

## QPress Smart (HART) Process Differential Pressure Transmitter QDP-PROCESS 5400 Series

Smart differential transmitter with remote diaphragm seals, 100:1 turn-down and global Ex approvals.

### Certifications

Quality Lab Solutions data sheet R4



### Applications

- Filter and line DP in chemical
- Power
- Marine
- Food and Beverage
- Clean/viscous/corrosive media with remote seals
- Hazardous areas Zone 0/1/21

### Special Features

- 4–20 mA + HART (HART5 default; HART7 optional); Modbus RS485; Bluetooth option
- Turn-down up to 100:1 with defined accuracy vs turn-down
- Low differential ranges with URL/LRL pairs; seal-system materials 316L, HC-276, Tantalum, Titanium, Monel
- Damping 0–100 s; response time  $\leq 100$  ms; sensor time constant  $\leq 0.2$  s
- IP66/IP67 enclosure; dual entries M20×1.5 or 1/2 NPT; flameproof gland/plug options
- Ex ia / Ex db / Ex tb; CSA/UL Class/Div/Zone; marine approvals (DNV, BV, ABS, LR, KR, NK, RS)



### QDP-PROCESS 5400

#### Description

Designed for process DP measurement where remote diaphragm seals are required, the QDP-PROCESS 5400 combines a smart transmitter with selectable direct, remote or insertion-sleeve seal systems. Ranges are offered on a 100:1 turn-down with URL/LRL limits clearly defined; temperature and mounting effects are stated and can be compensated in service. The unit provides 4–20 mA with HART as standard, with Modbus-RS485 and Bluetooth options. Damping is adjustable from 0 to 100 s and response time is  $\leq 100$  ms. A stainless-steel or polyester-coated aluminium housing achieves IP66/67 with dual M20×1.5 or 1/2 NPT entries. Wetted materials include 316L, Hastelloy C-276, Tantalum, Titanium and Monel with appropriate fill oils for elevated or low temperatures. ATEX/IECEx/CSA and marine approvals enable deployment across hazardous areas and shipboard systems.

## Specifications

| TECHNICAL SPECIFICATIONS |                                                                                                                               |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Pressure range           | URL sets typical: 0.4 bar and 2.5 bar DP (LRL –0.4 bar and –2.5 bar); min span 0.1 bar and 0.25 bar respectively.             |
| Pressure reference       | Differential                                                                                                                  |
| Accuracy                 | ±0.25 % FS; ±0.5 % FS; ±1 % FS (per range)                                                                                    |
| Turn down                | 100:1                                                                                                                         |
| Temp. drift              | Ambient effect per 10 °C stated; see extension                                                                                |
| Response time            | ≤100 ms                                                                                                                       |
| Power consumption        | ≤500 mW @ 24 V                                                                                                                |
| Ambient temp.            | Without LCD –50...85 °C; With LCD –40...70 °C                                                                                 |
| Medium temp.             | By fill fluid: Silicone –40...200 °C; High-temp silicone 0...315 °C; Low-temp silicone –55...120 °C; Fluorocarbon –55...85 °C |
| Storage temp.            | Without LCD –50...100 °C; With LCD –40...85 °C                                                                                |
| Operating humidity       | 5–100 %RH @ 40 °C                                                                                                             |
| Warranty                 | 2; 3; 5 Years                                                                                                                 |
| Damping time             | 0–100 s                                                                                                                       |
| Relative humidity        | 5–100 %RH @ 40 °C                                                                                                             |
| Protection               | IP66; IP67                                                                                                                    |
| Overpressure             | Diaphragm: 316L/Tantalum/Titanium; Pressure port: 304/316L/Hastelloy C-276/Titanium; O-ring: FKM or EPDM                      |
| Net weight               | ≤ 6.35 kg                                                                                                                     |
| Approvals/Certification  | UKCA;CE;RoHS;ATEX; IECEx; CSA; EAC; Marine: DNV; BV; ABS; LR; KR; NK; RS                                                      |
| EX Protection types      | Ex ia; Ex db; Ex tb                                                                                                           |
| Temperature class        | T4 (IS); T6 (Flameproof); T80 °C (Dust)                                                                                       |
| Electrical Outputs       | 4–20 mA + HART; Modbus RS485 (option); Bluetooth option                                                                       |
| Process connections      | Remote fixed flange or insertion sleeve; sizes DN25...DN100 (1–4 in) to EN1092-1 / ASME B16.5 / HG/T 20592; face RF/FM/M/RJ   |
| Cable Gland Types        | M20×1.5 gland IP67; flameproof plug; adapters                                                                                 |
| Electrical entry threads | M20×1.5; 1/2 NPT                                                                                                              |
| Connector material       | 316 SS metal plug; optional PVC/SS glands                                                                                     |
| Fill fluid options       | Silicone; High-temp silicone; Low-temp silicone; Fluorocarbon oil 2                                                           |
| Wetted parts             | 316L; HC-276; Tantalum; Titanium; Monel                                                                                       |
| Housing Material         | 316L stainless steel or aluminium alloy (polyester coated)                                                                    |
| Electrical connections   | Dual entries M20×1.5 or 1/2 NPT; glands/adapters; flameproof plug                                                             |
| Power Supply             | 18.3...44 V DC (IS 18.3...30 V DC)                                                                                            |
| Longterm Stability       | ±0.1 %SPAN/10 years                                                                                                           |
| Vibration effect         | < 0.1 %SPAN (IEC 61298-3)                                                                                                     |
| Bluetooth option         | Available                                                                                                                     |
| HART Version             | HART5 default; HART7 optional                                                                                                 |

