

# 4-20 mA vibration transmitter modules

## iT150 series

### SPECIFICATIONS

#### INPUT

<b>Sensor types</b>	IEPE accelerometers, IEPE piezovelocity transducers, IEPE dual output (vibration and temperature) sensors
<b>Sensor sensitivities accepted:</b>	
Accelerometer	10, 100, 500 mV/g
Piezovelocity	10, 100, 500 mV/ips
Dual output <sup>1</sup>	10 mV/°C
<b>Frequency response:</b>	
Acceleration <sup>2</sup>	0.2 Hz - 20 kHz (-3 dB, -0.1 dB)
Velocity	0.2 Hz - 5 kHz
<b>Sensor powering:</b>	
Open circuit voltage	24 VDC, ±5%
Constant-current	4.5 mA, ±20%
<b>Maximum dynamic signal input, for linear response</b>	20 Volts peak-to-peak
<b>OUTPUT, 4-20 mA loop current</b>	
<b>Full scale, ±2%</b>	see <a href="#">Ordering information</a> on page 2
<b>Output type</b>	true RMS, equivalent peak, equivalent peak-peak, true peak
<b>Maximum 4-20 mA loop load resistance</b>	500 Ω
<b>Accuracy</b>	±0.2% of full scale
<b>Turn on time</b>	< 30 seconds
<b>OUTPUT, buffered dynamic</b>	
<b>Gain, RTI sensor</b>	1.0 ±2%
<b>Noise RTO, broadband, 1 Hz - 10 kHz, RMS</b>	≤0.0001 Volts
<b>Output type</b>	DC-coupled
<b>ENVIRONMENTAL</b>	
<b>Power:</b>	
Voltage (Vin)	11 - 32 VDC
Current draw	125 mA at 24 VDC (3 watts max)
<b>Temperature, operating, ambient</b>	-40° to +70°C
<b>PHYSICAL</b>	
<b>Mounting</b>	snap into 35 mm DIN rail
<b>Dimensions:</b>	
Width	22.5 mm (0.86")
Depth (front of BNC to back of DIN rail)	127 mm (4.98")
Height	100 mm (3.90")



#### Key features

- Temperature measurement
- Slim 22.5 mm case
- Front panel BNC for dynamic signal output
- Manufactured in ISO 9001 facility

For dimensions and ordering information, see page 2.

For system architecture, see page 3.

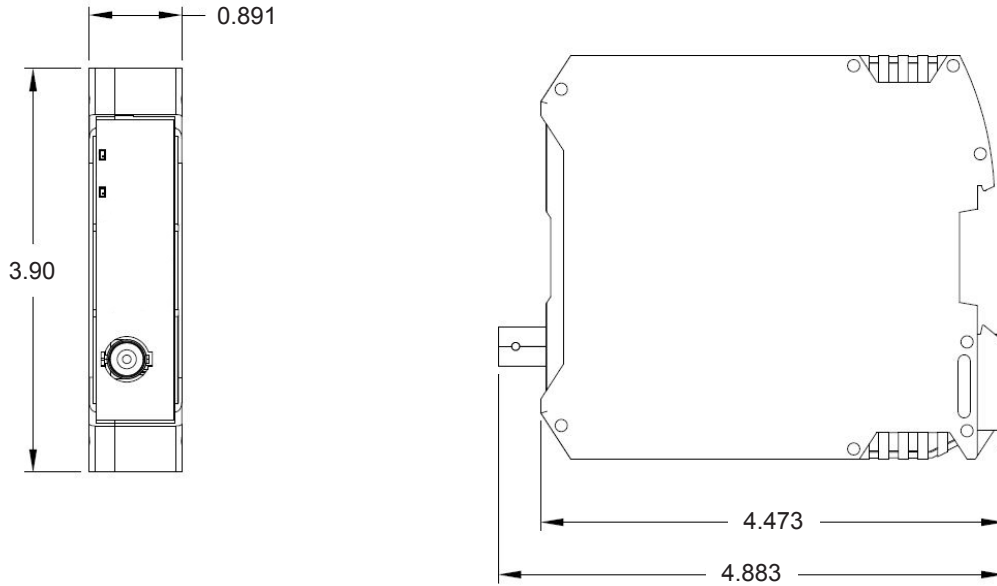
**Notes:** <sup>1</sup> Compatible with Wilcoxon models 786T and 787T (measurement range: 0° to 120°C, input signal: 0 - 1.2 VDC).

<sup>2</sup> True peak frequency response: 10 Hz to 25 kHz.



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

# Dimensions



# Ordering information

**Input type**

<b>A</b>	Acceleration
<b>V</b>	Velocity

**Sensitivity**

<b>10</b>	mV/g,
<b>100</b>	mV/ips
<b>500</b>	

**Output type**

<b>A</b>	Acceleration
<b>V</b>	Velocity
<b>D**</b>	Displacement

**Output type**

Output type	Units	Full scale
A	g	<b>1, 5, 10, 20, 30, 50</b>
	m/s <sup>2</sup>	<b>50, 100, 200, 300, 500</b>
V	ips	<b>0.5, 1, 2, 3, 5</b>
	mm/s	<b>15, 20, 25, 30, 45, 50, 100</b>
D**	mils	<b>10, 20, 25, 100</b>
	mm	<b>0.2, 0.5, 1, 2, 3, 4, 5</b>

