# INTELLIGENT PRESSURE TRANSMITTER WITH LCD DISPLAY

## EPD 20

"Modbus RTU or 4…20mA/HART Output, Aluminum Alloy Case"

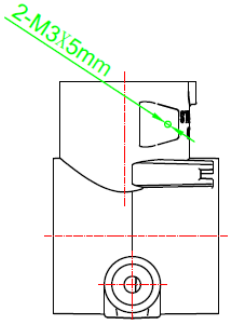

- 100 milibar….200 BAR pressure range
- Easy configuration with LCD module buttons
- 24VDC supply voltage
- 4…20mA/HART or MODBUS RTU output
- 4…20mA/HART output model: LCD with backlight, displaying 5 bits, and 4 decimal places
- MODBUS RTU output model: LCD with backlight, displaying 6 bits, and 5 decimal places
- Many measurement unit options adjustable from the menu
- High accuracy up to ±%0,3 FS
- Short circuit and reverse polarity protection
- Aluminum alloy case
- Excellent long-term work
- IP65 protection class

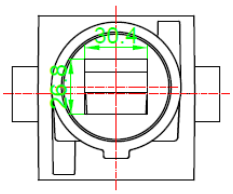
EPD20 pressure transmitter with LCD display, is used to convert and display measured pressure value to desired measurement unit. Modbus RTU and 4…20mA/HART output options are available.

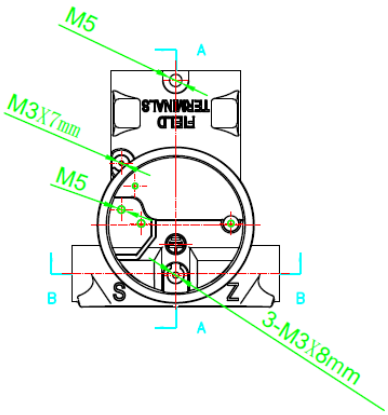
The product features high accuracy, stability and easy operation.

Parameter configuration and compensation of the transmitter can be done on-site and easily with the buttons on the LCD module.

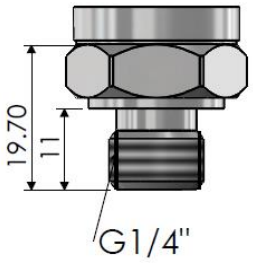
## 4…20mA/HART OUTPUT MODEL

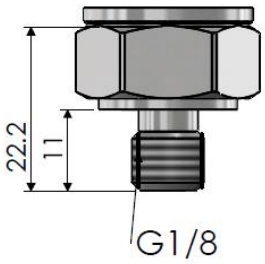



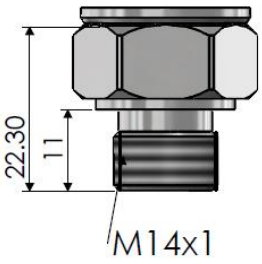



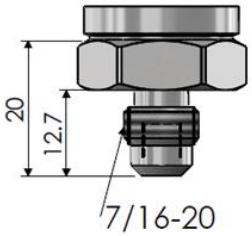



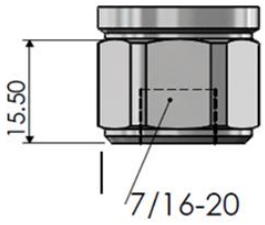

## PROCESS CONNECTION OPTIONS

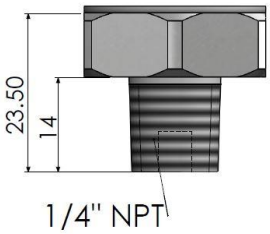


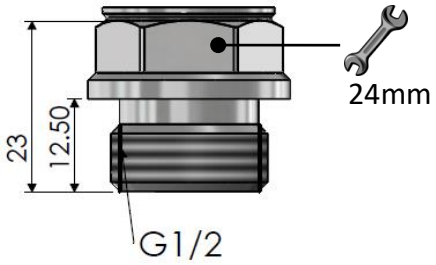




* In the case of the G1/2 model, the dimension of key slot is 24mm. All other models are 22mm.
** Do not turn the product by holding from socket during installation. Otherwise, the product may be damaged.

## TECHNICAL DATAS

| General Features | |
|---|---|
| **Output signal** | 4…20mA/HART |
| **Supply voltage** | 12-32VDC (suggested 24VDC) |
| **Site operation** | 3 buttons, all parameters can ve modified at site |

| Mechanical and Environmental Features | |
|---|---|
| **Working and storage temperature** | -30°C … +70°C |
| **Protection class** | IP65 |
| **Weight** | ~950 gr |
| **Material** | Transmitter : Stainless steel hosuing - 1.4305 (AISI303), Optional stainless 316L or Titanium<br>Case: Aluminum alloy |