## Accuracy

| Pressure reference | Turn-down (TD)                                                                                                                                                                                             | Linear output accuracy                             | Applicable nominal ranges                  |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------|
| DP                 | TD ≤ 5                                                                                                                                                                                                     | ±0.75% URL + Diaphragm seal system effects         | Applies to nominal ranges 0.4 bar, 2.5 bar |
|                    | TD > 5                                                                                                                                                                                                     | ±(0.025%×0.045TD)% + Diaphragm seal system effects | Applies to nominal ranges 0.4 bar, 2.5 bar |
| Notes              | Square-root output accuracy = $1.5 \times \text{linear output accuracy}$<br>Total performance = $\pm((E1)^2 + (E2)^2 + (E3)^2)$<br>E1=Indoor temp acc; E2=Ambient temp effects; E3=Static pressure effects |                                                    |                                            |

## Ambient temperature effects

| Pressure reference | Effect<br>(per 10°C)                                            | Applicable<br>nominal ranges               |
|--------------------|-----------------------------------------------------------------|--------------------------------------------|
| DP                 | $\pm(0.375+0.125 \cdot \text{TD})\% \text{SPAN}$<br>per 10 degC | Applies to nominal ranges 0.4 bar, 2.5 bar |

## Environmental conditions

| Item                  | Condition                                                | Notes                                                                                                                                                      |
|-----------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating temperature | Without LCD: -50 to +85 degC; With LCD: -40 to +70 degC  | Short pipeline explosion-proof products shall have a surface temperature $\leq 80$ degC. If uncertain, medium temperature shall be $\leq T_6/T_{80}$ degC. |
| Storage temperature   | Without LCD: -50 to +100 degC; With LCD: -40 to +85 degC | -                                                                                                                                                          |
| Operating humidity    | 5 %RH to 100 %RH @ 40 degC                               | -                                                                                                                                                          |

## EMC standards

| Test                                     | Standard      | Test conditions                                   | Performance level |
|------------------------------------------|---------------|---------------------------------------------------|-------------------|
| Radiated emission (enclosure)            | CISPR 32      | 30 MHz–1000 MHz                                   | Qualified         |
| Conducted emission (DC port)             | CISPR 32      | 0.15 MHz–30 MHz                                   | Qualified         |
| Electrostatic discharge immunity         | IEC 61000-4-2 | 8 kV contact, 15 kV air                           | B                 |
| RF electromagnetic field immunity        | IEC 61000-4-3 | 10 V/m (80 MHz–1 GHz)                             | A                 |
| Power-freq magnetic field immunity       | IEC 61000-4-8 | 30 A/m                                            | B                 |
| Electrical fast transient/burst immunity | IEC 61000-4-4 | 4 kV (5/50 ns, 100 kHz)                           | B                 |
| Surge immunity                           | IEC 61000-4-5 | 2 kV line-line; 4 kV line-ground (1.2/50 $\mu$ s) | B                 |
| Conducted RF immunity                    | IEC 61000-4-6 | 3 V (150 kHz–80 MHz)                              | A                 |

## Power supply & Load

| Item                     | Specification                    | Notes                                 |
|--------------------------|----------------------------------|---------------------------------------|
| Supply voltage (HART)    | 18.3–44 VDC                      | 13 VDC possible for non-IS on request |
| Supply voltage (IS HART) | 18.3–30 VDC                      | Intrinsically safe circuits           |
| Loop load (operation)    | 0–1476 $\Omega$                  | -                                     |
| Loop load (HART comms)   | 250–800 $\Omega$                 | -                                     |
| Transmission distance    | < 1000 m                         | Twisted pair recommended              |
| Power consumption        | $\leq 500$ mW @ 24 VDC (20.8 mA) | -                                     |

## Measuring Range (Differential Pressure)

| Range Code | Measuring Range | Minimum Range | LRL      | URL      | Accuracy         |
|------------|-----------------|---------------|----------|----------|------------------|
| 02         | 0...0.4 bar     | 0.1 bar       | -0.4 bar | +0.4 bar | $\pm 0.75\%$ URL |
| 03         | 0...2.5 bar     | 0.25 bar      | -2.5 bar | +2.5 bar | $\pm 0.75\%$ URL |

