VTX-420 configuration guide

Loop-powered velocity, temperature and dynamic-output request options

Document status - application guide and configuration review checklist. Use a controlled configuration datasheet, approved drawing and written quotation to define the delivered model, ratings, documents and commercial terms.

Choose the signal and requested variant

- VTX-420 - two-wire loop-powered 4-20mA velocity request.
- VTX-420T - vibration plus surface-temperature request. Confirm the temperature output type and additional conductors or loop.
- VTX-420D - 4-20mA process value plus buffered dynamic output request. Confirm signal sensitivity, output drive and acquisition input.
- VTX-420-LF - low-frequency request for slow-speed assets. Confirm the measured rotational speed and required passband.

Match the full scale and detector

Requested velocity full scales include 10, 20, 25, 25.4 and 50 mm/s. Imperial requests include 0.5, 1.0 and 2.0 in/s, equivalent to 12.7, 25.4 and 50.8 mm/s. Select True RMS or Peak independently and confirm that exact configuration with the quotation.

Acceleration requests can specify 5, 10 or 20 g with detector and frequency band. For a sinusoid, Peak = RMS x sqrt(2). Complex vibration requires the actual detector definition.

Frequency and temperature inputs

Give minimum and maximum frequency, motor speed, local sensor temperature and any transient exposure. Requested standard, low-frequency and wider-band options require model-level confirmation. Surface temperature follows the mounting location and thermal path.

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Electrical loop and mounting review

For a passive AI example, connect supply positive to TX positive, TX negative to AI positive, and AI common back to supply 0V. Active AI channels can provide excitation. Use the actual input-module and transmitter diagrams.

Confirm minimum transmitter voltage, supply tolerance, input burden, cable resistance, barrier drops, fault current and isolation. State a polarity-independent input requirement explicitly and obtain the accepted electrical drawing.

Specify M8 x 1.25, M6 x 1.0 or 1/4-28 UNF, including thread gender, depth and seating face. Choose top or side exit and M12 4-pin, 2-pin MIL-C-5015 or integral cable. Identify conduit entries separately from mounting threads.

M12 shape alone does not establish pinout. Record each original pin function, cable drawing and full model suffix. Confirm the mating connector, shield termination and grounding.

Installation-kit and document request

- Rigid prepared mounting pad and matched stud. Give the surface material, adhesive qualification and local temperature.
- Cable length, jacket, armor, connector and exact pinout. Route and support the cable clear of high-flexure locations.
- Controlled envelope drawing / STEP, configuration datasheet, calibration method and report scope.

Request the exact quantity, destination, installation schedule and required documents. Confirm unit prices, installation-kit prices, calibration scope, transport, warranty and lead time in the quotation for the selected configuration.

Machine evaluation and engineering reference

Select the applicable ISO 20816 part and adopted edition for the machine, support, speed, measurement direction and operating state. Overall housing vibration and changes from a baseline support condition trending. A diagnostic bearing assessment may need high-frequency features or waveforms.

https://www.iso.org/standard/89922.html