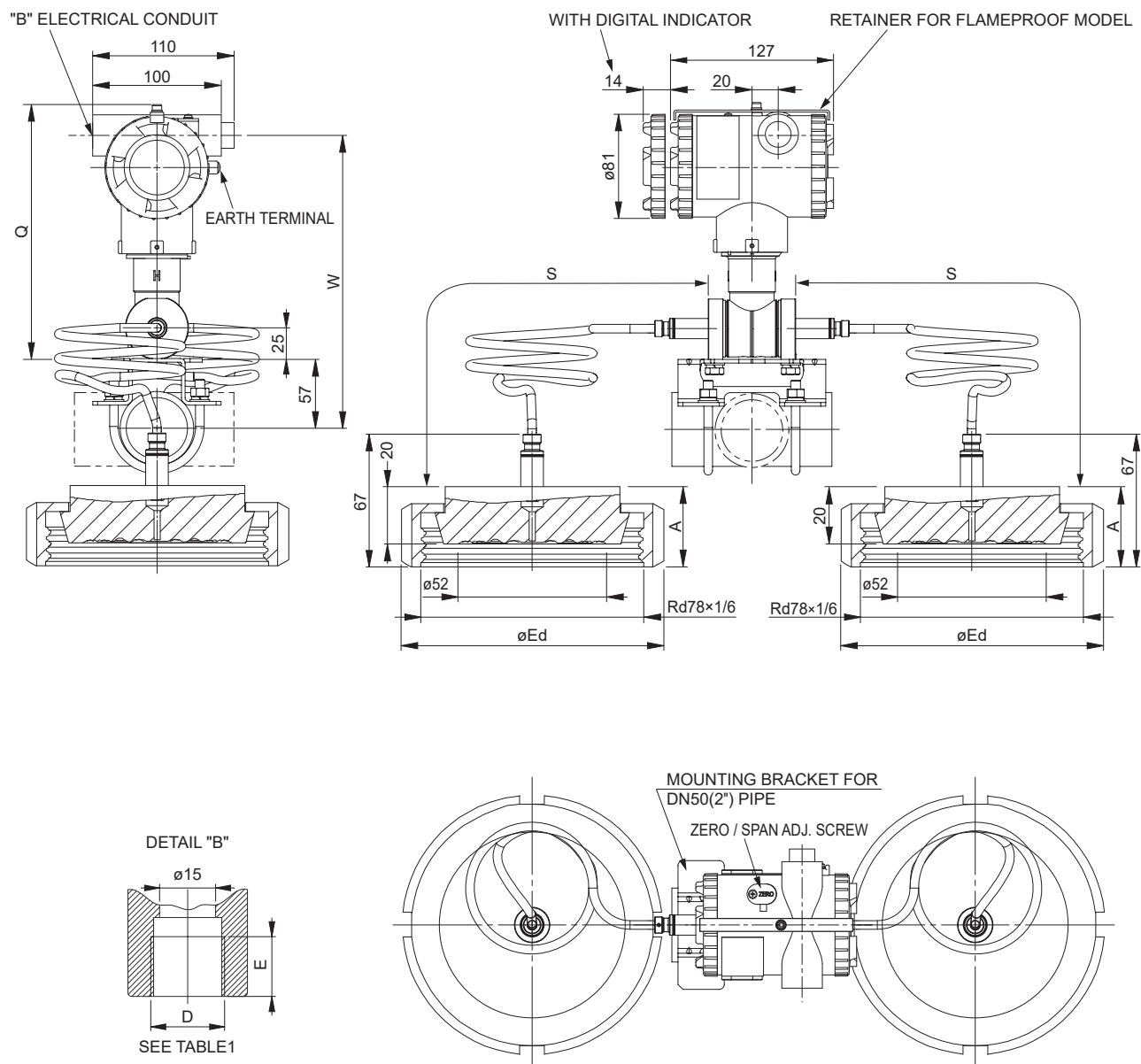
MAIN PART MODEL CODE

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
F K D □ □ □ V 6 - □ □ □ Y - 0 □

DIAPHRAGM SEAL MODEL CODE

HP							LP						
1	2	3	4	5	6	7	1	2	3	4	5	6	7
S	A	□	□	□	□	□	S	A	□	□	□	□	□

Differential pressure: FKD [<T shape>, capillary assembly, DIN 11851 coupling nut]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
	D	E
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D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	øEd	A	DIN 11851 COUPLING NUT	
U	92	28	PN	DN
			20	50

