

VM-X900

Wireless Transmitter

Technical Performance

Input.....	Digital
Channels.....	248 max. i.e. 31 x VM-X960 plus one universal analog input
Display.....	Indicates channel # and analog level
Modbus Connection.....	16 bit Master to VM-X960, slave receiver VM-X920

Mechanical

Aerial.....	Connection by SMA connector (front panel)
Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.51 x 3.9 x 0.89 in. (114.5 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	3.35 oz (95 gms) - nom

Electrical

Power Requirements.....	24 VDC (VM-X670 Power Supply Module)
Maximum Current.....	100 mA
Isolation Voltage.....	1 kV - Devices protected against reverse polarity connection
Temperature Coefficient.....	50 ppm
Linearity Error.....	0.01%°C
Input Impedance.....	1 MegOhm, 15 Ohms

Environmental

Operating Temperature Range.....	0 to 131°F (0 to 55°C)
Emmision.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

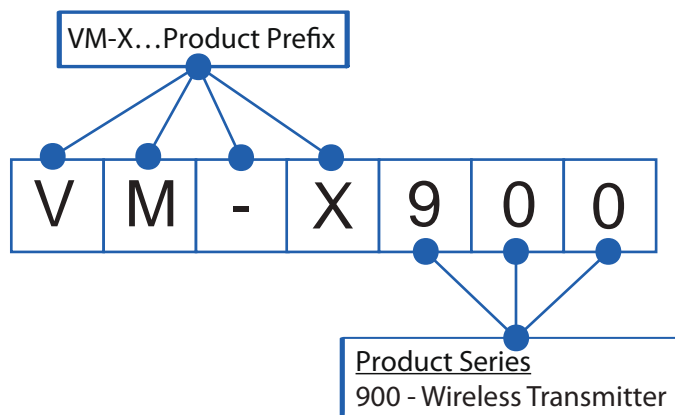


Features

- Fully Configurable
- Zigbee
- Up to 248 Channels
- 328 ft (100 m) range
- External Aerial

How to Order

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VM-X920

Wireless Receiver

Technical Performance

Input.....	Digital
Channels.....	248 max. i.e. 31 x VM-X960 plus one universal analog input
Display.....	Indicates channel # and analog level
Protocols.....	RTU - RS232 or RS485 TCP (Ethernet industrial standard)
Baud Rate (RTUs).....	9600 default (others available)
Port Settings.....	8 data bits, no polarity, one stop bit
Modbus Connection.....	16 bit Master to VM-X900, slave to PC

Mechanical

Aerial.....	Connection by SMA connector (front panel)
Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.51 x 3.9 x 0.89 in. (114.5 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	3.35 oz (95 gms) - nom

Electrical

Power Requirements.....	24 VDC (VM-X670 Power Supply Module)
Maximum Current.....	100 mA
Isolation Voltage.....	1 kV - Devices protected against reverse polarity connection
Temperature Coefficient.....	50 ppm
Linearity Error.....	0.01%°C
Input Impedance.....	1 MegOhm, 15 Ohms

Environmental

Operating Temperature Range.....	0 to 131°F (0 to 55°C)
Emission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

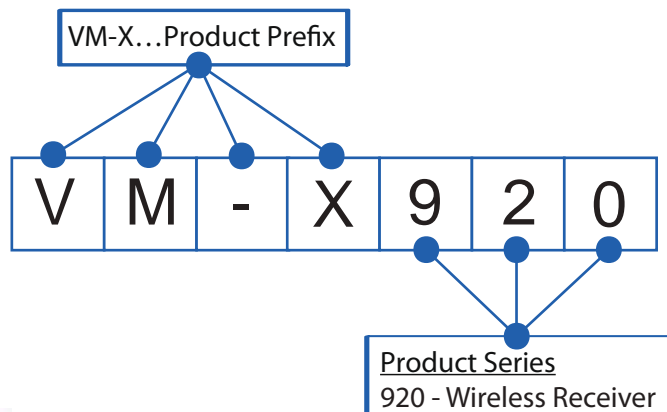


Features

- Fully Configurable
- Zigbee
- Up to 248 Channels
- 328 ft (100 m) range
- External Aerial

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VM-X940

Ethernet/Modbus Converter Module

Technical Performance

Input.....	Digital
Channels.....	248 max. i.e. 31 x VM-X960 plus one universal analog input
Display.....	Indicates channel # and analog level
Protocols.....	RTU - RS232 or RS485 TCP (Ethernet industrial standard)
Baud Rate (RTUs).....	9600 default (others available)
Port Settings.....	8 data bits, no polarity, one stop bit
Modbus Connection.....	16 bit Master to VM-X920, slave to PC

Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.51 x 3.9 x 0.89 in. (114.5 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	3.35 oz (95 gms) - nom

Electrical

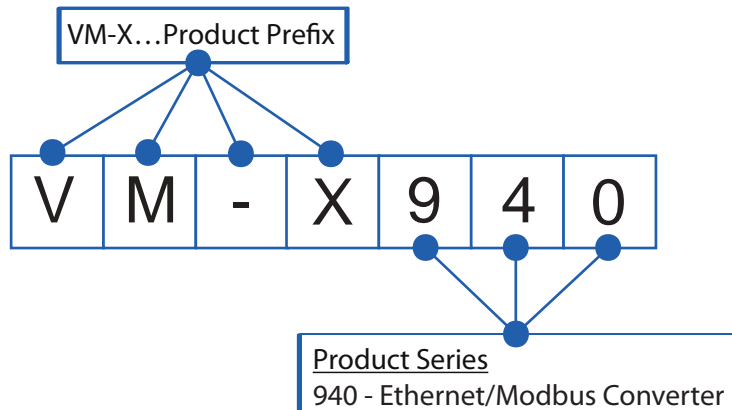
Power Requirements.....	24 VDC (VM-X670 Power Supply Module)
Maximum Current.....	100 mA
Isolation Voltage.....	1 kV - Devices protected against reverse polarity connection
Temperature Coefficient.....	50 ppm
Linearity Error.....	0.01%°C
Input Impedance.....	1 MegOhm, 15 Ohms

Environmental

Operating Temperature Range.....	0 to 131°F (0 to 55°C)
Emmission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

How to Order

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Features

- Interface with VM-X800 Series Modules
- 248 Inputs
- For use with VM-X920 Expansion Module
- Modbus RTU or TCP (Ethernet)
- Reverse Polarity Protection

VM-X940 Series Module



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VM-X960

Expansion Module

Technical Performance

Input.....	Analog 4-20 mA or 0-10 V from VM-X800 Series modules
Output.....	8 digital, 3 port isolation
Modbus Connection.....	Modbus connected to VM-X900 & VM-X940
	16 bit

Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.51 x 3.9 x 0.69 in. (114.5 x 99 x 17.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	3.35 oz (95 gms) - nom

Electrical

Power Requirements.....	24 VDC via Modbus
Maximum Current.....	20 mA
Isolation Voltage.....	1 kV - Devices protected against reverse polarity connection
Temperature Coefficient.....	50 ppm
Linearity Error.....	0.01%°C
Input Impedance.....	1 MegOhm, 15 Ohms

Environmental

Operating Temperature Range.....	0 to 131°F (0 to 55°C)
Emmission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

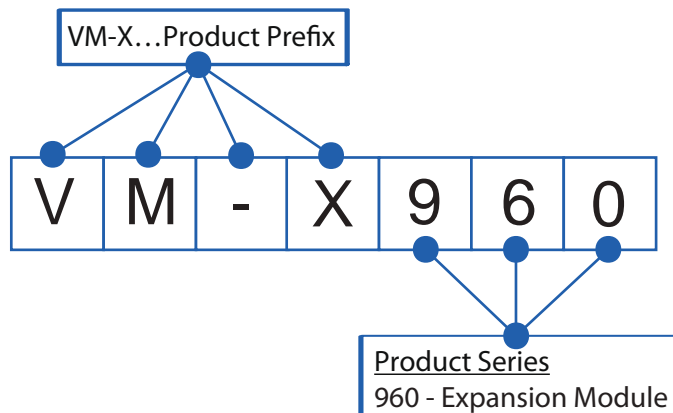


Features

- Interface with VM-X800 Series Module
- 8 Analog Inputs
- For use with VM-X940 and VM-X900
- Output - Industrial Modbus
- Wireless (VM-X900)
- Reverse Polarity Protection

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VM-X700

Vibration / Trip Display Module

Performance

Input.....	0-10VDC or 4-20mA from CM-600 Series, VM-X870, or VM-X860
Power Requirements.....	16 to 30 VDC (VM-X600 Power Supply Module)
Maximum Current.....	120mA
Display Range Options.....	0-3.93 in/sec (0-100 mm/sec) - programmable 0-3.53 oz (0-100 g) - programmable 32-212°F (0-100°C)
Display.....	3½ digit (Green LED)



Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.51 x 3.9 x 0.89 in. (114.5 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	4.94 oz (140 gms) - nom

