

INTELLIGENT DIFFERENTIAL PRESSURE TRANSMITTER WITH LCD

BFT 220

“Modbus RTU or 4...20mA/HART Output,
Aluminum Alloy Case”



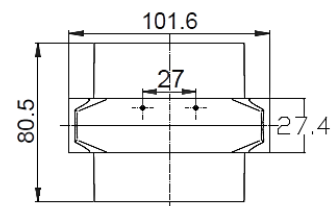
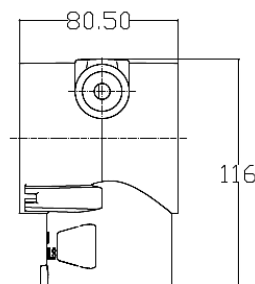
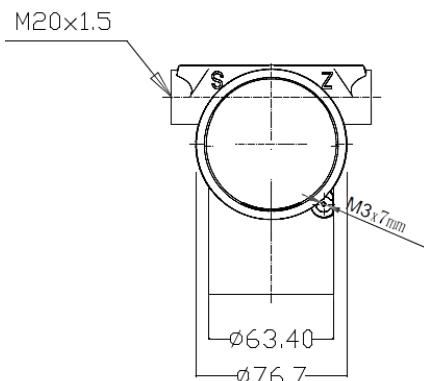
- 100 milibar....25Bar pressure range
- Easy configuration with LCD module buttons
- 24VDC supply voltage
- 4...20mA/HART or MODBUS RTU output
- 4...20mA/HART output model: LCD with backlight, displaying 5 bits, and 4 decimal places
- MODBUS RTU output model: LCD with backlight, displaying 6 bits, and 5 decimal places
- Many measurement unit options adjustable from the menu
- High accuracy up to $\pm 0,3$ FS
- Short circuit and reverse polarity protection
- Aluminum alloy case
- Excellent long-term work
- IP65 protection class

BFT 220 LCD display differential pressure transmitter is used to measure the pressure difference between two pressure points, convert it into the desired measurement unit, and display the measured value. Modbus and HART output options are available. Parameter configuration and compensation adjustments can be easily performed on-site via the buttons on the LCD module. The product features high accuracy, stability and easy operation.

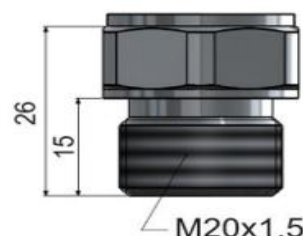
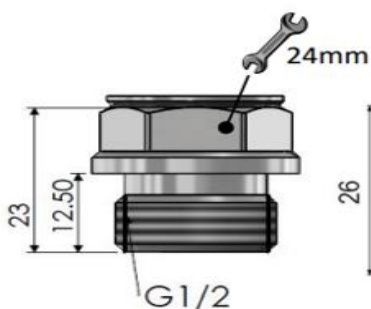
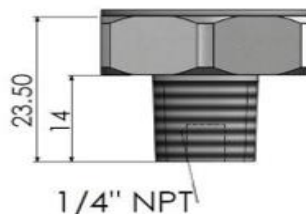
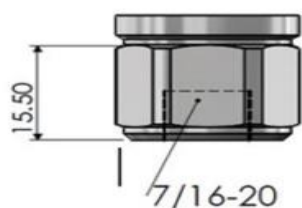
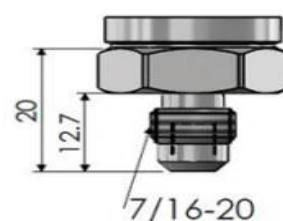
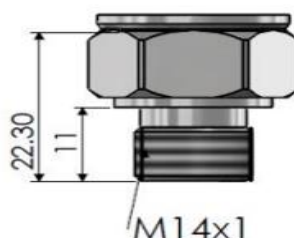
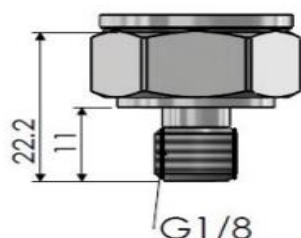
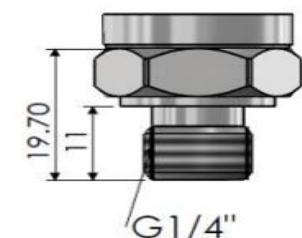
The product offers high accuracy, stability, and ease of use.

