PROCESS PRESSURE TRANSMITTER — BF2



RELIABLE MEASUREMENT OF PROCESS PRESSURE

- Compact and robust construction
- Piezo-resistive steel sensor
- Zero and range adjustable with internal potentiometer
- RS-485
- Compatible to software SW21
- IP protection IP63/IP65









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TECHNICAL INFORMATION

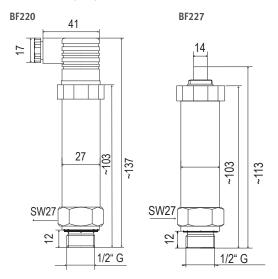
Measurement of Process Pressure

Pressure transmitters measure the pressure of neutral gases and nitrogen in piping and closed containers. The pressure of the medium being measured acts on a pressure cell, which converts the pressure into an electronic signal.

Field of Application

The process pressure transmitters are ideal for measurement of absolute pressure in applications with fast temperature changes and in compressed air, HVAC and pneumatic systems.

Dimensions (mm)



Terminal Assignment / Connection Diagram

BF220 2-Wire						
Hirschman Plug (DIN 43650)						
		PIN	Description	Wire Color (Internal)		
	V +	1	Power supply +	Black		
	Out -	2	Analog output -	Red		
	nc	3	Not connected			
	PE	⊕	Ground			

BF227 2-Wire/RS-485						
7-Pin Plug						
		PIN	Description	Wire Color (Internal)		
-2 -1	V+	1	Power supply +	Black		
-5-4-3	Out-	2	Analog output –	Red		
	RS-485B	5	Digital ou tput +	White		
	RS-485A	4	Digital i nput –	Yellow		

Device type Process pressure transmitter Parameters Absolute pressure Housing material Stainless steel (1.4878) Diaphragm Stainless steel (1.4404) IP protection IP65 IP63 Mounting position 90° to pressure pipe (max. 30° inclination) Dimensions 137 x 41 x 27 mm 113 x 14 x 27 mm Weight Approx. 220 g Approx. 235 g Pressure connection G ½" male thread Seal ring Viton Viton Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C CE / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar	Technical Data	BF220	BF227				
Stainless steel (1.4878)	Device type	Process pressure transmitter					
Diaphragm IP protection II protect	Parameters	Absolute pressure					
IP protection IP65 IP63 Mounting position 90° to pressure pipe (max. 30° inclination) Dimensions 137 x 41 x 27 mm 113 x 14 x 27 mm Weight Approx. 220 g Approx. 235 g Pressure connection G ½" male thread Seal ring Viton Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C E/ EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ± 2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	Housing material	Stainless steel (1.4878)					
Mounting position 90° to pressure pipe (max. 30° inclination) Dimensions 137 x 41 x 27 mm 113 x 14 x 27 mm Weight Approx. 220 g Approx. 235 g Pressure connection G ½" male thread Seal ring Viton Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C CE / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ± 2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	Diaphragm	Stainless steel (1.4404)					
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Weight Approx. 220 g Approx. 235 g Pressure connection G 1/2" male thread Seal ring Viton Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C E / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ± 2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	Mounting position	90° to pressure pipe (max. 30° inclination)					
Pressure connection G ½" male thread Seal ring Viton Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C CE / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ± 2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	Dimensions	137 x 41 x 27 mm	113 x 14 x 27 mm				
Seal ring Viton	Weight	Approx. 220 g	Approx. 235 g				
Electrical connections Hirschmann (DIN 43650) 7-pin Power supply 1530 VDC 1028 VDC Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C CE / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	Pressure connection	G ½" male thread					
Power supply Range of application -3080 °C -4080 °C Storage conditions -3080 °C -4080 °C CE / EMC compatibility EMC Directive 2004/108/EC, EN 61326 Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA Digital - RS-485	Seal ring	Viton					
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Absolute Pressure Measurement Measurement principle Piezo-resistive steel sensor Measurement range 010 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20°C ±2 K	Storage conditions	-3080 °C	-4080°C				
Measurement principle Measurement range O10 bar Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20°C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA Digital	CE / EMC compatibility	EMC Directive 2004/108/EC, EN 61326					
Measurement range O10 bar Pressure resistance 15 bar Air and non-aggressive gases Accuracy at 20°C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA Digital O10 bar 10 bar .	Absolute Pressure Measurement						
Pressure resistance 15 bar Medium Air and non-aggressive gases Accuracy at 20 °C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital – RS-485	Measurement principle	Piezo-resistive steel sensor					
Medium Air and non-aggressive gases Accuracy at 20°C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA Digital Air and non-aggressive gases ±0.25 % FS max. ±0.25 % FS max. ±0.25 % FS max. 425 % FS max. ±0.25 % FS max. ±0.25 % FS max. 425 % FS max. 420 MA	Measurement range	010 bar					
Accuracy at 20 °C ±2 K (linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital – RS-485	Pressure resistance	15 bar					
(linearity, hysteresis, repeatability, deviation of start and end value of the measurement range) TK zero ±0.03 %FS/K TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital – RS-485	Medium	Air and non-aggressive gases					
TK range ±0.03 %FS/K Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital - RS-485	(linearity, hysteresis, repeatability, deviation of start and end	±0.25 % FS max.	±0.25 % FS max.				
Long-term stability ±0.2 % full scale / year Outputs Analog 420 mA 420 mA Digital – RS-485	TK zero	±0.03 %FS/K					
Outputs Analog 420 mA 420 mA Digital - RS-485	TK range	±0.03 %FS/K					
Analog 420 mA 420 mA Digital – RS-485	Long-term stability	±0.2 % full scale / year					
Digital – RS-485	Outputs						
	Analog	420 mA	420 mA				
Permissible load $\langle 750 \Omega \rangle$ $\langle 900 \Omega \rangle$	Digital	-	RS-485				
	Permissible load	<750 Ω	<900 Ω				