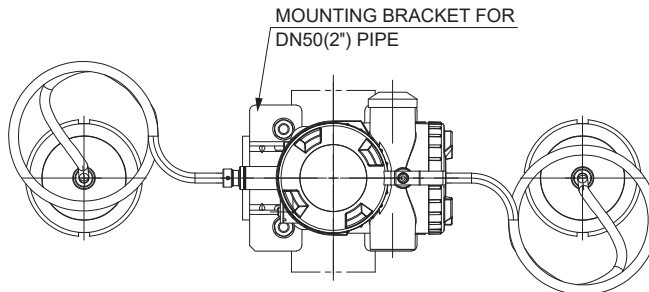
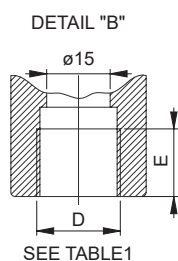
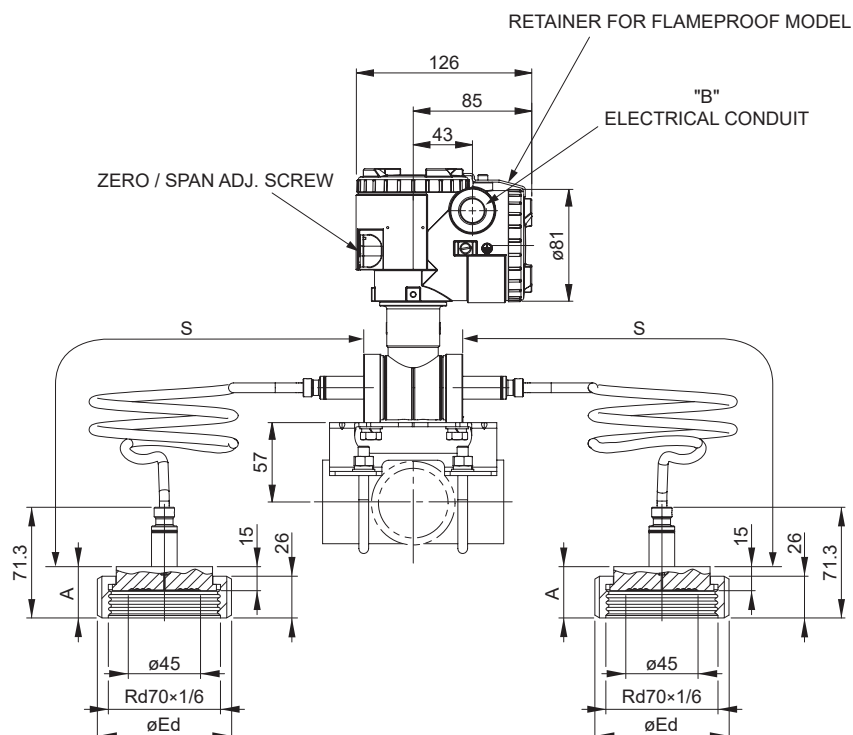
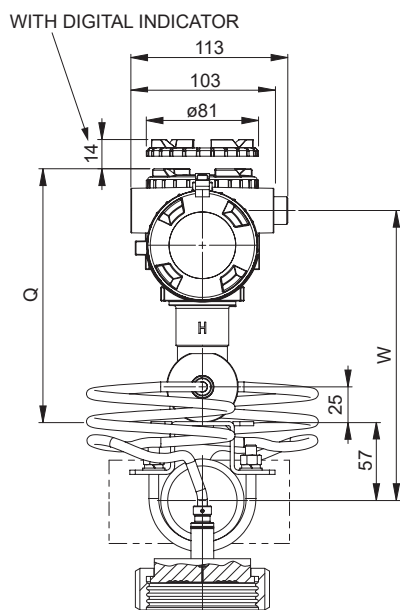
6 TH DIGIT	Q	W
3, 4, 6, 8	201	237

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE																				
															HP							LP													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	1	2	3	4	5	6	7	1	2	3	4	5	6	7							
F	K	D					V	6	-					Y	0							S	A						S	A					

Differential pressure: FKD [<L shape>, capillary assembly, SMS coupling nut]



4 TH DIGIT OF TRANSMITTER	ELECTRICAL CONDUIT	
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V	Pg13.5	10.5
W	M20x1.5	16

TABLE 1

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B, H	3
C, K	6
D, L	UPON REQUEST