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 be 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 housing - 1.4305 (AISI303), Optional stainless 316L or Titanium Case: Aluminum alloy

Differential Pressure Transmitter Features	
Measurement Range	Diffrent models from 100mbar to 0...25Bar
Measurement Type	Ambient pressure measurement as relative Air, Water, Oil, Non-explosive gases
Working Principle	Piezoresistive
Static Pressure	100Bar (max.)
Process Connection	M20x1.5, G1/2, G1/4, G1/4 dişi, NPT1/4, NPT1/4 dişi, M12X1, R1/4 dişi
Accuracy	±%0,5 FS @25°C ±%1 FS @0...+70°C ±%2 FS @-40...+85°C
Response Time	1 ms (to 90% F.S.)
Service Life	≥ 10x10 ⁶ pressure cycles
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	200MΩ/250VDC
Housing Material	Stainless Steel 304
Mounting / Tightening Torque	25Nm

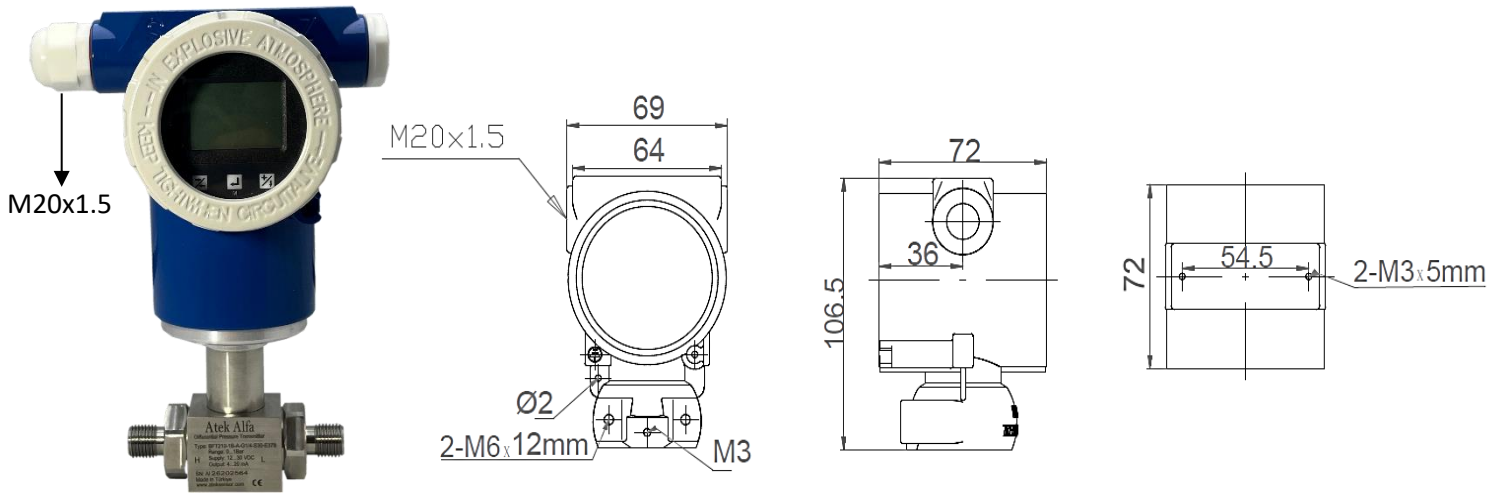
LCD Display Features	
Display	LCD with backlight, displaying 5 bits, and 4 decimal places
Units	H2O, inHg, ftH2O, mmH2O, mmHg, psi, bar, mbar, g/cm ² , kg/cm ² , Pa, kPa, Torr, atm, Mpa, mH2O, mHg, m, mm, cm, %, mA, g/cm ³
Sampling rate	>20 times/s
Display interface	English and Chinese; pressure, temperature, 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 fixing, write-protection,calibration (zero clearing, lower point and full scale calibration), language setting, media density (only unit M) and factory reset