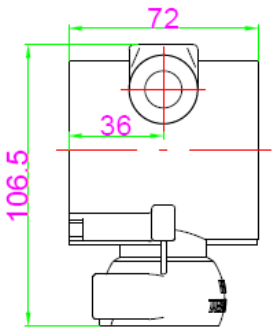
| Transmitter Features | |
|---|---|
| **Measurement Range** | Diffrent models from 0…100mbar to 0…200Bar<br>Vacuum models -950mBar…0Bar |
| **Measurement Type** | Ambient pressure measurement as relative<br>Air, Water, Oil, Non-explosive gases |
| **Working Principle** | Piezoresistive |
| **Maximum Compressive Strength** | 300%F.S. ≤700mbar, 200%F.S. ＜250Bar<br>150%F.S ≥250Bar<br>*Can be 3 or 5 times |
| **Oring – Sealing** | Standard NBR, optional FKM(Viton) or EPDM |
| **Process Connection** | G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F |
| **Accuracy** | ±%0,5 F.S or ±%0,3 F.S @25° C |
| **Long Term Stability** | ±%0,3 F.S / year |
| **Response Time** | 1ms %10…%90 nominal pressure |
| **Mounting / Tightening Torque** | 15 ... 20 Nm |

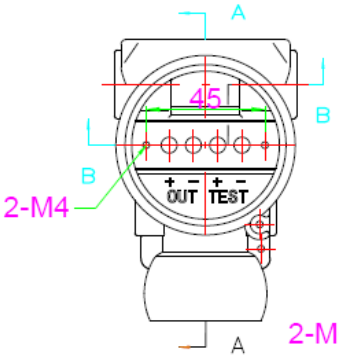
| LCD Display Features | |
|---|---|
| **Display** | LCD with backlight, displaying 5 bits, and 4 decimal places |
| **Units** | H2O, inHg, ftH2O, mmH2O, mmHg, psi, bar, mbar, g/cm$^2$, kg/cm$^2$, Pa, kPa, Torr, atm, Mpa, mH2O, mHg, m, mm, cm, %, mA, g/cm$^3$ |
| **Sampling rate** | >20 times/s |
| **Display interface** | English and Chinese; pressure, temperature, current, percentage |
| **Output Resolution** | 1µm |
| **Temp. compensation accuracy** | Better than %0.5 |
| **Linearity** | Complete machine linearity is better than 0.2% (Multi-point calibrating is available as required) |
| **Stability** | %0.2/year |
| **Anti-disturbance** | Power isolation, signal isolation (magnetic isolation), electrical isolation |
| **Range ratio** | 100:1 |
| **Circuit protection** | Surge current protection, reverse power protection |
| **Circuit design** | Intrinsic safety |
| **Isolation range** | >200MΩ |
| **Motherboard buttons operation** | reset, lower range calibration(zero drift under pressure source), upper range calibration (full scale calibration) |
| **LCD buttons opration** | changing span units, decimal place, damping time, currant fixing, output features, current fixxing, write-protection,calibration (zero clearing, lower point and full scale calibration), language setting, media density (only unit M) and factory reset |

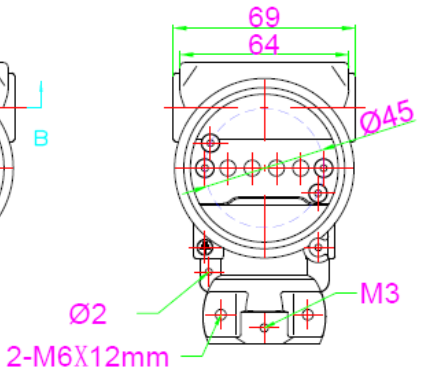
## ELECTRICAL CONNECTIONS


| Connections | |
|---|---|
| TERMINAL 1 | +V (12…32VDC) |
| TERMINAL 2 | -V |
| TERMINAL 3 | 4…20mA/HART |

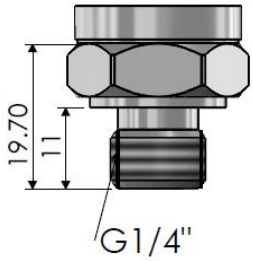
## MODBUS OUTPUT MODEL

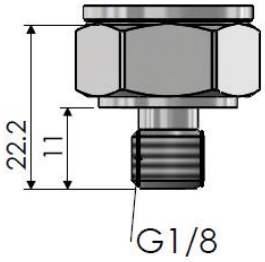


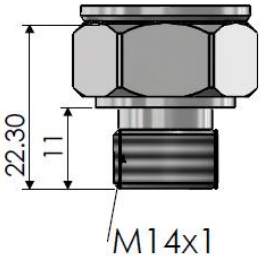



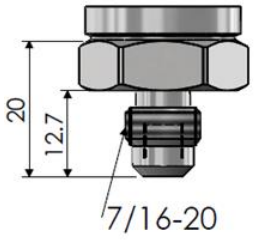



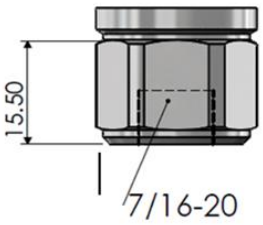

## PROCESS CONNECTION OPTIONS

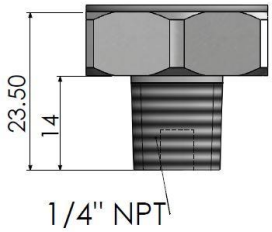


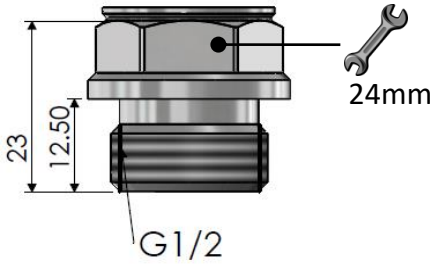

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** Do not turn the product by holding from socket during installation. Otherwise, the product may be damaged.

