



4-20 mA vibration transmitter modules iT150 series

Features

- Temperature measurement
- Slim 22.5 mm case
- Reverse wiring protection
- ESD protection
- Front panel BNC for dynamic signal output

INPUT

Sensor types.....	IEPE accelerometers, IEPE piezo-velocity transducers, IEPE dual output (vibration and temperature) sensors
Sensor sensitivities accepted:	
Accelerometer.....	10, 100, 500 mV/g
Piezovelocity.....	10, 100, 500 mV/ips
Dual output ¹	10 mV/°C
Frequency response:	
Acceleration ²	0.2 Hz - 20 kHz (-3 dB, -0.1 dB)
Velocity.....	0.2 Hz - 5 kHz
Sensor powering:	
Open circuit voltage.....	24 VDC, ±5%
Constant-current.....	4.5 mA, ±20%
Maximum dynamic signal input, for linear response.....	20 Volts peak-to-peak

OUTPUT, 4-20 mA loop current

Full scale, ±2%.....	see chart on back
Output type.....	True RMS, equivalent peak, equivalent peak-peak, true peak
Maximum 4-20 mA loop load resistance.....	500 Ω
Accuracy.....	±0.2% of full scale
Turn-on time.....	<30 seconds

OUTPUT, buffered dynamic

Gain, RTI sensor.....	1.0 ±2%
Noise RTO, broadband, 1 Hz - 10 kHz, RMS.....	≤0.0001 Volts
Output type.....	DC-coupled

ENVIRONMENTAL

Power:	
Voltage (V _{in}).....	11 - 32 VDC
Current draw.....	158 mA at 24 VDC (3.8 watts max)
Temperature, operating, ambient.....	-40 to +70° C

PHYSICAL

Mounting.....	snap into 35 mm DIN rail
Width.....	22.5 mm (0.86")
Depth, front of BNC to back of DIN rail.....	127 mm (4.98")
Height.....	100 mm (3.90")

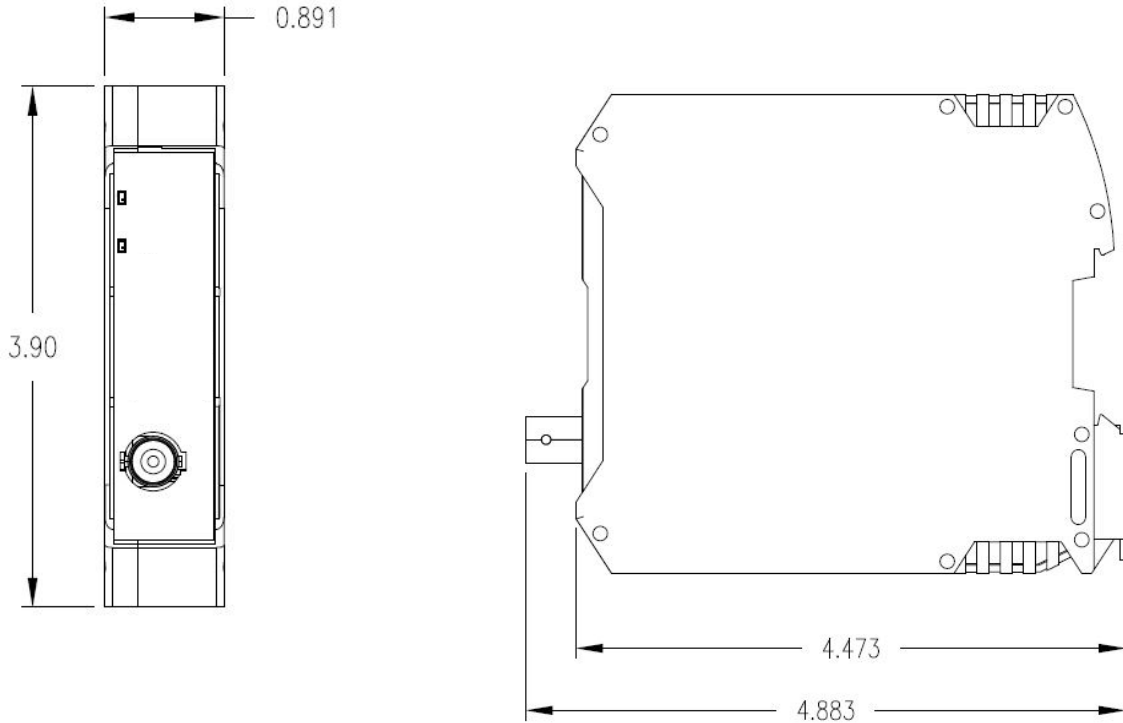
Notes: ¹ Compatible with Wilcoxon models 786T and 787T (measurement range: 0 to 120° C, input signal: 0 - 1.2 VDC).

² True peak frequency response 10 Hz to 25 kHz.



Due to continued research and product development, Wilcoxon Sensing Technologies reserves the right to amend this specification without notice. This document is cleared for public release.

