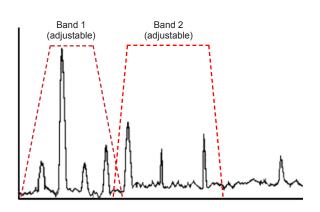
# 4-20 mA configurable vibration transmitter module



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The iT300 transmitter provides an easy means to connect a standard IEPE vibration sensor to a PLC, DCS or SCADA system. The transmitter's input provides power to and measures the signal from either an accelerometer, piezovelocity sensor or dual output sensor. The input circuitry has a wide frequency response, capable of measuring signals between 0.2 Hz and 20,000 Hz.

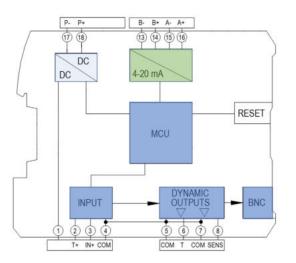


The transmitter has two independent processing bands with flexible mapping options to two separate 4-20 mA analog outputs. The processing channels contain selectable integration, allowing input from accelerometers to be output as acceleration or velocity. Selectable band filters and detector types make it easy to tailor the processing to specific machines or applications.

#### System architecture - input/output



Power input 4-20 mA outputs Input/output µprocessor



#### Certifications

### CE

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.

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#### **Key features**

- Accepts input from accelerometers (single or dual output) or piezovelocity sensors
- Input signal is split into two independent processing bands
- Measures real-time sensor bands, BOV, true peak and temperature (if applicable)
- Built-in web server for custom configuration of bandwidth/detection type
- 2 x 4-20 mA outputs, userdefined
- Text field for user entry of machine information
- Configurations can be stored
- Selectable speed range
- Manufactured in an approved ISO 9001 facility

## 4-20 mA configurable vibration transmitter module



### iT300

#### SPECIFICATIONS

INPUT		MAPPABLE OUTPUTS	\$
IEPE sensor type Temperature sensor input	Single-ended, DC coupled 10 mV/°C	4-20 mA output	2 user-configurable, based on (5) mappable options
IEPE power source	+24 VDC, 4.5 mA	Max loop resistance	500 Ω
Sensitivity range: acceleration velocity	9 - 11,000 mV/g 9 - 11,000 mV/ips	Output scaling <sup>1</sup> : acceleration velocity displacement	g (m/sec²) - rms, peak, peak-peak ips (mm/sec) - rms, peak, peak-peak mils (mm) - rms, peak, peak-peak
Full scale input range	±10 VDC		
Frequency response Fmax options	0.2 - 20 kHz (-3 dB, -0.1 dB) 200, 500 Hz; 1, 2, 5, 10, 20 kHz		1 - 50 g (10 - 500 m/sec²) 0.1-5 ips (2-100 mm/sec) 10 - 200 mils (0.2 - 5.0 mm)
Accuracy	±0.2% of full scale, 100 Hz	displacement	
ADC sampling rate	48 kbps, 24 bits delta-sigma	ENVIRONMENTAL	
FFT resolution, windowing	1,600 lines, Hanning window	Temperature range	–40° to +70°C
Dynamic range	>90 dB	Temperature range	(storage: –40°C to +85°C)
CONFIGURABLE OPTIONS		Power	11 - 32 VDC, 3.8 watts max (158 mA at 24 VDC)
Frequency bands 1 and 2	Sensor unit <sup>1</sup> or single integration <sup>2</sup> Fstart <sup>3</sup> Fstop <sup>3</sup> Detection type: rms, peak, pk-pk	Isolation	500 VAC
		Connection type	screw terminal, 14 - 24 AWG
		Mounting	35 mm DIN rail
Fixed measurement bands	True peak, BOV, temperature⁴	Dimensions	W x H x D: 22.5 x 99.2 x 114.5 mm

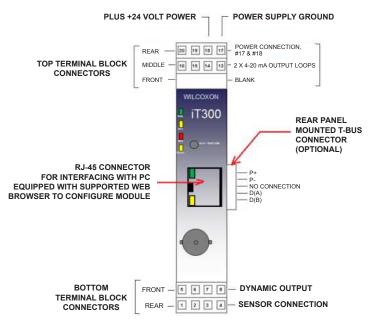
Notes: <sup>1</sup> Based on IEPE sensor type (accelerometer or piezovelocity).

<sup>2</sup> Acceleration signal to velocity, velocity signal to displacement. <sup>3</sup> The available selections are affected by the Fmax setting.

<sup>4</sup> 786T style sensors only.

System architecture

IO Port	Terminal numbers and signal assignments		
Vibration sensor	1 – No connection 2 – Temperature sensor (in T+) 3 – Signal in / Sensor Power (IN+) 4 – Circuit Common (COM)		
Temperature dynamic output	5 – Circuit Common (COM) 6 – Temperature out (T)		
Sensor dynamic output	7 – Circuit Common (COM) 8 – Sensor out (SENS)		
4-20 mA Loop B	13 – B- 14 – B+		
4-20 mA Loop A	15 – A- 16 – A+		
Power input	17 – P- 18 – P+		
Not used	19 – 20 –		



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ngs changes do not take effect until the "Save & Enable Changes" bul	tton is pressed Save & Enable Changes	Abandon Changes Logi	SENSING TECHNOLOG
achine Information			Login required before any changes can be made
Location Machine Location	Machine ID	Machine ID	MACHINE INFORMATION
Machine Name Machine Name	Measurement Point	Measurement Point	User entry of machine identity
ensor Input			
Sensor Type Acceleration 🗸	IEPE Power	Enabled V	SENSOR INPUT
Sensitivity (mV/g) 100 Serial Number Sensor Serial Number		User entry of sensor parameters	
Averaging Time 1 sec V			
Frequency Range		FREQUENCY RANGE	
F max 5 kHz V F min 5 Hz		User selection of frequency analysis range	
nsor Band Configuration			
Output Type F start (F Band 1 Velocity V	Hz) F stop (H	Iz) Detector Type	SENSOR BAND CONFIGURATION
Band 2 Acceleration V 5	5000	RMS ¥	Analysis band type and
asurement Results			frequency limits
	Result Unit	Present Level	
Band 1	in/sec 🗸	1.000 in/sec	
Band 2	g ~	1.000 g	MEASUREMENT RESULTS
True Peak	g 🗸	1.417 g	Results from each band in selectable units
Temperature Fahrenheit • 32.0 °F   BOV Volts 12.1 Volts			
irrent Loops			
	evel Destination	Force Loop Force Value	(Am)
op A Band 1 V 5 in/sec 7.2	20 mA Loop A Dest		O CURRENT LOOPS
op B Disabled V 5 30.0	00 mA		3 4-20 mA mapping
twork Configuration			
IP Address 192.168.0.100	Subnet Mask	255.255.255.0	NETWORK CONFIGURATION
Default Gateway 192.168.0.1	MAC Address	00:50:C2:19:BF:FB	Default configuration. Consult full manual on configuring your PC
dule Information			network adaptor.
Model iT300	Hardware Revision	D8	
Serial Number ENG2	Firmware Revision	1.01	
Change Load Configuration Password from File	Save Configuration to File Defau		Default user: user Default password: admin Remember to save your changes

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