

Vibration data source MQTT protocol

VDS130

SPECIFICATIONS

SENSOR INPUT

Channels

IEPE vibration 4
RPM 1

Connector

screw terminal

VIBRATION CHANNELS

Input sensitivity

10, 25, 50, 100, 500, or 1000 mV/g

Frequency response

40 kHz ($\pm 5\%$)

Power

IEPE (20 V min, 3 mA)

Input range

± 5 V / ± 20 V selectable

Coupling

AC/DC selectable

Input impedance

320 k Ω

Max sampling rate

102.4 kHz

RPM CHANNEL

Input range

5 V TTL (± 20 V peak)

Measurement range

0.5 Hz - 5 kHz

Power

5 V (max. 100 mA)

VIBRATION OUTPUT

Acceleration frequency band, selectable

RMS: 2 Hz - 1 kHz, 10 Hz - 10 kHz, 2 kHz - 10 kHz¹
peak: 2 Hz - 1 kHz, 10 Hz - 10 kHz, 2 kHz - 10 kHz

Velocity frequency band, selectable

RMS: 2 Hz - 1 kHz¹, 10 Hz - 1 kHz¹, 10 Hz - 5 kHz¹
peak: 2 Hz - 1 kHz, 10 Hz - 1 kHz, 10 Hz - 5 kHz

Displacement frequency band, selectable

RMS: 2 Hz - 1 kHz¹, 10 Hz - 1 kHz¹
peak: 2 Hz - 1 kHz, 10 Hz - 1 kHz

True peak

Fs @ 102.4 kHz

Power spectrum, selectable

1 kHz, 2 kHz, 5 kHz, 10 kHz, 20 kHz, 40 kHz

Window

rectangular, hanning, flat top

Lines

6400

Time waveform length

1 sec

Other features

crest factor, standard deviation

COMMUNICATION

Protocol

MQTT

Digital output connector

RJ45 Ethernet port

Data transmission interval

Overall value min. 1 minute
Time waveform min. 1 minute
Power spectrum min. 1 minute

Notes: ¹ Frequency bands align with ISO 17243 guidelines to assess the severity of machine tool spindle vibrations measured on the spindle housing or ISO 10816-3 and 20816-3 guidelines to assess the vibration of industrial machines



Key features

- Compatible with IEPE accelerometers
- MQTT digital output
- Frequency bands align with ISO 10816-3, 20816-3 and 17243 guidelines
- Multi functionality LED status indicators for VDS and sensors

Sensor input connections	
Connection	Function
Channels 1-4	
SHLD	shield
-	common
+	power/signal
RPM input	
SHLD	shield
RPM IN	signal
RPM GND	ground
+5 V	power

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

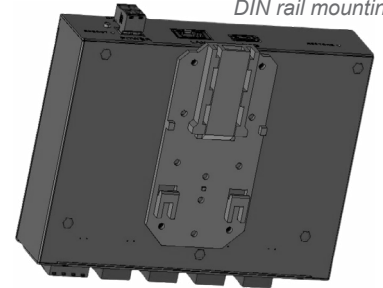
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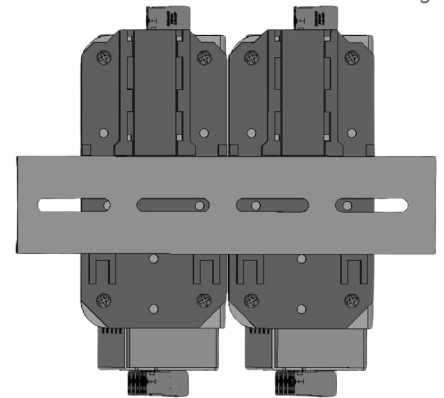
SPECIFICATIONS

PHYSICAL & ENVIRONMENTAL	
Power requirement	24 VDC
Power consumption	10 W max.
Exterior material	aluminum (painted)
Reset, restore	push button
Self-test status	LED indicator
Operating temperature	-10 to +80 °C
Dimensions	120mm x 155mm x 34mm
Weight	420 grams
Mounting	optional back or side panel for DIN rail mounting
USB	3.0 Type-A

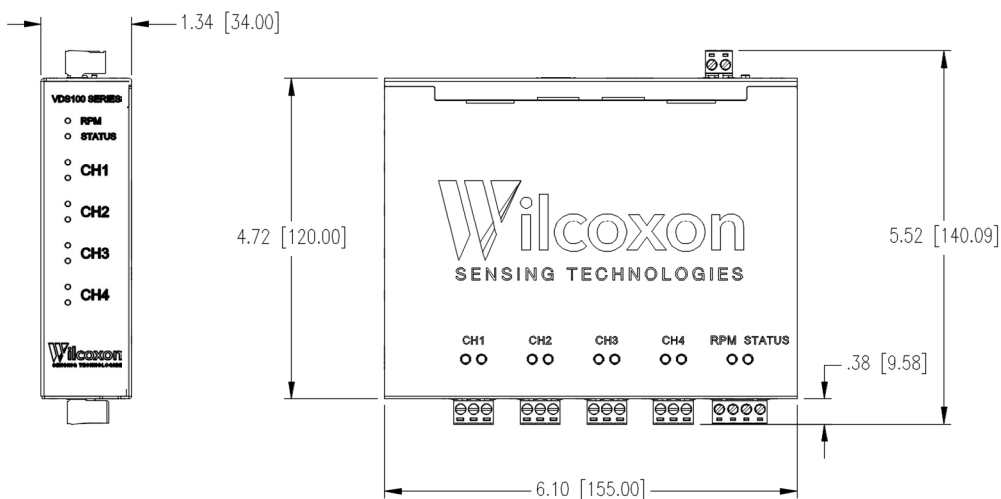
Back-panel for
DIN rail mounting.



Side-panel for DIN
rail mounting.



DIMENSIONS



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