

4-20 mA vibration transmitter modules

iT150 series

SPECIFICATIONS

INPUT

Sensor types	IEPE accelerometers, IEPE piezovelocity 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 Ordering Information on page 2
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 (Vin)	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
Dimensions:	
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.

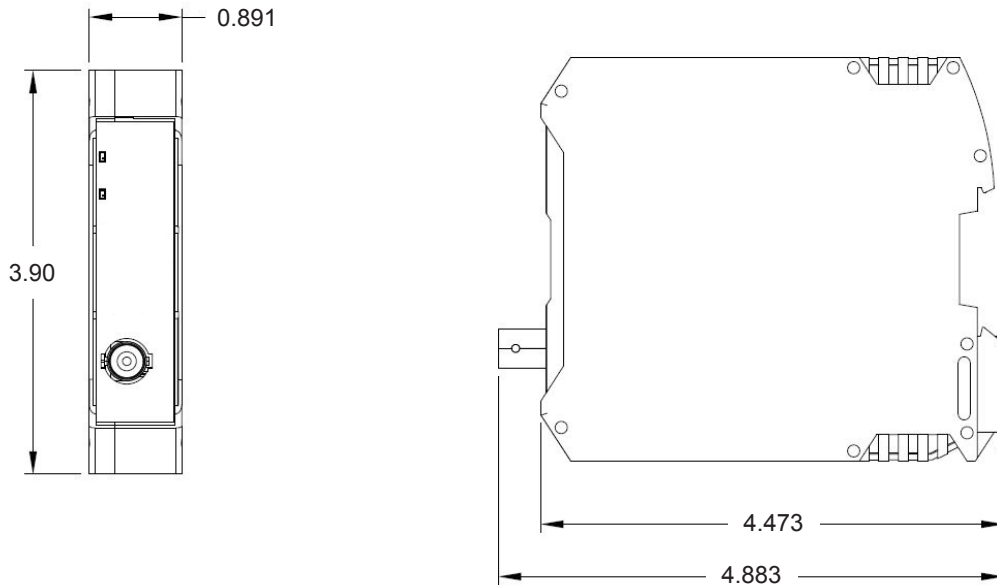
Notes: ¹ Compatible with Wilcoxon models 786T and 787T (measurement range: 0° to 120°C, input signal: 0 - 1.2 VDC).

² True peak frequency response: 10 Hz to 25 kHz.



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

A	Acceleration
V	Velocity

Sensitivity

10	mV/g,
100	mV/ips
500	

Output type

A	Acceleration
V	Velocity
D**	Displacement

Output type

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

Detector type

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

Output type

Output type	Units
A	g
	m/s/s (m/s²)
V	ips
	mm/s
D**	mils**
	mm

Output type

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

Notes:

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

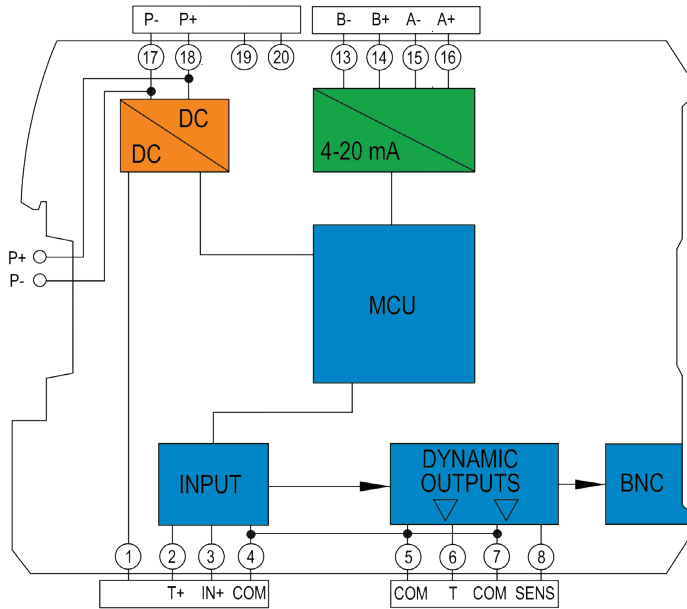
Selectable parameters are in **bold**.

ISO 10816-3

F_{MIN} fixed with F_{MAX} (select desired frequency range)

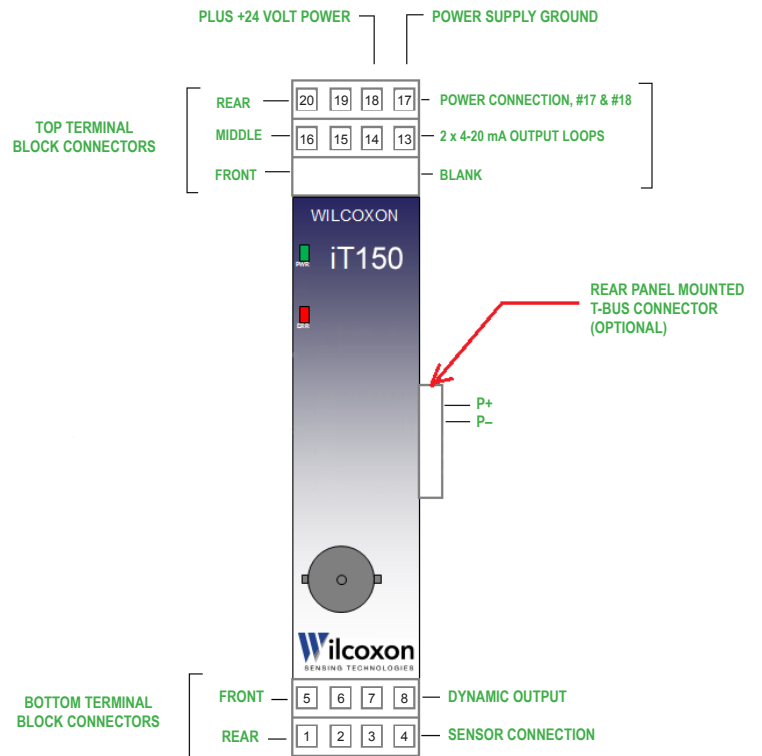
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System architecture



- Power input
- 4-20 mA outputs
- Input/output μ processor

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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