Electrical

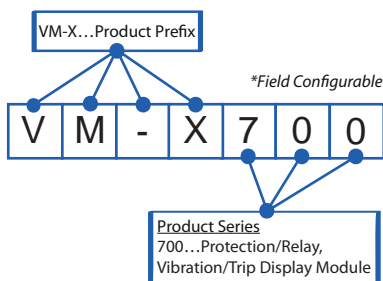
Set Points.....	Dual relays (front panel programmable)
Relay Rating.....	3 Amps at 240 Volts AC
Relay Status.....	N/O or N/C Latching / Non Latching
Relay Delays.....	Up to 1200 seconds
Outputs.....	4-20 mA or 0-10 Volts DC

Environmental

Operating Temperature Range.....	0 to 131°F (0 to 55°C)
Emmission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

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Features

- Fully configurable
- Delay start-up
- Dual relays
- Various inputs
- Relay inhibit



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Performance

Input.....	100 mV/g constant current accelerometer
Acceleration Range.....	From 0-50 'g' - to be specified
or	
Velocity Range.....	Up to 200 mm/s - to be specified
Frequency Range.....	2 Hz to 10 kHz (-3 dB) ISO 10816
Filters.....	Velocity Version: 10 hZ to 1 kHz (-3 dB) 2-pole Butterworth 'g' Version: 10 hZ to 5 kHz (-3 dB) 2-pole Butterworth

Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	4.72 x 2.95 x 0.9 in (120 x 75 x 23 mm) - HxDxW
Connections.....	Screw Clamp
Conductor Size.....	0.02 - 1.6 in (0.5 - 4.0 mm)
Weight.....	2.82 oz (80 gms) - nominal
Options.....	Various Filters

Electrical

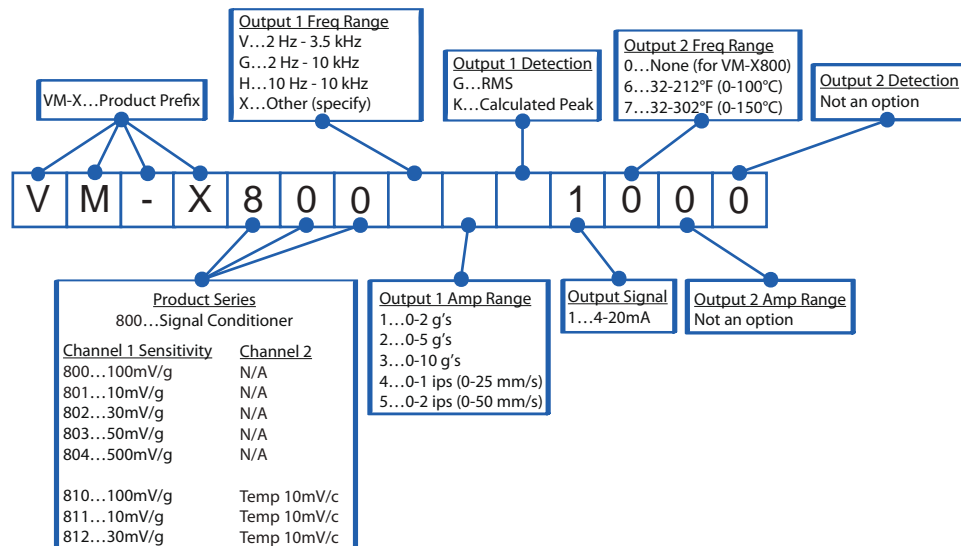
Power Input.....	24 V DC @ 50 mA (from VM-X600 Power Supply Module)
Output 1.....	Velocity Version: 4-20 mA = 0-25 mm/s rms 'g' Version: 4-20 mA = 0-5 g rms Max. Load Resistance: 500 ohms
Output 2.....	Buffered Accel. Output with DC Bias Voltage (nominal 12 VDC) AC only about 0 V on request

Environmental

Operating Temperature Range.....	32 to 131°F (0 to 55°C)
Emission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

How to Order

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Features

- Industrial Accelerometer Input
- 4-20 mA Velocity or 'g' Output
- Low Pass Filter
- DIN Rail Mounting
- Buffered Accelerometer Output (for data collection) via BNC



