OVERVIEW

The MX5000-SIM Sensor Interface Module is a next generation DIN rail mounted Smart Vibration Signal Conditioner and Monitoring System. It has been designed to accept signals from machine casing mounted velocity sensors, accelerometers, 4-20 mA process data sensors, or shaft observing proximity probe systems, and produce a 4-20 mA output proportional to the measured variable as well as the dynamic signal. It provides the user with a configurable signal input type for one to four independent channels. It also has the ability to stack MX5000-SIM modules to add additional channels, up to 6 modules or 24 channels. For each channel, a green LED indicates sensor and cable integrity. In the event of sensor failure, the LED changes to red and the output current is driven below 3.6 mA, thereby signaling a malfunction. The alarm status of each channel is indicated by the LED flashing yellow for Alert and flashing red for Danger. A BNC connector gives access to the dynamic input signal prior to any processing for local analysis. Isolation is provided between input, outputs and supply. In the MX5000-SIM, there are four Solid-State relays which can be configured with AND/OR logic from any channel's Alert or Danger status. There is a dedicated LED for each relay to indicate status. The alarm levels and relays can be configured using the free Metrix MX5000 software downloaded from the Metrix website.

Pending Approvals

Designed for ease of use, the USB-C interface is fitted for quick and easy configuration. Just connect a standard cable between the MX5000-SIM and your PC. Using our free configuration software, you can configure the device in the field to meet your application requirements. All four channels can be independently configured. Depending upon the sensor arrangement, one can obtain direct overall amplitude as well as other static variables via a Modbus link.

FEATURES

- Four channel module, capable of stacking up to 6 modules for a 24 channel system.
- Field configurable full-scale range, input type and Band Pass Filters
- Reduced cost alternative to rack mounted monitors
- Provides sensor excitation
- Drives dynamic signals over long distances (300 m or 1000 ft), if low frequency content (< 2,000 Hz) then the signal can be driven 600 meters (2,000 feet)
- Interfaces an accelerometer, velocity sensor, proximity probe system, or process variable 4-20 mA to a PLC, DCS or other system via Modbus or 4-20 mA output
- Modbus variables can include direct overall amplitude, channel and module status and, if appropriate, gap voltage
- With two or more SIMs, redundant Modbus is possible
- Provides 4-20 mA proportional output and is compliant with the NAMUR standard

FEATURES (Continued)

- Multi-Variable Output is allowed via Modbus (Single Channel Input / Multi-Variable Output)
- LED for OK/Not OK and alarm levels
- BNC connector for waveform analyzers
- Configuration can be loaded by factory or performed in the field

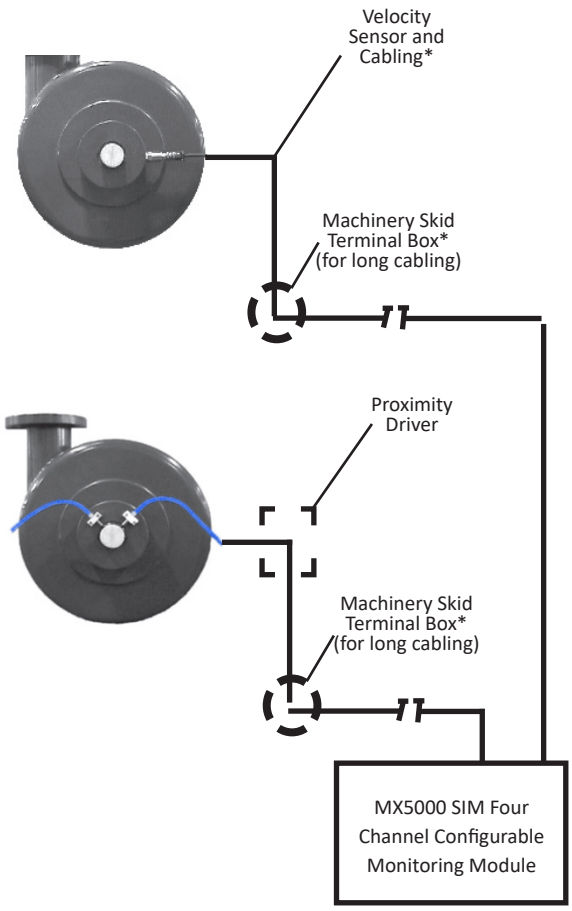
APPLICATIONS

- Centrifugal Compressors
- Motors & Generators
- Process Pumps
- Centrifuges
- Natural Gas/Diesel Engines
- Gas Turbines
- Other Rotating/Reciprocating Machines

