



PRESSURE TRANSMITTER

MODEL MBS33M

ROBUST PRESSURE TRANSMITTER FOR STEAM CONTROL SYSTEMS

Features

The MBS33M is an electronic pressure transmitter designed for direct installation at the measuring point. It has been developed for operation in harsh industrial and climatic environments.

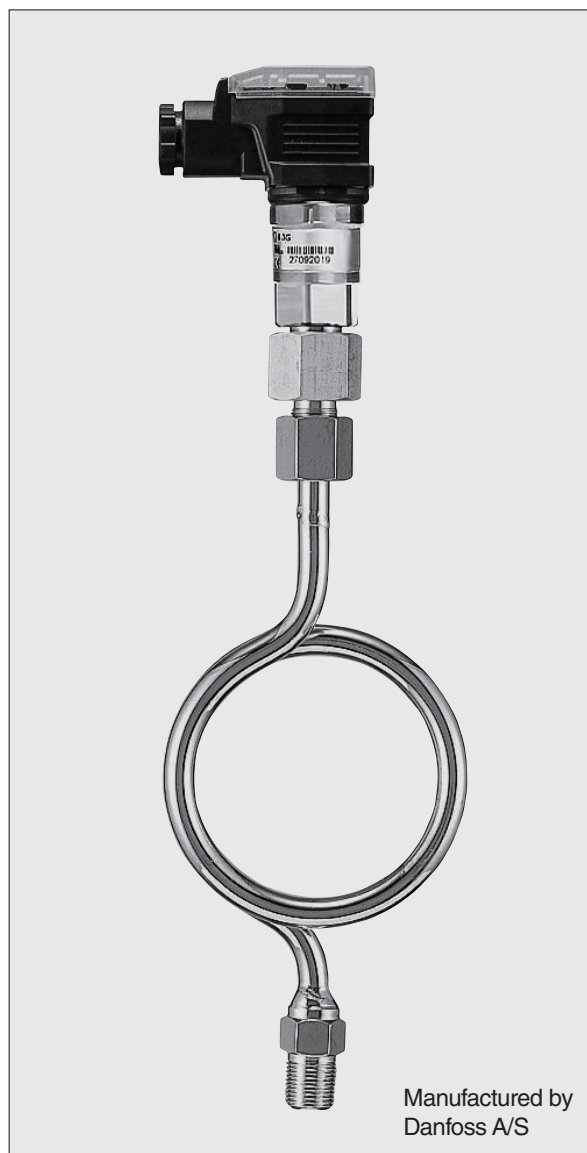
1. Four silicone strain gauges on a silicon chip working to the piezoresistive principle ensure high accuracy.
2. Built-in HF filter makes the MBS33M immune to electromagnetic noise and offers protection against interference from mobile telephones, electric motors etc.
3. Amplified linearized and temperature-compensated current output signal of 4 to 20 mA can be transmitted over long distances without difficulties.
4. Enclosure molded-in with a silicone compound gives maximum protection against high ambient temperature, dust and moisture.
5. Resistant to pressure surge, overpressure and vibration up to 20 G in the frequency range 20 Hz to 2 kHz.

Specifications

● Pressure Transmitter

Pressure Characteristics	Pressure Range	Absolute pressure type 0 to 400 kPa abs.	Gauge pressure type 0 to 500 kPaG 0 to 1 MPaG 0 to 2 MPaG 0 to 2.5 MPaG
	Accuracy	±0.3% FS	
	Max. Allowable Pressure	Twice rated pressure	
Electrical Characteristics	Power Source	10 to 30 V DC	
	Output Signal	4 to 20 mA DC (2-wire)	
	Load Resistance	250 to 1000 Ω (varies depending on source voltage) Equation: Load resistance (Ω) = $\frac{\text{Power source (V)} - 10}{0.02 \text{ (A)}}$	
Operatg. Cond.	Fluid Temperature	-40 to 85 °C limited by fluid freezing point (Siphon tube must be used above 85 °C)	
	Water Resistance	Rain-proof (IP65)	
Construction	Material	Stainless Steel AISI316L / DIN 1.4404	
	Joint	Brass	
	Fluid Contact Area	Stainless Steel AISI316 / DIN 1.4401	
	Pressure Sensor	Semiconductor strain gauge	
	Connection	G (PF) 3/8	
Other Characteristics	Weight	Approx. 400 g	
	Thermal Zero Point Drift	≤ ± 0.02 % FS / °C	
	Thermal Sensivity Drift	≤ ± 0.02 % FS / °C	
	Wire Connection Gland	DIN 43650 (PG 13.5)	
	Applicable Wire Diameter	5 to 14 mm	
	Transport Temperature	-50 to 85 °C	
	Vibration Stability	20 G (20 Hz to 2 kHz) (G = 9.81 m/sec ²)	
Other Characteristics	Approved by Classification Society	LR, DNV, GL, RINA, ABS, BV, NKK, PRS, MRS	
	Applicable Fluids*	Steam, Water, Air	