3 RD DIGIT OF DIAPHRAGM SEAL	Ed	A	SMS COUPLING NUT	
			PN	DN
V	84	32	40	50

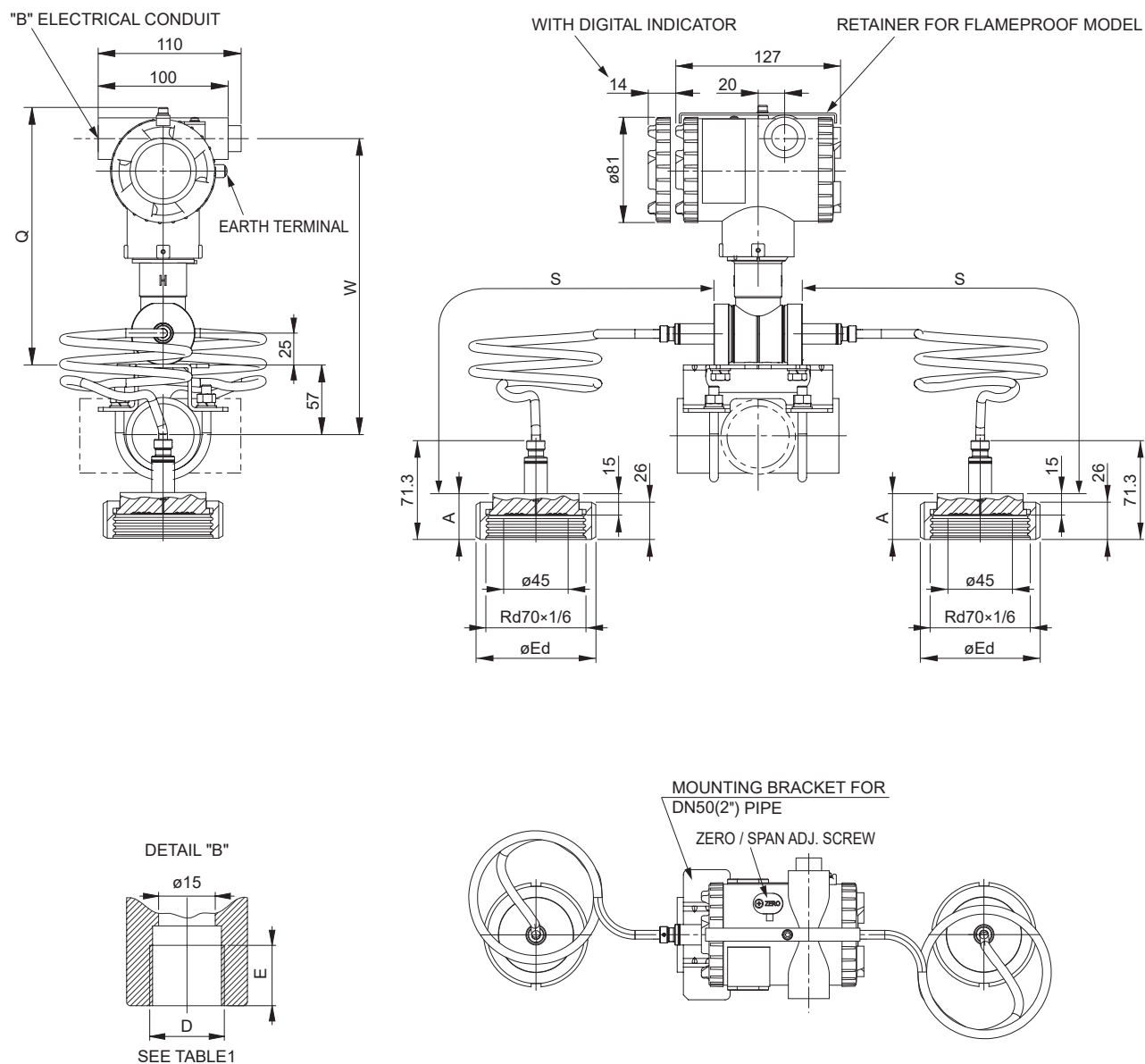
6 TH DIGIT	Q	W
	182	209

WEIGHT :
TRANSMITTER ONLY : - 3.5 kg (WITHOUT OPTION)
ADD :
- FLANGES WEIGHT
- 1.0 kg PER 50 MM EXTENSION
- 0.2 kg FOR INDICATOR
- 2.0 kg FOR STAINLESS STEEL HOUSING OPTION

MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE																	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	HP							LP										
F	K	D					V	6	-					Y	-	0		S	A							S	A					

Differential pressure: FKD [<T shape>, capillary assembly, SMS coupling nut]



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MODEL CODE

MAIN PART MODEL CODE															DIAPHRAGM SEAL MODEL CODE															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	HP							LP								
F	K	D				V	6	-					Y	0		S	A							S	A					



Fuji Electric India Private Limited

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Country of Manufacture : India

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