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Performance

Input 1.....10 mV/°C
 Acceleration Range..... From 0-50 'g' - to be specified
 or
 Velocity Range.....Up to 200 mm/s - to be specified
 Frequency Range.....2 Hz to 10 kHz (-3 dB) ISO 10816
 Filters.....Velocity Version: 10 hZ to 1 kHz (-3 dB) 2-pole Butterworth
 'g' Version: 10 hZ to 5 kHz (-3 dB) 2-pole Butterworth
 Input 2.....100 mV/g constant current accelerometer

Mechanical

Case Material.....Plastic
 Mounting.....DIN Rail TS35 (Top Hat)
 Dimensions.....4.72 x 2.95 x 0.9 in (120 x 75 x 23 mm)
 Connections.....Screw Clamp
 Conductor Size.....0.02 - 1.6 in (0.5 - 4.0 mm)
 Weight.....2.82 oz (80 gms) - nominal
 Options.....Various filters & temperature ranges

Electrical

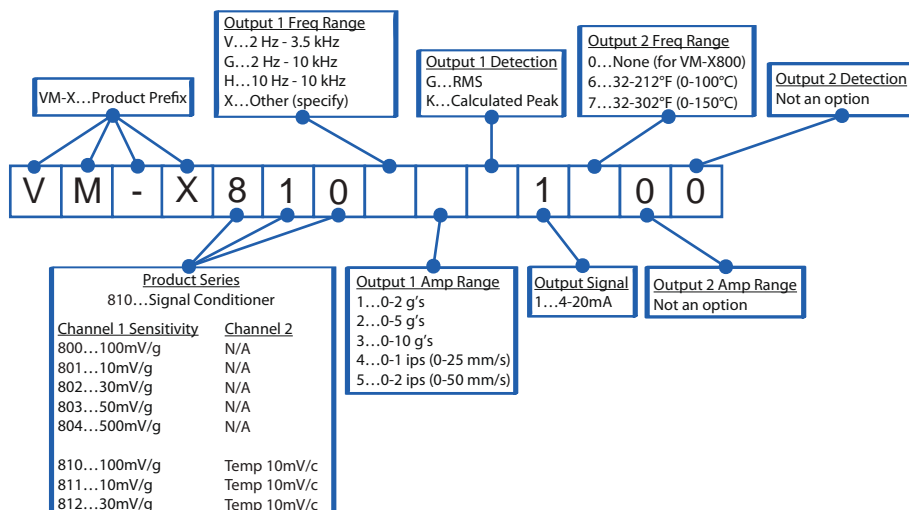
Power Input.....24 VDC @ 70 mA
 (from VM-X970 Power Supply Module)
 Output 1.....Temperature 4-20 mA = 32 - 212°F (others available)
 'g' Version: 4-20 mA = 0-5 'g' RMS
 Max. load resistance = 500 ohms
 Output 2.....Velocity version: 4-20 mA = 0-25 mm/s RMS
 Output 3.....Buffered accel. output with DC bias voltage
 (nomnial 12 VDC) AC only about 0 V on request

Environmental

Operating Temperature Range..... 32 - 131°F (0 - 55°C)
 Emission..... EN6100-6-4:2001
 Immunity..... EN6100-6-2:1999
 Installation Category (IEC664)..... II
 Equipment Class (IEC536)..... III

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VM-X810 Series Module

VM-X860

Signal Conditioner, Triple Output Vibration Module

Performance

Input.....	100 mV/g constant current accelerometer
Frequency Range.....	2 Hz to 10 kHz (-3dB)
G pk-pk Filters.....	1.5 kHz or 3.5 kHz or 5 kHz (-3dB)
	2-pole Butterworth, set by internal links
Velocity Filters.....	10 Hz to 1 kHz (-3dB) 2-pole Butterworth

Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	5.28 x 3.9 x 0.89 in. (134 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	4.94 oz (140 gms) - nom

Electrical

Power Input.....	+24 V DC at 50 mA (VM-X970 Power Supply Module)
Output 1.....	0-10 VDC or 4-20 mA = 0-10 or 0-25 or 0-50 or 0-100 g pk-pk. Set by internal links
Output 2.....	0-10 VDC or 4-20 mA = 0-10 or 0-20 or 0-50 or 0-100 mm/s RMS velocity. Set by internal link.
Output 3 (BNC).....	Buffered accel. Output with DC bias voltage (nom. 12 VDC) AC only about 0 V optional - on request
TDX OK.....	Transducer OK. Outputs 1 & 2 held at 0 V or 2 mA when in fault

Environmental

Operating Temperature Range.....	32 to 131°F (0 to 55°C)
Emission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

