

## BTT 26S Series

“-40...+150°C Temperature Measuring Range  
10...5000 Bar Pressure Measuring Range,  
Analog Output”



- Simultaneous pressure and temperature measurement with a single sensor
- Completely welded thin-film steel diaphragm structure that does not require o-ring
- Pressure measuring range options from 0...10 to 0...5000 bar (optional others)
- -40 ... +150°C temperature measurement (optional others)
- 0-20 mA, 4-20mA, 0-10V, 0.5-4.5V Ratiometric, PT100, PT1000 output options
- Stainless steel housing
- EMC and reverse polarity protection
- High accuracy and stability
- Excellent long-term operation

BTT 26S series combined pressure and temperature sensors provide simultaneous measurement of pressure and temperature in liquid and gaseous media via a single compact sensor, eliminating the need for 2 different sensors.

For reliable and accurate measurements, the sensor uses thin-film MEMS technology for pressure sensing as well as RTD for temperature sensing. Measurement values taken from sensors are converted into various analog output signals (4-20 mA, 0-10V, etc.) and integrated into automation systems.

BTT 26S series, which is not affected by electrical fluctuations and reverse connections thanks to overvoltage and reverse polarity protection, has a long life. With its fully welded thin-film steel diaphragm structure that does not require O-rings, it is resistant to vibrations and is ideal for use in difficult areas such as chemical applications.

It has a wide range of user-selectable options such as measurement range, mechanical connection type, output signal, electrical connection type.

## APPLICATIONS

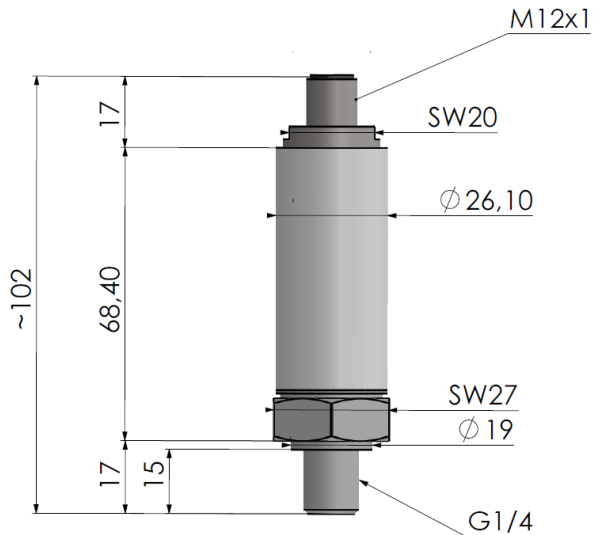
- Industrial Machines
- Cooling and HVAC
- Hydraulic and Pneumatic
- Energy Facilities
- Automotive
- Compressors and pumps
- Test Benches
- Defense and aviation
- Rail systems