SOFTWARE

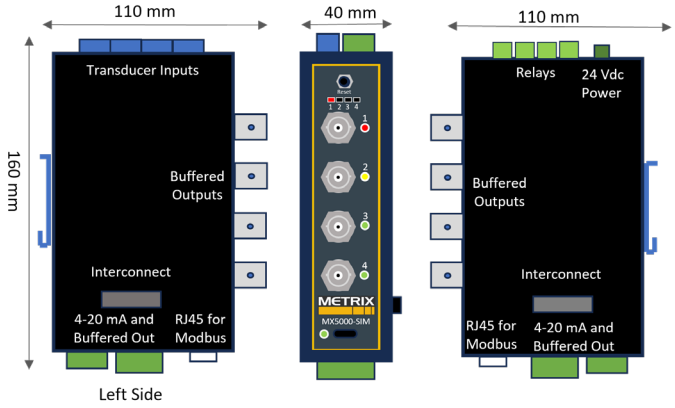
- Download free configuration and display software from Metrix website.

TYPICAL INSTALLATION DIAGRAM



WEIGHT & DIMENSIONS

Weight: 1.1 lbs (0.5 kg)
Maximum Power: 8.0W
Recommended Wire Gauge: 0.8 mm2 (18 AWG), Allowed: 0.2 to 1.3 mm2 (16 to 24 AWG)
Relay Wiring: Solid State Relays - Allowed: 0.2 to 1.3 mm2 (16 to 24 AWG)
Mounting: 35mm DIN rail mounting
Casing Material: ABS PA765 Durable Plastic



SPECIFICATIONS

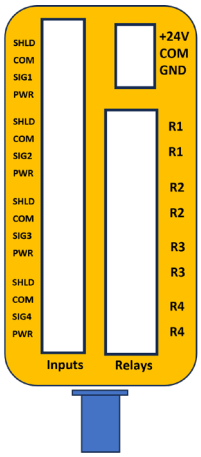
Input signal	100 to 500 mV/ips, 10 to 500 mV/g, 100-200 mV/mil, 4-20 mA
Sensor Excitation Provided	Required only for piezo-velocity sensor input types: 24 VDC, 4 mA constant current standard and 4-20 mA
Output Accuracy	4-20 mA dc (source) ± 5% bounded by the NAMUR standard
Dynamic Signal Output	Buffered input signal at BNC (5m or 16ft) and terminal block (Drives dynamic signals over long distances (300 m or 1000 ft), if low frequency content (< 2,000 Hz) then the signal can be driven 600 meters (2,000 feet))
Scale Range	Configurable
Maximum Load Resistance	600 Ω
Frequency Response	2 Hz to 5 kHz for velocity 2 Hz to 10 kHz for proximity 0 to 10 Hz for proximity position 2 Hz to 10 kHz for acceleration 10 Hz for 4-20 mA input
Sensor Malfunction	Output current driven below 3.6 mA and sensor status green LED turns to red when sensor/cable not OK
Filters	Optional low-pass and high-pass filters (36 db/octave). Filter section does not affect dynamic signal.
Temperature Limits	-40° C to +85° C (-40° F to +185° F)
Input Power	20 to 30 Vdc. Reverse polarity and electrical transient protection provided. With two or more SIMs, redundant power supplies allowed.
Hazardous Area Certification	Available safety certification for CSA & NRTL/C Class I (A, B, C & D) T4, Div. 2. ATEX/IECEx/UKCA, SIL
Electromagnetic Compatibility	Yes
Solid State Switches	100 mA, SPST, 120/240 VAC or 24 VDC (Configurable NO/NC)

WARNING - DO NOT CONNECT OR DISCONNECT WHEN ENERGIZED. FIELD WIRING TO SIGNAL CONDITIONER/SMART SWITCH MUST COMPLY WITH LOCAL CODE. SIGNAL CONDITION PROVIDES INCREASED SAFETY CIRCUIT TO 5485C, SV6300 AND OTHER COMPATIBLE VELOCITY TRANSDUCERS AND SA6200A, SA6250 AND OTHER COMPATIBLE ACCELEROMETERS AND MX2033, MX2034 AND OTHER COMPATIBLE PROXIMITY SENSORS WHEN INSTALLED PER DRAWING NO. 187YYYY.