ELECTRICAL CONNECTIONS

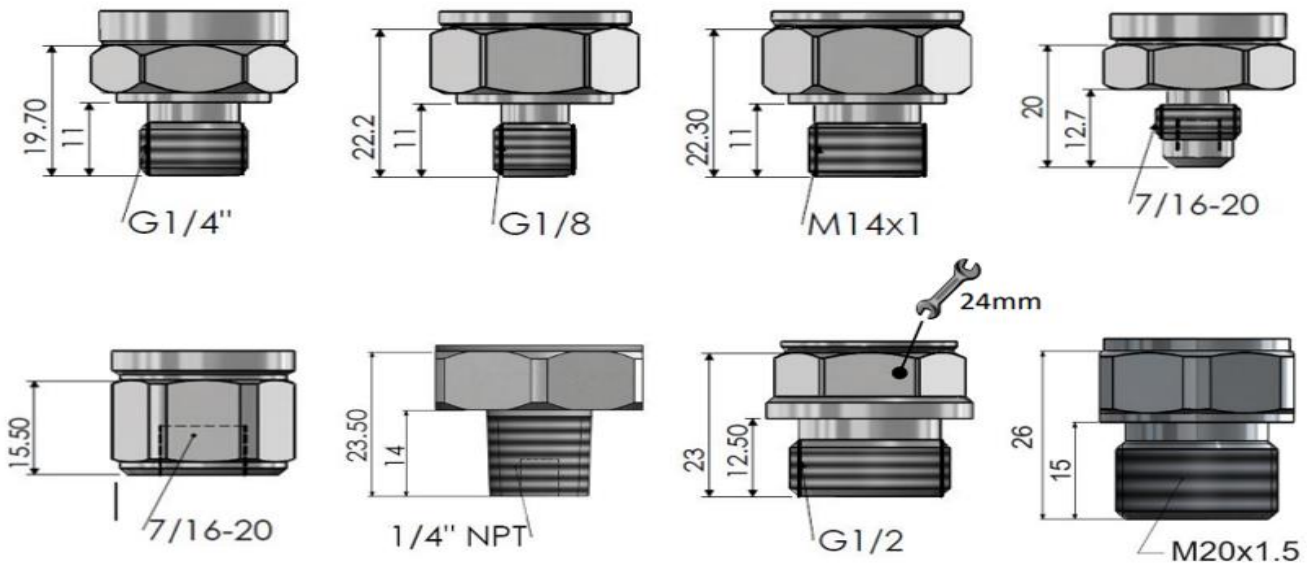


Connections	
TERMINAL 1	+V (12...32VDC)
TERMINAL 2	-V
TERMINAL 3	4...20mA/HART

MODBUS OUTPUT MODEL



PROCESS CONNECTION OPTIONS



- * 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	MODBUS RTU
Supply voltage	18-36VDC (suggested 24VDC)
Site operation	3 buttons, all parameters can be 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 housing - 1.4305 (AISI303), Optional stainless 316L or Titanium Case: Aluminum alloy

Differential Pressure Transmitter Features	
Measurement Range	Diffrent models from 100mbar to 0...25Bar
Measurement Type	Ambient pressure measurement as relative Air, Water, Oil, Non-explosive gases
Working Principle	Piezoresistive
Static Pressure	100Bar (max.)
Process Connection	M20x1.5, G1/2, G1/4, G1/4 dişi, NPT1/4, NPT1/4 dişi, M12X1, R1/4 dişi
Accuracy	±%0,5 FS @25°C ±%1 FS @0...+70°C ±%2 FS @-40...+85°C
Response Time	1 ms (to 90% F.S.)
Service Life	≥ 10x10 ⁶ pressure cycles
EMC-interference	IEC 61000-6-3
EMC-immunity	IEC 61000-6-2
Insulation resistance	200MΩ/250VDC
Housing Material	Stainless Steel 304
Mounting / Tightening Torque	25Nm

LCD Display Features	
Display	LCD with backlight, displaying 6 bits, and 5 decimal places
Units	KPa, Pa, MPa, mmH ₂ O, mH ₂ O, 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 is available 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

Model



Output Signal

MR : MODBUS RTU
H: 4...20mA/HART

Transmitter Body Material

E304: : Stainless Steel 304
* Ask for other options.

Working Pressure Range

Available in different options ranging from 100 mbar to 25 bar.

* Ask for other options.

Mechanical Connection

G1/4 : G1/4 Connection
G1/4F : G1/4 Female Connection
G1/2 : G1/2 Connection
NPT1/4 : NPT1/4 Connection
NPT1/4F : NPT1/4 Female Connection
R1/4F : R1/F Female Connection
M12: : M12x1 Connection
M20 : M20x1.5 Connection

* Ask for other options.