## Output Signals

| Code | Output                              | Power Supply                            | Load                                              |
|------|-------------------------------------|-----------------------------------------|---------------------------------------------------|
| IH   | 4-20 mA (2-wire) + HART             | 18.3–44 VDC (non-IS) / 18.3–30 VDC (IS) | 0–1476 $\Omega$ ; 250–800 $\Omega$ for HART comms |
| IB   | 4-20 mA (2-wire) + HART + Bluetooth | 18.3–44 VDC (non-IS) / 18.3–30 VDC (IS) | 0–1476 $\Omega$ ; 250–800 $\Omega$ for HART comms |
| RM   | RS485 (MODBUS RTU)                  | 18.3–44 VDC                             |                                                   |

## HART Protocol

| Code | Description      |
|------|------------------|
| H5   | HART 5 (default) |
| H7   | HART 7           |

| Construction Materials |        |                  |                     |
|------------------------|--------|------------------|---------------------|
| Code                   | Flange | Insertion sleeve | Measuring diaphragm |
| 6A                     | 316 SS | 316 SS           | 316L                |
| 6B                     | 316 SS | 316 SS           | HC-276              |
| 6C                     | 316 SS | 316 SS           | Tantalum            |
| 6D                     | 316 SS | 316 SS           | Titanium            |
| 6E                     | 316 SS | 316 SS           | Monel               |

| Enclosure & Conduit entry |                             |                        |              |                    |
|---------------------------|-----------------------------|------------------------|--------------|--------------------|
| Code                      | Case Material               | Conduit Thread         | Outlet Ports | Notes              |
| EC1                       | 316L SS                     | M20x1.5 (dual outlets) | 2            | No glands included |
| EC2                       | 316L SS                     | 1/2 NPT (dual outlets) | 2            | No glands included |
| EC3                       | Aluminum (polyester-coated) | M20x1.5 (dual outlets) | 2            | No glands included |
| EC4                       | Aluminum (polyester-coated) | 1/2 NPT (dual outlets) | 2            | No glands included |

| Cable Gland & Adapter |                                      |                  |          |                |           |            |
|-----------------------|--------------------------------------|------------------|----------|----------------|-----------|------------|
| Code                  | Type                                 | Thread           | Material | Cable OD range | IP rating | Notes      |
| GL0                   | None (no cable glands)               | -                | -        | -              | -         |            |
| GLA                   | Flameproof metal plug (single-ended) | -                | 316 SS   | -              | -         | Flameproof |
| GL1                   | Waterproof gland with plug           | M20x1.5          | PVC      | 6–12 mm        | IP67      |            |
| GL2                   | Non-flameproof adapter with plug     | M20x1.5->M20x1.5 | 316 SS   | 6–8 mm         | IP67      |            |
| GL3                   | Flameproof adapter with plug         | M20x1.5->1/2 NPT | 316 SS   | 6–12 mm        | IP67      |            |
| GL4                   | Flameproof adapter with plug         | M20x1.5->M20x1.5 | 316 SS   | 6–12 mm        | IP67      |            |
| GL5                   | Flameproof adapter with plug         | M20x1.5->G1/2    | 316 SS   | 6–12 mm        | IP67      |            |

| Application |                                                            |
|-------------|------------------------------------------------------------|
| Code        | Description                                                |
| OX          | Oxygen service (use fluorocarbon fill, oil-free treatment) |
| OF          | Oil-free degreasing of wetted parts                        |

| Power Supply |                       |
|--------------|-----------------------|
| Code         | Supply                |
| V4           | 18.3–44 VDC (HART)    |
| VI           | 18.3–30 VDC (IS HART) |

| Fill Fluid |                                 |                    |                               |
|------------|---------------------------------|--------------------|-------------------------------|
| Code       | Filling oil type                | Medium temperature | Diaphragm ambient temperature |
| S          | Normal temperature silicone oil | -40 to +200 degC   | -40 to +85 degC               |
| H          | High temperature silicone oil   | 0 to +315 degC     | 0 to +85 degC                 |
| L          | Low temperature silicone oil    | -55 to +120 degC   | -40 to +85 degC               |
| E          | Fluorocarbon oil 2              | -55 to +85 degC    | -40 to +85 degC               |

| Display |         |                                               |       |
|---------|---------|-----------------------------------------------|-------|
| Code    | Display | Temp window                                   | Notes |
| D0      | None    | -40 to +70 deg (Ex) / -50 to +85 deg (non-Ex) |       |
| D1      | LCD     | -40 to +70 deg                                |       |

| Certification / Documentation |                                      |
|-------------------------------|--------------------------------------|
| Code                          | Description                          |
| CE                            | CE (EMC)                             |
| UK                            | UKCA                                 |
| RO                            | RoHS                                 |
| AT                            | ATEX (db / ia / tb)                  |
| IX                            | IECEx (db / ia / tb)                 |
| UL                            | CSA/UL North America (Division/Zone) |
| CU                            | EAC Ex                               |

