



# VT7S12E

## Dual Channel Vibration Transmitter

Compact. Advanced. Affordable



VT7S12E is the most advanced & Compact Vibration Transmitter. It accepts input directly from ICP type Accelerometer, processes the signal and gives analog output in the form of standard current or voltage; the vibration measurement range is field configurable for acceleration, velocity or displacement. The output signal is usually interfaced with PLC or DCS for monitoring and protection.

VT7S12E Transmitter has two Relay outputs per channel for Alarm, Trip. Also has additional outputs like Buffered output on BNC connector for analysis purpose, and optional RS485 serial port for direct interface with PLC, DCS or SCADA

VT7S12E is aimed for balance of plant equipments like Pumps, Motors, Fans, Blowers, etc to provide monitoring and protection, the unit Employs True-RMS and calculated RMS-Peak measurement techniques, considered best for general machine condition monitoring.

The unit can be field configured and operated by means of front keyboard and display, Relay set points and logic can be set for all application types including fail-safe operation, all configured data is stored in a non-volatile memory.

### Features

- Compact DIN Rail mounting
- 4 Digit LED display for Parameter Value & 1 Digit LED display for channel no
- Dual channel (optional single channel)
- Micro Controller based
- Same model Field Configurable for Acceleration, Velocity or Displacement range
- Field configurable by front keys and display
- Transmitter/Input signal health check
- Relay for Alarms/Trip
- Serial Modbus Interface (optional)

### Applications

- Balance of Plant Vibration measurement and protection
- Cooling Towers
- Pumps
- Motors
- Gear Boxes
- Blowers
- ID/ FD/ PA Fans
- Air Compressors
- Conveyors

# TECHNICAL SPECIFICATIONS

<b>Input</b>		<b>Relay Output</b>	
No of Channels	Two/One (Optional)	No of Relays	4 nos (2 nos per channel)
<b>Input Type</b>		Purpose	Alarm/Trip
<b>Accelermoter Input</b>		Rating	2A@250VAC/30VDC & 5A@250VAC (optional)
Type	Remote ICP piezoelectric Accelerometer	Type	(1NO+1NC)
Sensitivity	100mV/g (Standard) 500mV/g (On Request)	Delay for relay	05-50 sec to avoid false tripping
Dynamic Range	80 g pk	<b>Communication (Isolated) - Optional</b>	
<b>Measurement Parameters</b>		No of Port	1 no RS485
<b>Parameter</b>	<b>Range (Field Selectable)</b>	Protocol	Modbus - RTU
Acceleration	0 to 50.0g (RMS, Pk)	Baud Rate	9600, 19200
Velocity	0 to 100.0mm/sec (RMS, Pk)	<b>Buffered Output (Available for Vibration input type only)</b>	
Displacement	0 to 2000microns (Pk-Pk) <sup>#</sup>	No of Output	2 nos
		Output Impedance	<100 ohms
		Frequency Range	0.5Hz to 10KHz
		Accuracy	0.25% of Full Range
Sensor Excitation current	4 mA Approx	<b>Power Supply</b>	
Scan Time	100 mSec/Channel	Voltage	85 to 265VAC, 50/60Hz 18 to 36VDC (optional)
Frequency Range (factory set)	High Pass: 2.5Hz, 5 Hz, 10 Hz Low Pass: 1 KHz, 2.5KHz, 10KHz	Consumption	10 VA max (230VAC) 5 VA max (24VDC)
Accuracy	±2% of full span (Input to Display)	<b>Isolation (Withstanding voltage)</b>	
<b>Display &amp; Keys</b>		<ul style="list-style-type: none"> <li>Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute</li> <li>Between primary terminals*: At least 1500 V AC for 1 minute</li> <li>Between secondary terminals**: At least 500 V AC for 1 minute</li> </ul>	
Channel number	1-Digit, 0.3", Green seven segment LED	* Primary terminals indicate power terminals and Aux Supply terminals.	
Measuring Parameter Value	4-Digit, 0.3", Red seven segment LED	** Secondary terminals indicate Communication O/P and Power O/P.	
Status LEDs	Discrete/Individual RED LEDs 2 for communication, 4 LEDs for Relay, 1 LED for Auto-manual and 2 for input type of channel	Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding terminal	
Operational Keys	4 Keys (ENT, UP, DOWN & ESC)	<b>Physical</b>	
<b>Output</b>		Mounting	35mm DIN rail
<b>Analog Output (Isolated)</b>		Dimension (in mm)	75 (H) x 70(W) x 110 (D)
No of Outputs	One per channel	Weight	350g
Output Types	4-20mA	Wiring	Terminals for 2.5mm <sup>2</sup> wire size
Load	500Ω Max.	Enclosure material	ABS Plastic
Accuracy	±0.25% of Full Scale (Display to Output)	Protection	IP20 (except terminals)
		<b>Environmental</b>	
		Operating Temperature	0 to 55 °C
		Operating Humidity	30 to 95% RH (non-condensing)
		Storage Temperature	0 to 85°C
		Warm up time	15 minutes

## Ordering code

Model	Channel-1	Channel-2	Power Supply	Output Type	Communication o/p
VT7S12E	X	X	X	X	X
	1	N	A	N	N
		1	B	C	1
	Accelerometer i/p	None	85 to 265 VAC	None	None
		Accelerometer i/p	18 to 36 VDC	4-20mA	RS485

Compatible Sensor (Optional on-request)	
Sensor Mounting:	Stud/ Pad mounting
Sensor Type:	ICP
Sensor Output:	100mV/g