POWER APPLIED TO 1 SIM IS SHARED TO ALL CONNECTED SIMS. A SECOND POWER SUPPLY CAN BE CONNECTED TO AN INDIVIDUAL SIM. POWER CAN BE APPLIED TO AN INDIVIDUAL SIM OR TO 2 SIMS WHEN MORE THAN 1 SIM IS USED. THIS PROVIDES FOR REDUNDANT POWER SUPPLIES.

MX5000-SIM WIRING CONNECTIONS (TOP)

Signal Inputs
- 4 Channel Inputs
  - Proximity Sensor (mV)
  - Velocity Sensor (mV)
  - Accelerometer (mV)
  - Process Variable (4-20 mA)



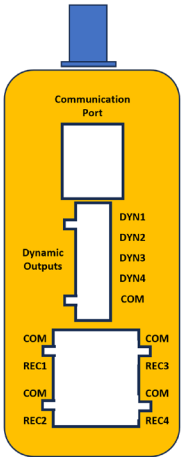
Front of SIM

Power Input
- +24 VDC Power
- Redundant Power Allowed

Relay Contacts
- 4 Solid State Relays
- Configurable AND/OR Logic
- Limited to 100 mA each

MX5000-SIM WIRING CONNECTIONS (BOTTOM)

Front of SIM



Communication Port
- RJ45 Connector (Modbus 485 Output)

Dynamic Outputs
- 4 Buffered Outputs (1 per Channel)

4-20 mA Outputs
- 4 Recorder Outputs (1 per Channel)

POSSIBLE MEASUREMENTS

- Shaft-relative radial vibration
- Shaft axial position (Thrust Measurements)
- Casing vibration (radial or axial)
- Shaft rotative speed
- Reciprocating compressor rod drop
- Reciprocating compressor rod position
- Reciprocating compressor crosshead acceleration
- Reciprocating machine impact measurements
- Reciprocating compressor frame vibration
- Process variables via any 4-20mA output sensor
- Dual Path measurements (single channel input with multiple variable output via Modbus)
    - One accelerometer input may generate an accelerometer output (4-20 mA and Modbus) and an integrated velocity output (Modbus)
    - One accelerometer input may generate an accelerometer output (4-20 mA and Modbus) and an impact output (Modbus)
    - One velocity input may generate a vibration output (4-20 mA and Modbus) and an integrated position output (Modbus)
    - One proximity input may generate a position (Gap/Rod Drop) output (4-20 mA and Modbus) and a vibration output (Modbus)

ELECTROMAGNETIC COMPATABILITY (EMC)

APPROVALS PENDING

Standards:
CISPR 11:2009Ed.5+A1
Industrial, Scientific and Medical Equipment – Radio Frequency Disturbance Characteristics - Limits and Methods of Measurement
IEC 61000-4-4 Ed. 2.1:2011
Electromagnetic compatibility (EMC) - Part 4-4: Testing and measurement techniques - Electrical fast transient/burst immunity test
IEC 61000-4-6 Ed.3: 2008
Electromagnetic compatibility (EMC) - Part 4-6: Testing and measurement techniques - Immunity to conducted disturbances, induced by radio-frequency fields

SAFETY INTEGRITY LEVEL

APPROVAL PENDING

SIL is a method or measurement unit to determine the reliability of electrical, electronic and programmable systems. The purpose of the SIL certification is to measure safety system performance and the likelihood of failure. Achieving SIL certification, based on the IEC61508 Functional Safety Standard, signifies that the product has been thoroughly assessed and is a reliable electronic device ready to use across a wide range of industries.

System is natively SIL 1 compliant. For SIL 2, sensor pairs (XY, Thrust, Speed, etc.) must reside on separate SIM modules.