## TECHNICAL FEATURES

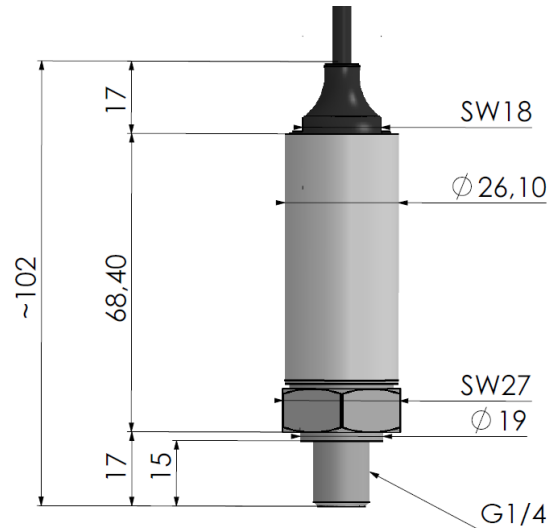
	Pressure	Temperature
<b>Measuring Sensor</b>	Thin-film MEMS Sensor	PT100 (Class B EN60751)
<b>Measuring Range</b>	Different options from 10Bar to 5000Bar	-40 ... +150°C (optional others)
<b>Over Pressure</b>	%300FS <1000Bar, %150FS ≥1000Bar	-
<b>Burst Pressure</b>	%500FS <1000Bar, %300FS 1000Bar ≤pressure≤ 2500Bar, %250FS 4000Bar, %200FS 5000Bar	-
<b>Response Time</b>	25ms (standard) %10...%90 nominal pressure 1ms, 5ms, 125ms (optional) 1ms, 5ms, 125ms	1sn
<b>Accuracy</b>	±0.5%FS (@0°C~70°C)	±%0.5 FS (@0°C~70°C)
<b>Long Term Stability</b>	≤±%0.2 FS/ year	-
<b>Zero offset temperature coefficient</b>	≤±%0.03 fso/°C	-
<b>Span temperature coefficient</b>	≤±%0.03 fso/°C	-
<b>Output Type (*)</b>	<b>Pressure</b>	<b>Temperature</b>
*There are 2 separate outputs for Pressure and Temperature on the sensor. Output types must be selected in accordance with the horizontal table on the side. For example, if the pressure output is selected as 0-10V; temperature output can be selected as 0-10V, PT100 or PT1000.	2 wire 4-20mA	2 wire 4-20mA, PT100, PT1000
	3 wire 4-20mA	3 wire 4-20mA, PT100, PT1000
	3 wire 0-20mA	3 wire 0-20mA, PT100, PT1000
	0-10V	0-10V, PT100, PT1000
	0.5-4.5V Ratiometric	0.5-4.5V Ratiometric, PT100, PT1000
<b>Supply Voltage</b>	2 wire : 8-32VDC 3 wire : 12-30VDC	2 wire : 8-32VDC 3 wire : 12-30VDC
<b>Current Consumption</b>	2 wire : ≤20 mA @24VDC 3 wire : <30 mA @24VDC	2 wire : ≤20 mA @24VDC 3 wire : <30 mA @24VDC
<b>Reverse polarity protection</b>	Yes	
<b>Short circuit protection</b>	Yes	
<b>Overload protection</b>	Yes	
<b>Electrical connection</b>	M12 connector or cable	
<b>Mechanical connection</b>	G1/4 (Optional others)	
<b>Mounting Torque</b>	15 ... 20 Nm	
<b>Material</b>	Body: 304L SS / Diaphragm: 17-4ph SS (AISI630) / Mechanical conn: 17-4ph SS (AISI630)	
<b>Operating Temperature</b>	-10°C ... +70°C	
<b>Storage Temperature</b>	-40°C ... +85°C	
<b>Protection</b>	IP65 or IP67 *IP67 protection is provided if M12 connector models are equipped with press-printed connectors.	

## MECHANICAL DIMENSIONS (mm)

### M12 CONNECTOR


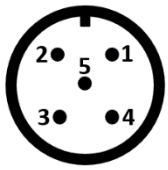




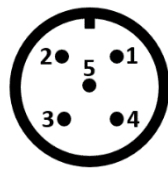

### CABLE




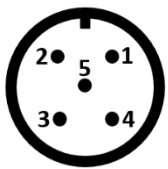

## ELECTRICAL CONNECTIONS


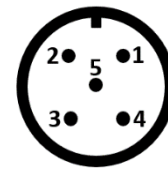

### ➤ ANALOG PRESSURE OUTPUT + ANALOG TEMPERATURE OUTPUT

3 Wire 0-10V, 0.5-4.5V Ratiometric, 4-20mA, 0-20mA (Pressure and Temperature) Connection		
		
Cable	M12 5 pin male connector	Signal
Red	1	+12...30 VDC (Supply)
Yellow	2	0-10V, 0.5-4.5V Ratiometric, 4-20mA, 0-20mA (Pressure)
Black	3	GND
Green	4	0-10V, 0.5-4.5V Ratiometric, 4-20mA, 0-20mA (Temp.)
Pink	5	N/C

2 Wire 4-20mA (Pressure and Temperature) Connection		
		
Cable	M12 5 pin male connector	Signal
Red	1	+8...32 VDC (Supply)
Yellow	2	4-20mA (Pressure)
Black	3	N/C
Green	4	4-20mA (Temp.)
Pink	5	N/C

### ➤ ANALOG PRESSURE OUTPUT + RTD TEMPERATURE OUTPUT

3 Wire 0-10V, 0.5-4.5V Ratiometric, 4-20mA, 0-20mA (Pressure) and PT100, PT1000 (Temperature) Connection		
		
Cable	M12 5 pin male connector	Signal
Red	1	+12...30 VDC (Supply)
Yellow	2	0-10V, 0.5-4.5V Ratiometric, 4-20mA, 0-20mA (Pressure)
Black	3	GND
Green	4	PT100, PT1000 (Temp.)
Pink	5	PT100, PT1000 (Temp.)