## Process Connections/Drawings

| Code | Thread / Port                                     |
|------|---------------------------------------------------|
| P11  | EN1092-1 DN25 flange (RF/FM/M/RJ per selection)   |
| P12  | EN1092-1 DN40 flange (RF/FM/M/RJ per selection)   |
| P13  | EN1092-1 DN50 flange (RF/FM/M/RJ per selection)   |
| P14  | EN1092-1 DN80 flange (RF/FM/M/RJ per selection)   |
| P15  | EN1092-1 DN100 flange (RF/FM/M/RJ per selection)  |
| P21  | ASME B16.5 1 in flange (RF/FM/M/RJ per selection) |
| P22  | ASME B16.5 2 in flange (RF/FM/M/RJ per selection) |
| P23  | ASME B16.5 3 in flange (RF/FM/M/RJ per selection) |
| P24  | ASME B16.5 4 in flange (RF/FM/M/RJ per selection) |

## Connection seal

| Code | Seal type       |
|------|-----------------|
| RF   | Raised face     |
| FM   | Female face     |
| M    | Male face       |
| RJ   | Ring joint face |

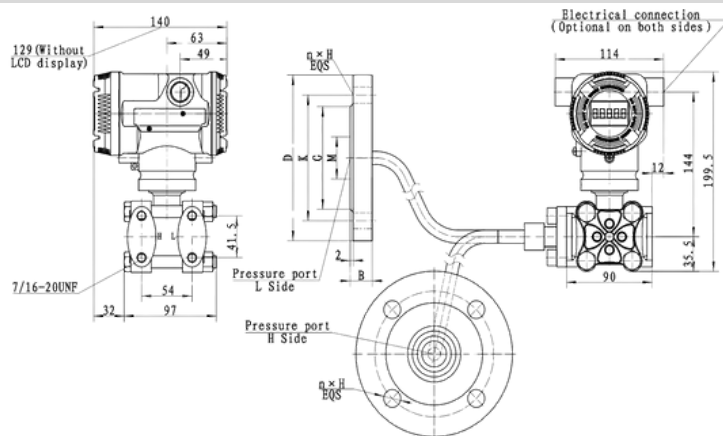
## Remote HP + LP Connections

| Code | Side | Name                                         | Description                                                       | Sealing Face                                        | Sleeve Diameter   | Sleeve Length     |
|------|------|----------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------|-------------------|-------------------|
| HF   | HP   | Remote fixed flange                          | HP side uses a remote fixed flange seal connected via capillary.  | RF/FM/M/RJ faces per flange standard.               | —                 | —                 |
| HE   | HP   | Remote fixed flange insertion sleeve         | HP side uses an insertion sleeve on a remote fixed flange seal.   | RF/FM/M/RJ faces per flange standard.               | Ø 46 / 66 / 77 mm | 50 / 100 / 150 mm |
| HN   | HP   | Side-mounted movable flange (blind face)     | HP side uses side-mounted movable flange with blind sealing face. | Blind face (no port).                               | —                 | —                 |
| HM   | HP   | Side-mounted movable flange insertion sleeve | HP side uses side-mounted movable flange with insertion sleeve.   | Blind face on flange body; sleeve seals to process. | Ø 46 / 66 / 77 mm | 50 / 100 / 150 mm |
| LF   | LP   | Remote fixed flange                          | LP side uses a remote fixed flange seal connected via capillary.  | RF/FM/M/RJ faces per flange standard.               | —                 | —                 |
| LE   | LP   | Remote fixed flange insertion sleeve         | LP side uses an insertion sleeve on a remote fixed flange seal.   | RF/FM/M/RJ faces per flange standard.               | Ø 46 / 66 / 77 mm | 50 / 100 / 150 mm |

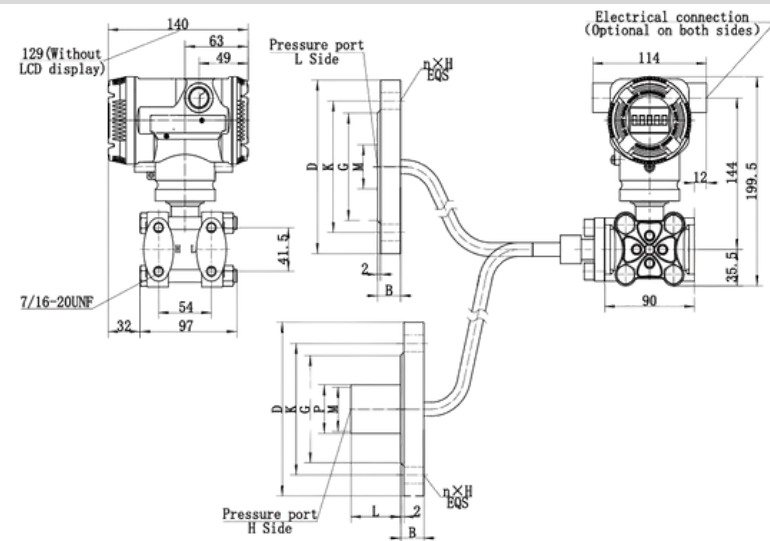
## Available Remote HP + LP combinations