* Do not use for toxic, flammable or otherwise hazardous fluids.



● Attached Siphon Tube

Pipe Connection	Sensor side: G (PF) 3/8; Tube side: R (PT) 3/8
Material	Stainless Steel 304
Maximum Operating Pressure	20 MPaG
Max. Operating Temperature	350 °C
Weight	Approx. 400 g

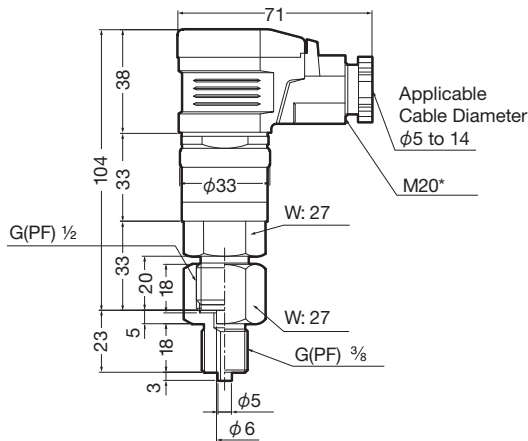
1 MPa = 10.197 kg/cm²



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

Dimensions

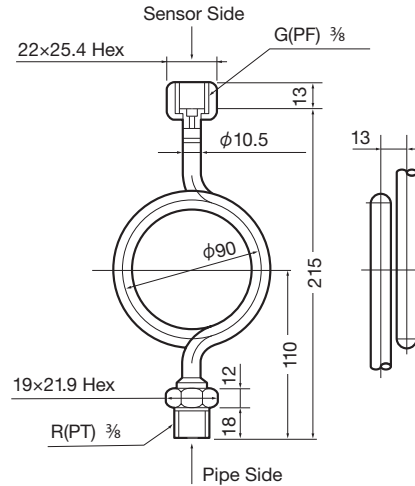
● Pressure Transmitter



W = Width across flats
Units = mm

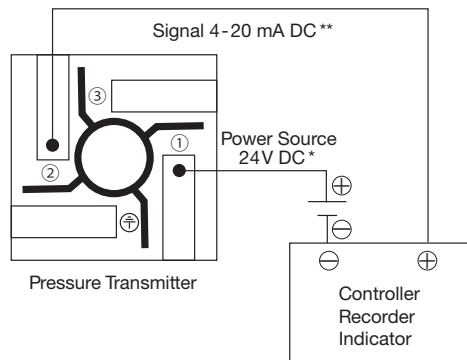
* Dimensions may vary according to the model version.

● Attached Siphon Tube



Wiring Terminals

● Connected to controllers, indicators, and recorders



* MBS33M requires separate 24 V DC power source
** 2-wire shielded cable

Options

Special Measuring Pressure Range	Gauge Pressure Type: 0 to 100 kPaG, 0 to 250 kPaG, 0 to 1.6 MPaG, 0 to 4 MPaG, 0 to 6 MPaG, 0 to 10 MPaG, etc. Absolute Pressure Type: 0 to 250 kPa abs. 0 to 600 kPa abs. etc.
Pipe Joint Material	Stainless Steel SUS316
Siphon Tube Material	Stainless Steel SUS316
Siphon Tube Connection	Sensor Side × Pipe Side: G (PF) 3/8 × G (PF) 3/8; G (PF) 3/8 × NPT 3/8
Siphon Tube	Supply without Siphon Tube