

Vibration Transmitter (Model VT7S10)



Masibus' Model VT7S10 Vibration Transmitter is an innovative product that excites and reads signal from high temperature accelerometer and transmits overall vibration value with 4-20mA on loop power. It provides output for essential continuous monitoring of critical fan, pump, motor and other industrial machines. It measures the vibration to which it is exposed.

Masibus has a proven track record of manufacturing online process monitoring instruments for over 3 decades. Vibration transmitter makes online vibration monitoring system cost-effective with its analog output which can be connected to plants instrumentation and control systems like RTU/PLC/DCS.

Vibration Transmitter is a strategic tool for predictive maintenance. It measures online vibration and provides easy communication to data acquisition system where vibration can be displayed, trended and alarm can be generated. On this basis further analysis can be done using on board buffered output (dynamic signal) connected to vibration analyzer for diagnosing the machine's problem.

Vibration is measured in terms of r.m.s. and peak. When overall vibration is to be measured, r.m.s. and peak measurement technique is considered best for general machine health.

Requirement for high temperature sensor with 4-20mA output and a dynamic signal are a primary requirement for machine protection in the industry today. Most of the products available do not have all three functions at an affordable cost. Masibus has conceived VT7S10 to meet requirement for such applications.

Features

- *Loop power vibration transmitter (4-20 mA output)*
- *Measurement of overall vibration level in rotating machines.*
- *Dynamic buffered signal output for analysis*
- *Velocity range 0-12.5, 25, 50mm/S*
- *Reading type : Peak to Peak and RMS value*
- *Frequency range : 10 Hz to 1 KHz*
- *Excitation Voltage 19-30 VDC*
- *Sensor temperature upto 150 °C*

VT7S10

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HARDWARE SPECIFICATIONS VT7S10

Mounting	Remote sensor mounting Vibration sensor is mounted on bearing (surface where vibration measurement is required) and connected to Vibration transmitter. Transmitter takes analog signal proportional to 0-25mm/S from vibration sensor. Transmitter is wall mounting type.
Sensor Mounting	Stud / Pad mounting
Electrical Connection	Screw type for excitation voltage and analog output connection that can accept up to 2.5mm ² wire.
Cable Gland	PG 7
Vibration Range / Mode	mm/S: 0 to 12.5, 25, 50mm/S (factory set) g: 0 to 2,5,10,15g (factory set)
Excitation Voltage	19 to 30 VDC
Accuracy	+ or - 2%* of full span
Output	4 - 20mA DC
Signal Transmission	Two wire system
Load	Max. 600Ω at 30 VDC
Frequency range	10 Hz to 1 KHz
Dynamic signal	1Hz to 10 KHz (BNC connector)
Operating Temperature	0 to 55°C
Operating Humidity Range	30 to 95% RH (non-condensing)
Case Material	ABS plastic enclosure
Size	80 mm (H) x 82 mm (W) x 55 mm (D)
Sensor Operating Temperature	- 50 to 120 °C (up to 150 °C option)
Sensor Type	PZT ceramic
Sensor Output	100mV/g
Weight	250 gms Approx.

Cables
Vibration sensor cables plays an important role in online vibration monitoring and protection system. Cables with suitable connector makes installation easy and reliable. Industrial environment can be different for different plants and reliable cables are an important element to achieve best performance from machine protection system.

Masibus offers various kind of cables as per customers requirement. Selection of cable shall be done considering environmental condition.

Cable Connection	Vibration sensor is mounted on bearing and connected to transmitter unit with cable
Type of Cables	
Standard Cable	Applicable for ambient temperature with external conduit
Teflon Cable	Applicable for temperature upto 150 °C with external conduit
Armored Cable	Applicable for temperature upto 150 °C with flexible steel armor protection (no external conduit required)

* Accuracy is 5% at input signal frequency greater than 800Hz and frequency less than 20 Hz.

ORDERING CODE VT7S10

Model	Vibration Range			Measurement		Sensor Mounting
VT7S10	XX		Unit	XX		X
	1V	0-12.5	mm/sec	0R	RMS	S Stud Mounting
	2V	0-25	mm/sec	0P	Peak	P Pad
	3V	0-50	mm/sec	PP	Peak to Peak	
	1A	0-2	g			
	2A	0-5	g			
	3A	0-10	g			
	4A	0-15	g			

ORDERING CODE CABLES

Model	Con. Type	Cable type	Protection	Length in mtr.	Molding
CBL	X	X	X	XX	X
	S Straight	S Standard	U Unarmored	03	Y Yes
	R Right angle	T Teflon	A Armored	05	N No
				10	
				20	
				30	