| Code  | Description                                                                                        | Service Notes                                         |
|-------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| HF-LF | HP and LP sides have remote fixed flanges.                                                         | For oxygen service use /OX with fluorocarbon oil (E). |
| HE-LF | HP has insertion sleeve; LP is fixed flange.                                                       | For oxygen service use /OX with fluorocarbon oil (E). |
| HE-LE | Both sides insertion sleeves.                                                                      | For oxygen service use /OX with fluorocarbon oil (E). |
| HN-LF | HP = side-mounted movable flange (blind face).<br>No insertion sleeve on HP.<br>LP = fixed flange. | For oxygen service use /OX with fluorocarbon oil (E). |
| HM-LF | HP = side-mounted movable flange insertion sleeve. LP = fixed flange.                              | For oxygen service use /OX with fluorocarbon oil (E). |
| HM-LE | HP = side-mounted movable flange insertion sleeve; LP = insertion sleeve.                          | For oxygen service use /OX with fluorocarbon oil (E). |

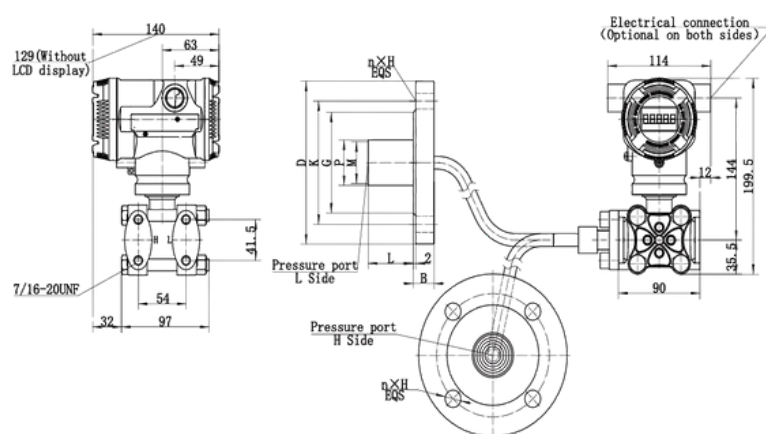
## HF-LF Drawing



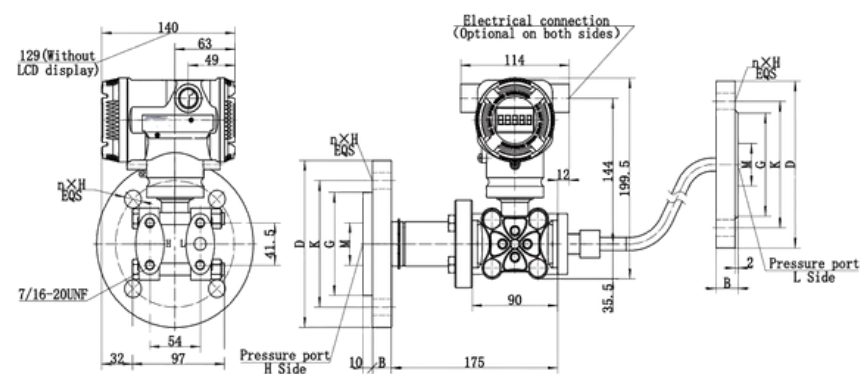
## HE-LF Drawing



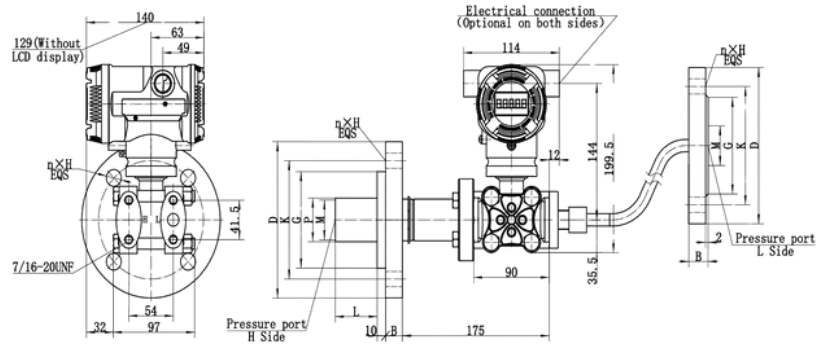
## HE-LE Drawing



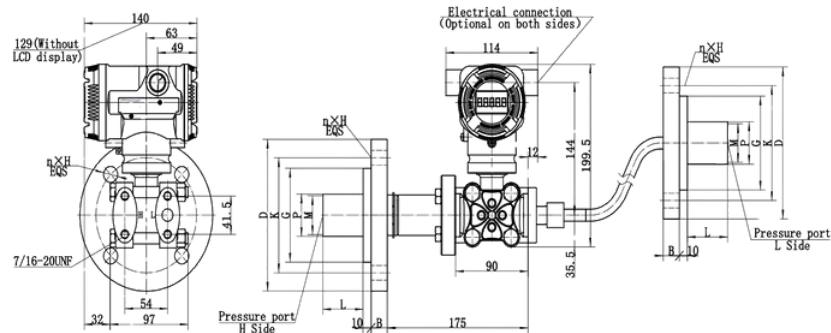
## HN-LF Drawing



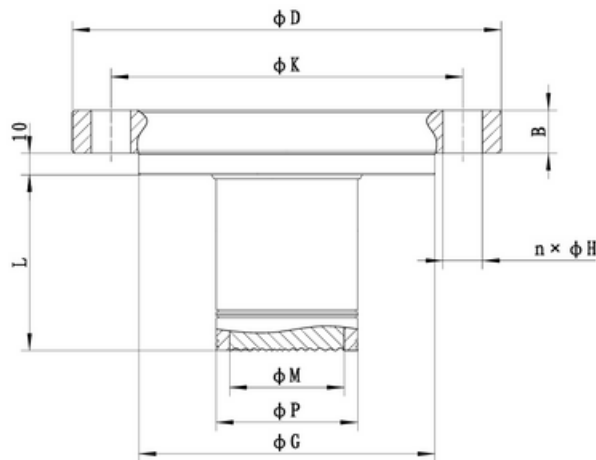
## HM-LF Drawing



## HM-LF Drawing

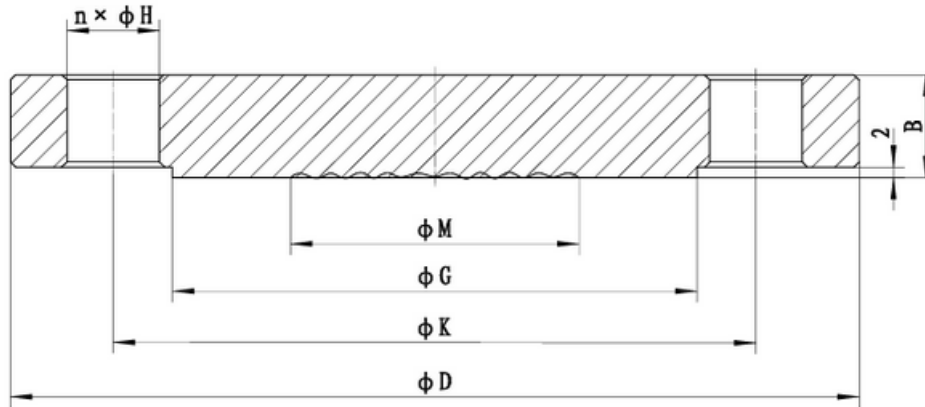


## Insertion sleeve Flange dimensions



| Specification | Outer Diameter ( $\phi D$ ) | Thickness (B) | RF Diameter ( $\phi G$ ) | Hole Circumference ( $\phi K$ ) | Quantity (n) | Hole Diameter ( $\phi H$ ) | Insertion Sleeve Diameter ( $\phi P$ ) | Insertion Sleeve Length (L) | Corrugation Diameter ( $\phi M$ ) |
|---------------|-----------------------------|---------------|--------------------------|---------------------------------|--------------|----------------------------|----------------------------------------|-----------------------------|-----------------------------------|
| DN80PN10      | 200                         | 20            | 138                      | 160                             | 8            | 18                         | 66                                     | 50                          | 42                                |
