

# THIN-FILM PRESSURE TRANSMITTER

## BTT 22

"Thin-Film Steel Diaphragm, Suitable for Chemical Applications, Resistant to Vibrations"



- Completely welded thin-film steel diaphragm structure that does not require o-ring
- 23 mm diameter stainless steel housing
- Different options up to 1000 Bar
- Resistant to vibrations
- Resistant to chemicals
- 4...20mA / 0...10VDC etc. different analogue output options
- G1/4, G1/2, NPT1/4, NPT1/2, M14x1 mechanical connection options
- EMC and reverse polarity protection
- High accuracy and stability
- Excellent long-term operation

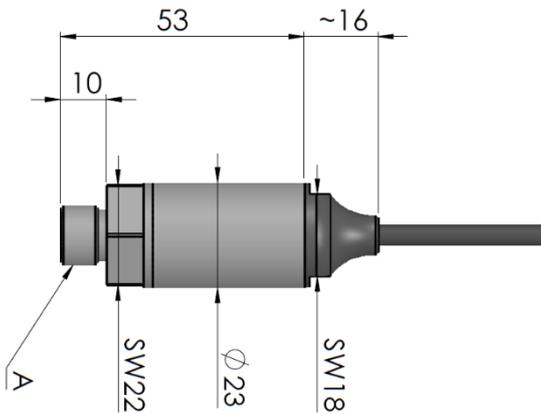
BTT 22 series pressure transmitter is resistant to vibrations and ideal for use in difficult areas such as chemical applications with its completely welded thin-film steel diaphragm structure that does not require o-ring. Various analog output, mechanical connection and connector options are optionally available.

## APPLICATIONS

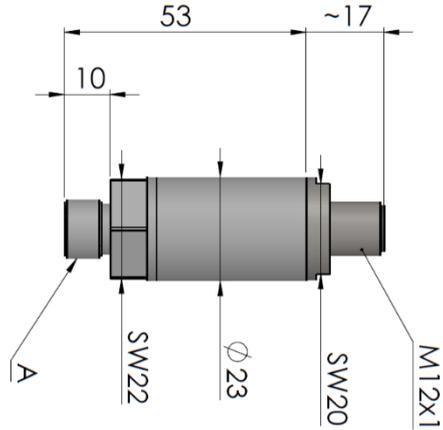
- Machine tools
- HVAC
- Process technology
- Hydraulics
- Refrigeration
- Water treatment