**Detector type**

<b>RMS</b>	True RMS
<b>P</b>	Peak (equiv.)
<b>PP</b>	Peak-to-peak (equiv.)
<b>TP*</b>	True peak (10-25,000 Hz)

**Output type**

Output type	Units
A	<b>g</b>
	<b>m/s/s (m/s<sup>2</sup>)</b>
V	<b>ips</b>
	<b>mm/s</b>
D**	<b>mils**</b>
	<b>mm</b>

**Output type**

Detector type	Output type	F <sub>MIN</sub> (Hz) – F <sub>MAX</sub> (Hz)	
RMS Peak Peak-to-peak	A, V, D**	<b>0.2 – 200</b>	
		<b>0.5 – 500</b>	
	A, V	<b>1 – 1,000</b>	
		<b>10 – 1,000</b>	
		<b>2 – 2,000</b>	
		<b>5 – 5,000</b>	
	A	<b>10 – 10,000</b>	
		<b>20 – 20,000</b>	
	True peak*	A	<b>10 – 25,000</b>

ISO 10816-3

F<sub>MIN</sub> fixed with F<sub>MAX</sub> (select desired frequency range)

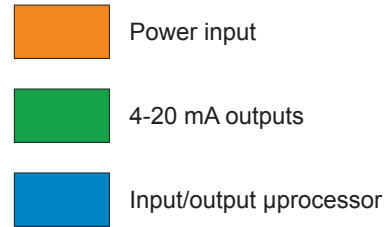
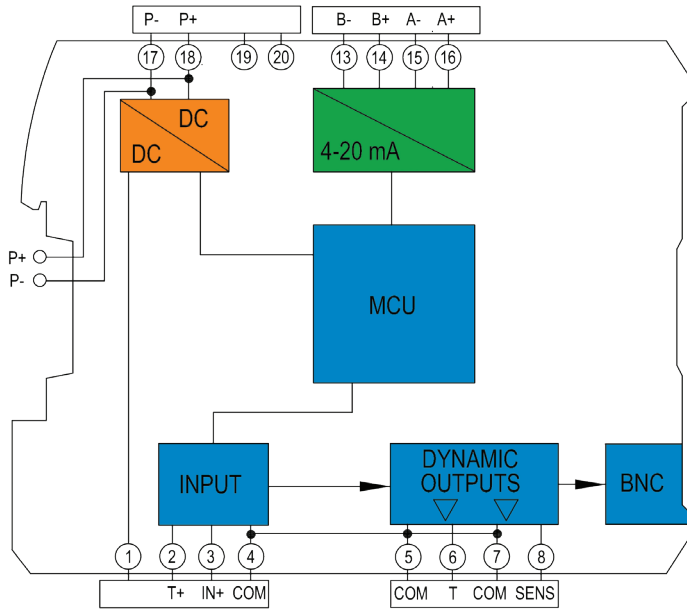
**Notes:**

- \* True peak detection option available for Input/Output type "A" only.
- \*\* Displacement output option available for Input type "V" only.

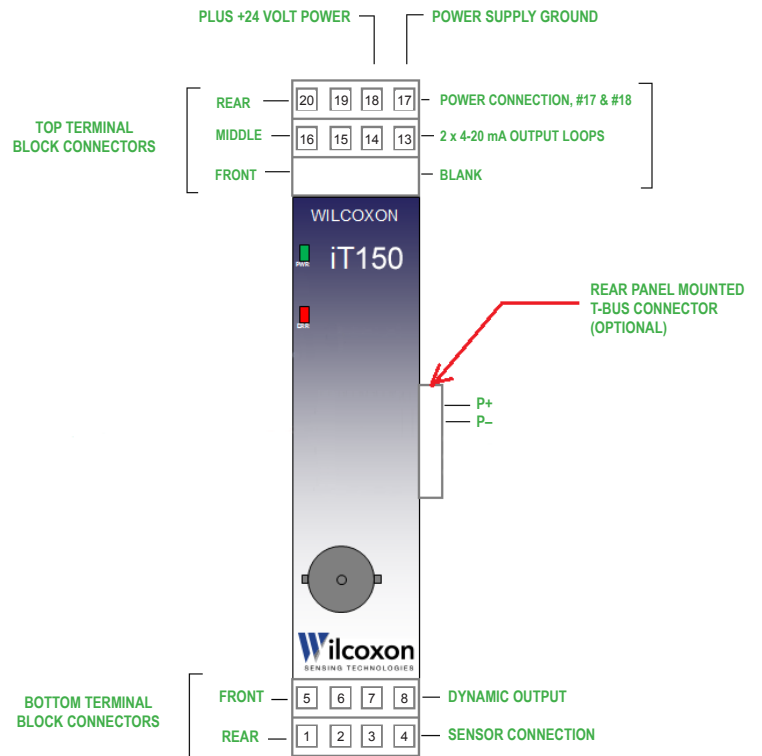
Selectable parameters are in **bold**.

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# 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)
Sensor dynamic output	6 - Temperature out (T)
4-20 mA Loop B Temperature	7 - Circuit common (COM)
	8 - Sensor out (SENS)
4-20 mA Loop A Vibration	13 - B-
	14 - B+
Power input	15 - A-
	16 - A+
Not used	17 - P-
	18 - P+
	19
	20



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