| DN80PN10      | 200                         | 20            | 138                      | 160                             | 8            | 18                         | 66                                     | 100                         | 42                                |
| DN80PN10      | 200                         | 20            | 138                      | 160                             | 8            | 18                         | 66                                     | 150                         | 42                                |
| DN50PN10      | 165                         | 20            | 102                      | 125                             | 4            | 18                         | 46                                     | 150                         | 42                                |
| DN50PN10      | 165                         | 20            | 102                      | 125                             | 4            | 18                         | 46                                     | 50                          | 42                                |
| DN50PN10      | 165                         | 20            | 102                      | 125                             | 4            | 18                         | 46                                     | 100                         | 42                                |

## Flange dimensions



| Specification | Outer Diameter ( $\phi D$ ) | Thickness (B) | Hole Circumference ( $\phi K$ ) | RF Diameter ( $\phi G$ ) | Hole Diameter ( $\phi H$ ) | Quantity (n) | Corrugation Diameter ( $\phi M$ ) |
|---------------|-----------------------------|---------------|---------------------------------|--------------------------|----------------------------|--------------|-----------------------------------|
| DN50PN10      | 165                         | 20            | 125                             | 102                      | 18                         | 4            | 56                                |
| DN80PN10      | 200                         | 20            | 160                             | 138                      | 18                         | 8            | 56                                |
| DN100PN10     | 220                         | 20            | 180                             | 158                      | 18                         | 8            | 56                                |