Dimensions



Ordering information – part numbers

Detector type	
RMS	True RMS
P	Peak (equiv.)
PP	Peak-to-peak (equiv.)
TP*	True peak (10-25,000 Hz)

Units	
g	g
ips	ips
mils**	mils
m/s/s	m/s ²
mm/s	mm/s
mm**	mm

Full scale	
1, 5, 10, 20, 30, 50 (g)	50, 100, 200, 300, 500 (m/s ²)
0.5, 1, 2, 3, 5 (ips)	15, 20, 25, 30, 45, 50, 100 (mm/s)
10, 20, 25, 100 (mils)**	0.2, 0.5, 1, 2, 3, 4, 5 (mm)**

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Input type	
A	Acceleration
V	Velocity

Sensitivity	
10	mV/g, mV/ips
100	
500	

Output type	
A	Acceleration
V	Velocity
D**	Displacement

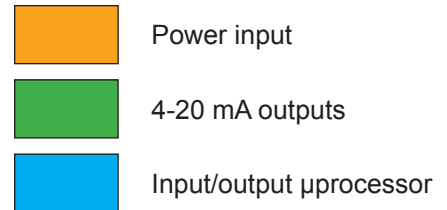
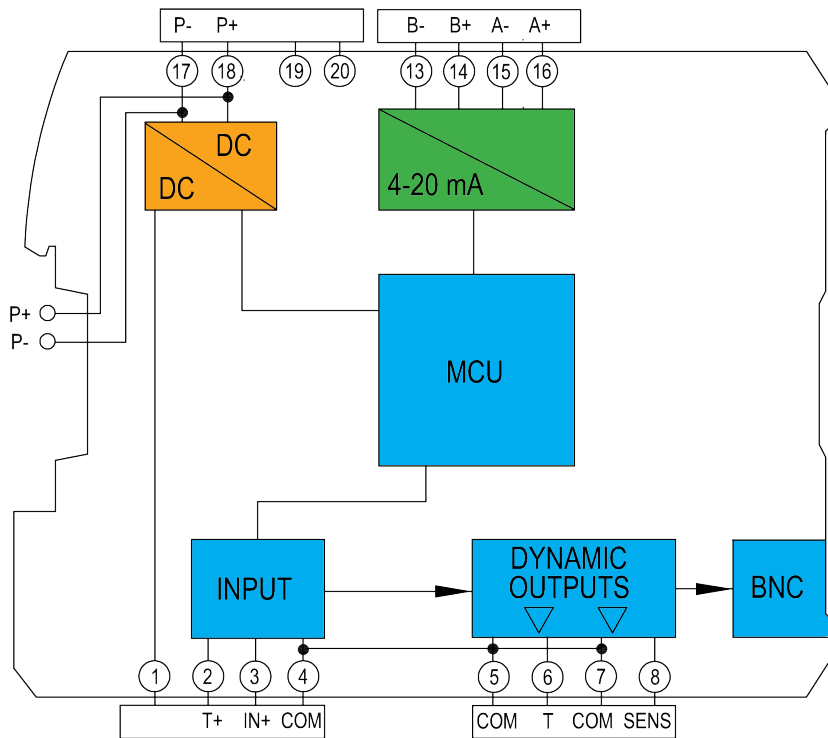
Detector type	Output type	F _{MIN} (Hz)	F _{MAX} (Hz)
RMS Peak Peak-to-peak	A, V, D**	0.2	to 200
	A, V, D**	0.5	to 500
	A, V	1	to 1,000
	A, V	2	to 2,000
	A	10	to 10,000
	A	20	to 20,000
True peak*	A	10	to 25,000

Notes:

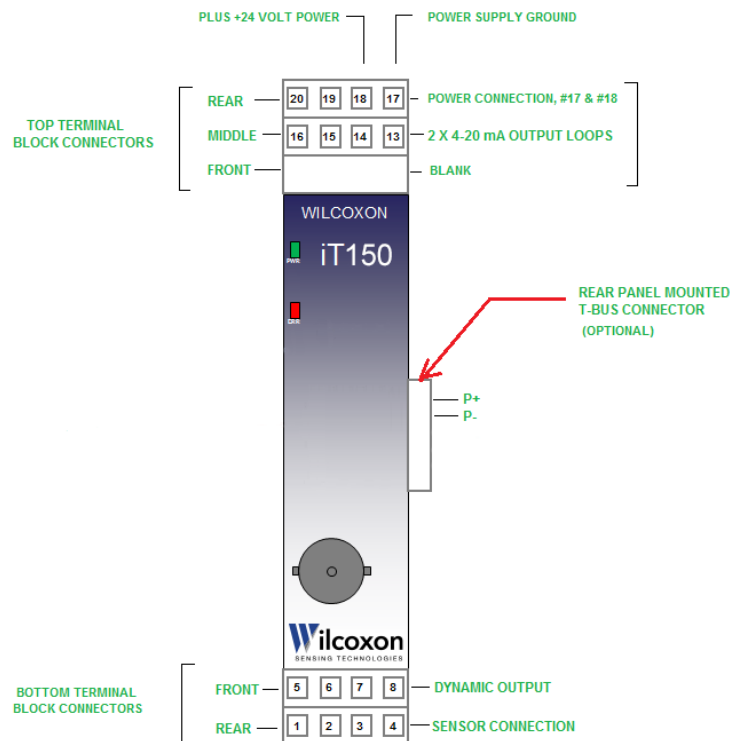
- * True peak detection option available for Input/Output type "A" only.
- ** Displacement output option available for Input type "V" only.

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



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