2 Wire 4-20mA (Pressure) and PT100, PT1000 (Temperature) Connection		
		
Cable	M12 5 pin male connector	Signal
Red	1	+8...32 VDC (Supply)
Yellow	2	4-20mA (Pressure)
Black	3	N/C
Green	4	PT100, PT1000 (Temp.)
Pink	5	PT100, PT1000 (Temp.)

## PRESSURE RANGE SELECTION

Code	Pressure Range	Overpressure	Burst Pressure
10Bar	0~10 Bar	%300FS	%500FS
25Bar	0~25 Bar	%300FS	%500FS
40Bar	0~40 Bar	%300FS	%500FS
60Bar	0~46 Bar	%300FS	%500FS
100Bar	0~100 Bar	%300FS	%500FS
250Bar	0~250 Bar	%300FS	%500FS
400Bar	0~400 Bar	%300FS	%500FS
600Bar	0~600 Bar	%300FS	%500FS
1000Bar	0~1000 Bar	%150FS	%300FS
1600Bar	0~1600 Bar	%150FS	%300FS
2500Bar	0~2500 Bar	%150FS	%300FS
4000Bar	0~4000 Bar	%150FS	%250FS
5000Bar	0~5000 Bar	%150FS	%200FS

## OUTPUT SIGNAL SELECTION

	Pressure	Temperature
<b>Output Type (*)</b>	2 wire 4-20mA	2 wire 4-20mA, PT100, PT1000
	3 wire 4-20mA	3 wire 4-20mA, PT100, PT1000
	3 wire 0-20mA	3 wire 0-20mA, PT100, PT1000
	0-10V	0-10V, PT100, PT1000
	0.5-4.5V Ratiometric	0.5-4.5V Ratiometric, PT100, PT1000



**\*There are 2 separate outputs for Pressure and Temperature on the sensor. Output types must be selected in accordance with the horizontal table above.**

For example, if the pressure output is selected as 0-10V; temperature output can be selected as 0-10V or PT100 or PT1000.

For example, if the pressure output is selected as 2-wire 4-20mA; temperature output can be selected as 2-wire 4-20mA or PT100 or PT1000.

## ORDER CODE

### 1-Model

BTT 26S

### 2- Temperature Range

-40 ... +150 °C standard (Ask for others)

### 3- Pressure Range

10, 25, 40, 60, 100, 250, 400, 600, 1000, 1600, 2500, 4000 and 5000 bar (Ask for others)

### 4- Temperature Output Signal

A : 4-20mA (2-wire)	V : 0-10VDC	PT100
A0 : 0-20mA (3-wire)	V8 : 0.5-4.5VDC Ratiometric	PT1000
A7 : 4-20mA (3-wire)		

**\*There are 2 separate outputs for pressure and temperature. Output signals must be selected in accordance with the output signal selection table above (page 4).**

### 5- Pressure Output Signal

A : 4-20mA (2-wire)	V : 0-10VDC
A0 : 0-20mA (3-wire)	V8 : 0.5-4.5VDC Ratiometric
A7 : 4-20mA (3-wire)	

**\*There are 2 separate outputs for pressure and temperature. Output signals must be selected in accordance with the output signal selection table above (page 4).**

#### 6- Process Connection

G1/4 : G1/4

\* Optional others

#### 7- Electrical Connection

S165 : M12 4 pin erkek soket

1M : 1 meters cable

\* Optional others

#### 8- Body Material

E304 : 304L

\* Optional others

**Sample order code 1:** BTT 26S -40...+150 250Bar V V G1/4 S165 E304

BTT 26S series, -40...+150°C temperature measurement, 250Bar pressure measurement, 0-10V temperature output, 0-10V pressure output, G1/4 process connection, M12 5 pin male connector, 304L body

**Sample order code 2:** BTT 26S -40...+150 100Bar PT100 V G1/4 S165 E304

BTT 26S series, -40...+150°C temperature measurement, 100Bar pressure measurement, PT100 temperature output, 0-10V pressure output, G1/4 process connection, M12 5 pin male connector, 304L body