## Hazardous area

| Code | Scheme                 | Explosion protection marking                                                                           | Key standards (non-PRC)                                | Notes              |
|------|------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------|
| AT   | ATEX (EU)              | II 1G Ex ia IIC T4 Ga                                                                                  | EN IEC 60079-0; EN 60079-11                            | Intrinsically safe |
| AT   | ATEX (EU)              | II 2G Ex db IIC T6 Gb; II 2D Ex tb IIIC T80°C Db                                                       | EN IEC 60079-0; EN 60079-1; EN 60079-31                | Flameproof & dust  |
| IX   | IECEx (International)  | Ex ia IIC T4 Ga                                                                                        | IEC 60079-0; IEC 60079-11                              | Intrinsically safe |
| IX   | IECEx (International)  | Ex db IIC T6 Gb; Ex tb IIIC T80°C Db                                                                   | IEC 60079-0; IEC 60079-1; IEC 60079-31                 | Flameproof & dust  |
| UL   | North America (CSA/UL) | Class I, Div 1, Groups A–D T4; Class I, Zone 0, AEx ia IIC T4 Ga                                       | ANSI/UL 60079-0/-11; UL 61010-1; CSA C22.2 60079-0/-11 | Intrinsically safe |
| UL   | North America (CSA/UL) | Class I, Div 1, Groups A–D T6; Class II Div 1 Groups E–G T80°C; AEx db IIC T6 Gb; AEx tb IIIC T80°C Db | ANSI/UL 60079-0/-1/-31; CSA C22.2 60079-0/-1/-31       | Flameproof & dust  |
| CU   | EAC Ex (Eurasian)      | 1Ex db IIC T6 Gb; 0Ex ia IIC T4 Ga                                                                     | GOST 31610.0; GOST IEC 60079-1/-11                     | —                  |

## Accessory

| Code | Description         |
|------|---------------------|
| Code | Description         |
| AX10 | Cable gland kit     |
| AX20 | USB HART modem      |
| AX30 | RS485-USB converter |

## Optional Extras

| Group                        | Code  | Description                                              |
|------------------------------|-------|----------------------------------------------------------|
| Mounting bracket accessories | MB1   | L-shaped bracket (sq), 316 SS                            |
|                              | MB2   | L-shaped bracket (sq), Q235 carbon steel                 |
| Calibration / Verification   | CAL   | Factory verification report; specify LRL/URL if required |
| Leakage test report          | VT1   | PN10/PN16 (Class 150), 10 min hold                       |
|                              | VT2   | PN25/PN40 (Class 300), 10 min hold                       |
|                              | VT3   | PN63, 10 min hold                                        |
|                              | VT4   | PN100 (Class 600), 10 min hold                           |
| HART configuration           | H5    | HART 5 (default)                                         |
|                              | H7    | HART 7                                                   |
| Function settings            | ST    | Damping 0–100 s (default 0 s)                            |
|                              | WH    | High alarm: 20.8 mA (H5) / 21 mA (H7)                    |
|                              | WL    | Low alarm: 3.8 mA (H5) / 3.7 mA (H7)                     |
| Identification plate         | IP1   | 316L hanging nameplate; ID ≤16 chars                     |
| Diaphragm surface treatment  | DG1   | Gold plating 8 um — single diaphragm                     |
|                              | DG2   | Gold plating 8 um — double diaphragms                    |
| Application                  | OF    | Oil-free degreasing of wetted parts                      |
|                              | OX    | Oxygen service — select fluorocarbon oil (E)             |
| Delivery Documentation       | LE    | English docs                                             |
|                              | LR    | Russian docs                                             |
|                              | XM    | Additional acceptance documents                          |
| Warranty Period              | Y2    | 2-year warranty                                          |
|                              | Y3    | 3-year warranty                                          |
|                              | Y5    | 5-year warranty                                          |
| Language & documentation     | LG-RU | Russian nameplate + documentation + certificates         |
| Delivery documentation       | DS1   | Additional acceptance documents per order                |