## TECHNICAL DATAS

| General Features | |
|---|---|
| **Output signal** | MODBUS RTU |
| **Supply voltage** | 18-36VDC (suggested 24VDC) |
| **Site operation** | 3 buttons, all parameters can ve modified at site |

| Mechanical and Environmental Features | |
|---|---|
| **Working and storage temperature** | -30°C ... +70°C |
| **Protection class** | IP65 |
| **Weight** | ~730 gr |
| **Material** | Transmitter : Stainless steel hosuing - 1.4305 (AISI303), Optional stainless 316L or Titanium<br>Case: Aluminum alloy |

| Transmitter Features | |
|---|---|
| **Measurement Range** | Diffrent models from 0…100mbar to 0…200Bar<br>Vacuum models -950mBar…0Bar |
| **Measurement Type** | Ambient pressure measurement as relative<br>Air, Water, Oil, Non-explosive gases |
| **Working Principle** | Piezoresistive |
| **Maximum Compressive Strength** | 300%F.S. ≤700mbar, 200%F.S. ＜250Bar<br>150%F.S ≥250Bar<br>*Can be 3 or 5 times |
| **Oring – Sealing** | Standard NBR, optional FKM(Viton) or EPDM |
| **Process Connection** | G1/4, G1/8, G1/2, NPT1/4, NPT1/8, NPT1/2, M14, UNF7/16X20M, UNF7/16X20F |
| **Accuracy** | ±%0,5 F.S or ±%0,3 F.S @25° C |
| **Long Term Stability** | ±%0,3 F.S / year |
| **Response Time** | 1ms %10…%90 nominal pressure |
| **Mounting / Tightening Torque** | 15 ... 20 Nm |

| LCD Display Features | |
|---|---|
| **Display** | LCD with backlight, displaying 6 bits, and 5 decimal places |
| **Units** | KPa, Pa, MPa, mmH2O, mH2O, mbar, bar, PSI, M,% |
| **RS-485 communication protocol** | Modbus-RTU |
| **RS-485 communication rate** | 1200 bps |
| **Sampling rate** | >20 times/s |
| **Display interface** | English and Chinese; pressure, current, percentage |
| **Linearity** | Complete machine linearity is better than 0.2% (Multi-point calibrating isavailable as required) |
| **Stability** | %0.2/year |
| **Anti-disturbance** | Power isolation, signal isolation (magnetic isolation), electrical isolation |
| **Range ratio** | 10:1 |
| **Circuit protection** | Surge current protection, reverse power protection |
| **Circuit design** | Intrinsic safety |
| **Isolation range** | >200MΩ |
| **Motherboard buttons operation** | reset, lower range calibration(zero drift under pressure source), upper range |
| **LCD buttons operation** | changing machine address (0-255), units, decimal place, damping time and zero clearing |

## ELECTRICAL CONNECTIONS


| Connections | |
|---|---|
| TERMINAL 1 | -V |
| TERMINAL 2 | +V (18…36VDC) |
| TERMINAL 3 | RS485-A |
| TERMINAL 4 | RS485-B |

## ORDER CODE

# Model

**EPD20** – **XXX** – **XX** – **XXXX** – **XXXX**

### Working Pressure Range

-950mBar…0Bar : Vacuum -950mBar…0BAR
0…-950mBar : Vacuum (Reverse calibration)

100mBar : 0…100mbar
250mBar : 0…250mbar
400mBar : 0…400mbar
600mBar : 0...600mbar

1Bar : 0…1BAR
10Bar : 0…10BAR
16Bar : 0…16BAR
25Bar : 0…25BAR
100Bar : 0…100BAR
160Bar : 0…160BAR
200Bar : 0…200BAR

* Ask for other options.

### Output Signal

**MR :** MODBUS RTU
**H**: 4…20mA/HART

### Mechanical Connection

G1/4 : G1/4 Connection
G1/8 : G1/8 Connection
G1/2 : G1/2 Connection
NPT1/4 : NPT1/4 Connection
NPT1/8 : NPT1/8 Connection
NPT1/2 : NPT1/2 Connection
M14 : M14x1 Connection
7/16M : UNF7/16x20M Connection
7/16F : UNF7/16x20F Connection

* Ask for other options.

### Transmitter Body Material

Empty : Stainless 303
E316 : Stainless 316L
* Ask for other options.