## MECHANICAL DIMENSIONS (mm)

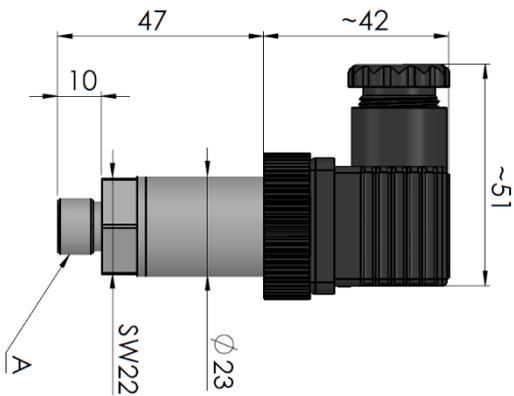
### CABLE



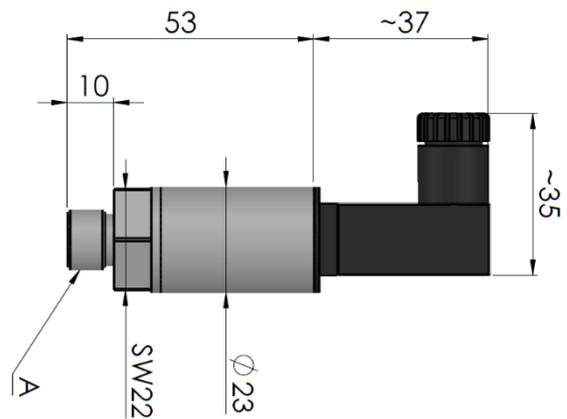
### M12 CONNECTOR



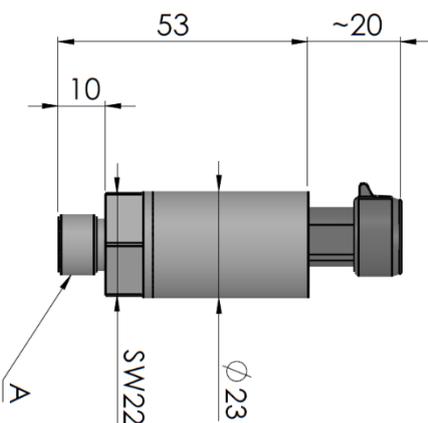
### DIN43650-A CONNECTOR



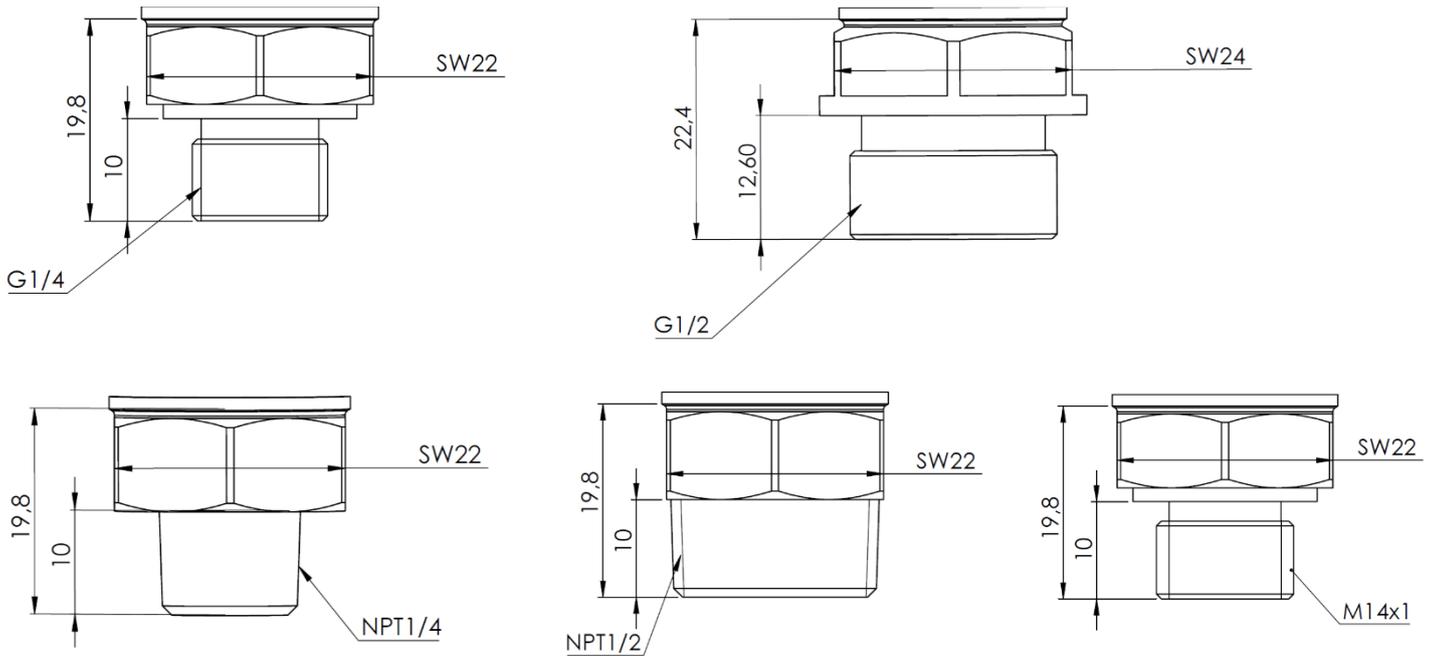
### DIN43650-C CONNECTOR



### PACKARD CONNECTOR



## PROCESS CONNECTION (A)

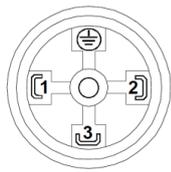
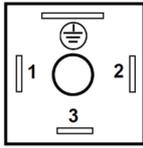
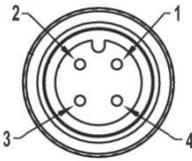
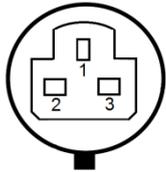
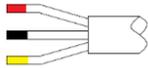


- \* In the case of the G1/2 model, the dimension of key slot is 24mm. All other models are 22mm.
- \*\* Do not turn the product by holding from socket during installation. Otherwise, the product may be damaged.