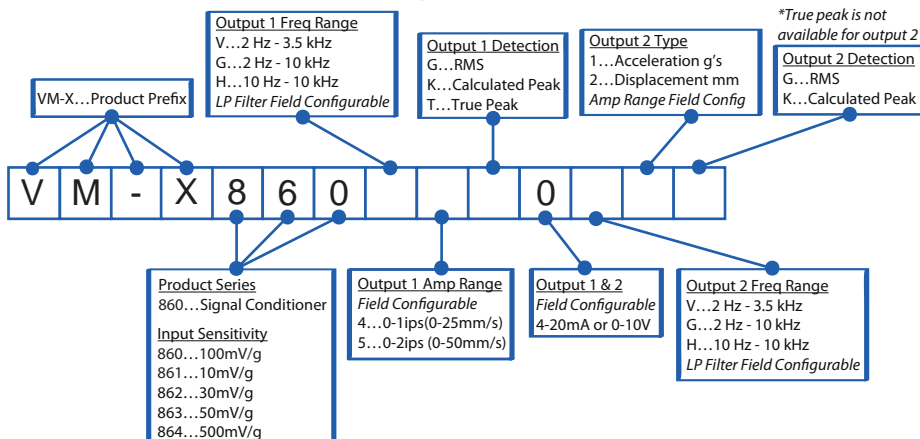


Features

- RMS Velocity Output
- Peak 'g' Output
- 0-10 V and 4-20 mA Outputs
- Buffered Acceleration Output (for Data Collection)
- DIN Rail Mounted
- TDX OK Function

How to Order

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VM-X860 Series Module

VM-X870

Signal Conditioner, Quad Output Vibration Module

Performance

Input.....	100 mV/g constant current accelerometer (other sensitivities available)
Frequency Range.....	10 Hz to 10 kHz (-3dB)
gE Filters.....	Input Filters 500 Hz to 10 kHz (-3dB) 2-pole Butterworth Post-Envelope Filter 10 Hz to 1 kHz (-3dB) 2-pole Butterworth
Velocity Filters.....	10 Hz to 1 kHz (-3dB) 2-pole Butterworth

Mechanical

Case Material.....	Plastic
Mounting.....	DIN Rail TS35 (Top Hat)
Dimensions.....	5.27 x 3.9 x 0.89 in. (134 x 99 x 22.5 mm)
Connections.....	Screw Clamp
Conductor Size.....	0.02 to 0.16 in. (0.5 to 4.0 mm)
Weight.....	4.94 oz (140 gms) - nom

Electrical

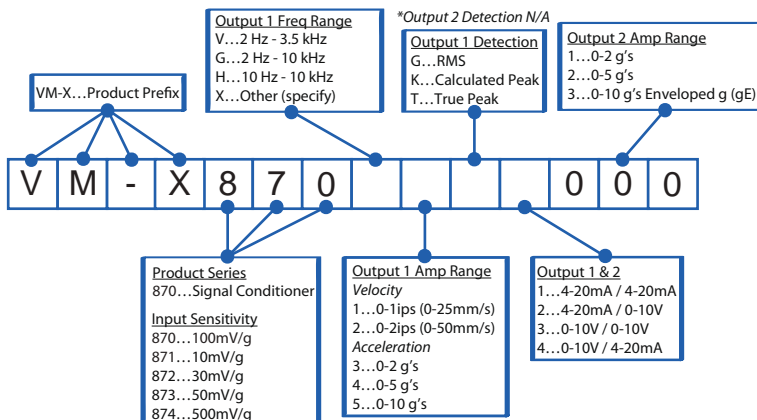
Power Input.....	+24 VDC at 25 mA (from VM-X970 Power Supply Module)
Output 1.....	0-10 VDC = 0-10 gE (other ranges available)
Output 2.....	0-10 VDC = 0-20 mm/s rms Velocity (other ranges available)
Output 3.....	Buffered acceleration output with DC bias voltage (nom. 12 VDC) AC only about 0 V on request
Output 4.....	Buffered gE AC output with 9 VDC Ref. Voltage
TDX OK.....	Transducer OK. Outputs held at 0 V if in fault

Environmental

Operating Temperature Range.....	32 to 131°F (0 to 55°C)
Emmission.....	EN6100-6-4:2001
Immunity.....	EN6100-6-2:1999
Installation Category (IEC664).....	II
Equipment Class (IEC536).....	III

How to Order

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Features

- RMS Velocity Output
- Enveloped 'g' Output
- 0-10 V Outputs for PLCs
- Buffered Acceleration Output (for Data Collection)
- DIN Rail Mounted
- TDX OK Function



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VM-X870 Series Module