## Order Guide

| Segment                       | Your Code | QDP-PROCESS 5400           | QDP-PROCESS 5400              | QDP-PROCESS 5400           | QDP-PROCESS 5400           | QDP-PROCESS 5400              | QDP-PROCESS 5400           |
|-------------------------------|-----------|----------------------------|-------------------------------|----------------------------|----------------------------|-------------------------------|----------------------------|
| Diaphragm Seal Combination    |           | HF-LF                      | HE-LF                         | HE-LE                      | HN-LF                      | HM-LF                         | HM-LE                      |
| Pressure Reference            |           | DP                         | DP                            | DP                         | DP                         | DP                            | DP                         |
| Range                         |           | 02/03                      | 02/03                         | 02/03                      | 02/03                      | 02/03                         | 02/03                      |
| Output                        |           | IH/IB/RM                   | IH/IB/RM                      | IH/IB/RM                   | IH/IB/RM                   | IH/IB/RM                      | IH/IB/RM                   |
| Power Supply                  |           | See Power Supply & Load    | See Power Supply & Load       | See Power Supply & Load    | See Power Supply & Load    | See Power Supply & Load       | See Power Supply & Load    |
| Enclosure & Conduit Entry     |           | See Enclosure & Conduit    | See Enclosure & Conduit       | See Enclosure & Conduit    | See Enclosure & Conduit    | See Enclosure & Conduit       | See Enclosure & Conduit    |
| Display                       |           | N / L                      | N / L                         | N / L                      | N / L                      | N / L                         | N / L                      |
| Construction Materials        |           | See Construction Materials | See Construction Materials    | See Construction Materials | See Construction Materials | See Construction Materials    | See Construction Materials |
| Capillary Type                |           | U/L                        | U/L                           | U/L                        | U/L                        | U/L                           | U/L                        |
| Capillary Length              |           | 1..A                       | 1..A                          | 1..A                       | 1..A                       | 1..A                          | 1..A                       |
| Connection Seal               |           | RF/FM/M/RJ                 | RF/FM/M/RJ                    | RF/FM/M/RJ                 | RF/FM/M/RJ (blind face)    | RF/FM/M/RJ (blind face)       | RF/FM/M/RJ (blind face)    |
| HART Version                  |           | H5/H7                      | H5/H7                         | H5/H7                      | H5/H7                      | H5/H7                         | H5/H7                      |
| Function Settings             |           | ST/WH/WL                   | ST/WH/WL                      | ST/WH/WL                   | ST/WH/WL                   | ST/WH/WL                      | ST/WH/WL                   |
| Fill Fluid                    |           | S/H/L/E                    | S/H/L/E                       | S/H/L/E                    | S/H/L/E                    | S/H/L/E                       | S/H/L/E                    |
| Option – HART Config          |           | H5/H7                      | H5/H7                         | H5/H7                      | H5/H7                      | H5/H7                         | H5/H7                      |
| Option – Leak Test            |           | VT1..VT4                   | VT1..VT4                      | VT1..VT4                   | VT1..VT4                   | VT1..VT4                      | VT1..VT4                   |
| Option – Surface Treatment    |           | Flange diaphragm only      | HP: sleeve+flange; LP: flange | Both sleeves & flanges     | Flange diaphragm only      | HP: sleeve+flange; LP: flange | Both sleeves & flanges     |
| Option – Nameplate & Brackets |           | IP1/MB1/MB2                | IP1/MB1/MB2                   | IP1/MB1/MB2                | IP1/MB1/MB2                | IP1/MB1/MB2                   | IP1/MB1/MB2                |
| Option – Docs & Warranty      |           | LE/LR/XM/Y2/Y3/Y5          | LE/LR/XM/Y2/Y3/Y5             | LE/LR/XM/Y2/Y3/Y5          | LE/LR/XM/Y2/Y3/Y5          | LE/LR/XM/Y2/Y3/Y5             | LE/LR/XM/Y2/Y3/Y5          |
| Certification                 |           | See Certification          | See Certification             | See Certification          | See Certification          | See Certification             | See Certification          |
| Hazardous Area                |           | See Hazardous Area         | See Hazardous Area            | See Hazardous Area         | See Hazardous Area         | See Hazardous Area            | See Hazardous Area         |

**Ordering Example** DP transmitter; 4–20 mA + HART7; 316L case M20x1.5 with LCD; material set 6A. HP: side-mounted movable flange insertion sleeve; LP: remote fixed flange insertion sleeve. EN DN80 PN40 RF both sides; 316 SS flanges/sleeves; 316L diaphragm. Capillary U, 6 m; silicone oil ; damping + high alarm; leak test PN25/PN40; 316L nameplate; bracket; English docs; 3-year warranty.

| Product Family   | Diaphragm Seal Combination | Pressure Reference | Range      | Output             | Enclosure & Conduit Entry | Display          | Construction Materials | Capillary Type | Capillary Length |
|------------------|----------------------------|--------------------|------------|--------------------|---------------------------|------------------|------------------------|----------------|------------------|
| QDP-PROCESS 5400 | HM-LE                      | DP                 | 03         | IH                 | EC1                       | L                | 6A                     | U              | 6                |
| Connection Seal  | HART Version               | Function Settings  | Fill Fluid | Option – Leak Test | Option – Nameplate        | Option – Bracket | Delivery Documentation | Warranty       |                  |
| RF               | H7                         | ST/WH              | S          | VT2                | IP1                       | MB1              | LE                     | Y3             |                  |

### Notes

Ensure media compatibility with wetted parts. Torque depends on gasket, mating material and lubrication.  
 Capillary type U (PVC) or L (SS bellows); length 1..A = 1..10 m. For capillary >=6 m choose DN80/3 in or larger where possible.  
 PFA/PTFE films generally apply to flange diaphragms; sleeves accept only supported coatings per datasheet.