## TECHNICAL FEATURES

<b>Measuring Principle</b>	Thin-film on steel diaphragm					
<b>Measuring Range</b>	6, 10, 16, 25, 40, 100, 250, 400, 600 and 1000 bar					
<b>Over Pressure</b>	%300FS <1000Bar, %150FS ≥1000Bar					
<b>Burst Pressure</b>	%500FS (Max. 4000 bar)					
<b>Output Signal</b>	<b>4...20mA (2 wire)</b>	<b>0...20mA (3 wire)</b>	<b>0...10VDC</b>	<b>1...6VDC</b>	<b>0...5VDC</b>	<b>Ratiometric</b>
<b>Supply Voltage</b>	8 ... 32 VDC	12 ... 30 VDC	12 ... 30 VDC	12 ... 30 VDC	12 ... 30 VDC	5 VDC
<b>Operating Current</b>	30 mA max.					
<b>Accuracy</b>	±0.5%FS (@0°C~70°C)					
<b>Long Term Stability</b>	≤±%0.1 FS/ year					
<b>Zero temperature drift</b>	±%0.03FS/°C					
<b>Full scale temperature drift</b>	±%0.03FS/°C					
<b>Response time</b>	25ms (standard) %10...%90 nominal pressure 1ms, 5ms, 125ms (optional, only available on models with current output)					
<b>Life Time</b>	1x10 <sup>8</sup> cycles					
<b>Operating Temperature</b>	-40°C ... +85°C					
<b>Storage Temperature</b>	-40°C ... +85°C					
<b>EMC Protection</b>	Immunity	IEC 61000-6-2				
	Emission	IEC 61000-6-3				
<b>Insulation Resistance</b>	≥1000MΩ/500V AC					
<b>Electrical Connection</b>	DIN43650-A, DIN43650-C, M12, Packard or cable					
<b>Process Connection</b>	G1/4, G1/2, NPT1/4, NPT1/2, M14x1					
<b>Mounting Torque</b>	15 ... 20 Nm					
<b>Material</b>	Pressure	316L Stainless Steel				
	Process	316L Stainless Steel				
	Body	304L Stainless Steel				
<b>Protection</b>	IP65 or IP67 **IP67 protection is provided if M12 connector models are equipped with press-printed					

## ELECTRICAL CONNECTIONS

							
		DIN D43650-A	DIN D43650-C	M12 / 4 pin		PACKARD	CABLE
		S30	S31	S12	S15	S32	COLOR
		PIN NO	PIN NO	PIN NO		PIN NO	
CURRENT OUTPUT	+Vcc	2	2	2	1	B	RED
	Analog Out	1	1	1	3	C	BLACK
VOLTAGE OUTPUT	+Vcc	2	2	2	1	B	RED
	GND	1	1	1	3	C	BLACK
	Analog Out	3	3	3	2	A	YELLOW

- \* For IP67 protection at model with M12 socket, press-printed cable should be used. Otherwise, it can not be used under IP67 conditions.
- \*\* PVC cable is used as standard in the model with cable.
- \*\*\* On models with the PACKARD socket, the letter of pin numbers are 1(C), 2(B), 3(A).
- \*\*\*\* Only S30 socket type can be selected for 3-wire 0-20mA analog output. Other socket types or wired models cannot be selected.

## PRESSURE RANGE SELECTION

Code	Pressure Range	Overpressure	Burst Pressure
6Bar	0~6Bar	%300FS	%500FS
10Bar	0~10 Bar	%300FS	%500FS
16Bar	0~16Bar	%300FS	%500FS
25Bar	0~25Bar	%300FS	%500FS
40Bar	0~40Bar	%300FS	%500FS
100Bar	0~100Bar	%300FS	%500FS
250Bar	0~250Bar	%300FS	%500FS
400Bar	0~400Bar	%300FS	%500FS
600Bar	0~600Bar	%300FS	%500FS
1000Bar	0~1000Bar	%150FS	%500FS

## ORDER CODE

### Output Signal

Voltage Output Product  
V : 0-10VDC (standard)  
V1 : 0-5VDC  
V2 : 1-6VDC  
V3 : 0,5-4,5VDC  
V4 : 0,5-5,5VDC  
V5 : 1-5VDC  
V6 : 1-10VDC

Ratiometric Products  
V8 : Ratiometric 0.5-4.5VDC  
V9 : Ratiometric 0-5VDC

Current Output Products  
A : 4-20mA (2-wire) (standard)  
A0 : 0-20mA (3-wire)

\* Ask for other options.

### Electrical Connection

S12 : M12x1 4 pin  
S13 : M12x1 5 pin (for CANopen output)  
S15 : M12x1 4 pin (1 supply, 3 output)  
S30 : DIN43650-A type large type socket  
S31 : DIN43650-C type small type socket  
S32 : Packard socket  
2M : 2 meters cable

\*Only S30 socket can be selected for 3-wire 0-20mA (A0) analog output. Other socket types or wired models cannot be selected.

\* Ask for other options.

BTT 22
—
250Bar
—
A
—
G1/4
—
S30

### Pressure Range

Different options from 6 Bar to 1000 Bar  
\*See. "Pressure selection table"

### Mechanical Connection

G1/4  
G1/4F (female)  
G1/2  
NPT1/4  
NPT1/2  
M14

\* Ask for other options.

**Sample Order Code: BTT 22 250Bar A G1/4 S30**