Metrix products have been thoroughly evaluated by an independent third party agency on the basis of IEC61508 Functional Safety standards to obtain SIL certification.

NAMUR STANDARD

The NAMUR signal standard defines specific diagnostic meaning to values of current lying outside the 4-20 mA range: NAMUR compatible transmitters are designed to limit their output signals between 3.8 mA and less than 21 mA when functioning properly. If the sensor is not functioning properly the sensor will go Not OK (< 3.6 mA).

A sensor out of range will not result in a Not OK condition unless it is configured in the software.

ORDERING INFORMATION

MX5000 (Field Configurable for Displayed Options)

A A - B B - C C - D D - E E
MX5000-□□-□□-□□-□□-□□

AA			qty REMs
	0	0	no REM
	0	1	REM
BB			**qty SIMs**
	0	0	no SIM
	0	1	1 SIM
	0	2	2 SIMs
	0	3	3 SIMs
	0	4	4 SIMs
	0	5	5 SIMs
	0	6	6 SIMs
CC			**qty TIMs**
	0	0	no TIM
	0	1	1 TIM
	0	2	2 TIMs
	0	3	3 TIMs
	0	4	4 TIMs
	0	5	5 TIMs
	0	6	6 TIMs
	0	7	7 TIMs
DD			**Hazardous Area**
	0	0	Non-Hazardous Area
	0	5	NA/ATEX/IECEx
EE			**Configuration**
	0	0	No Configuration Provided
	0	1	Configuration Provided

INPUT SENSORS, FULL-SCALE RANGES AND FILTERING

Velocity Sensor Output Options	
Vibration Range (4-20 mA Output)	**Output Measure**
0 - 1.0 ips, pk	Velocity/ English System
0 - 1.0 ips, rms	
0 - 2.0 ips, pk	
0 - 2.0 ips, rms	
0 - 3.0 ips, pk	
0 - 3.0 ips, rms	
0 - 10 mils, pk-pk	Integrated Displacement/ English System
0 - 20 mils, pk-pk	
0 - 20 mm/s, pk	Velocity/ Metric System
0 - 20 mm/s, rms	
0 - 50 mm/s, pk	
0 - 50 mm/s, rms	
0 - 200 um, pk-pk	Integrated Displacement/ Metric System
0 - 500 um, pk-pk	
1 mm/s = 0.03937 ips 1 ips = 25.4 mm/s 1 mil = 25.4 μm 1 μm = 0.03937 mil	

Accelerometer Sensor Output Options	
Vibration Range (4-20 mA Output)	**Output Measure/ Unit System**
0 - 10 g, pk	Acceleration/ English System
0 - 10 g, rms	
0 - 50 g, pk	
0 - 35 g, rms	
0 - 1.0 ips, pk	Integrated Velocity/ English System
0 - 1.0 ips, rms	
0 - 2.0 ips, pk	
0 - 2.0 ips, rms	
0 - 100 m/s^2, pk	Acceleration/ Metric System
0 - 100 m/s^2, rms	
0 - 500 m/s^2, pk	
0 - 350 m/s^2, rms	
0 - 20 mm/s, pk	Integrated Velocity/ Metric System
0 - 20 mm/s, rms	
0 - 50 mm/s, pk	
0 - 50 mm/s, rms	

Impact Measurement Options[1]
Input <= 900 [mV PK] (IMPACT)
Input <= 1400 [mV PK] (IMPACT)
Input <= 2500 [mV PK] (IMPACT)
Input <= 4750 [mV PK] (IMPACT)

Proximity Probe Output Options
4 mils, pk-pk (Vibration)
5 mils, pk-pk (Vibration)
6 mils, pk-pk (Vibration)
10 mils, pk-pk (Vibration)
15 mils, pk-pk (Vibration)
20 mils, pk-pk (Vibration)
30 mils, pk-pk (Vibration)
40 mils, pk-pk (Vibration)
100 µm, pk-pk (Vibration)
150 µm, pk-pk (Vibration)
200 µm, pk-pk (Vibration)
250 µm, pk-pk (Vibration)
300 µm, pk-pk (Vibration)
400 µm, pk-pk (Vibration)
500 µm, pk-pk (Vibration)
750 µm, pk-pk (Vibration)
1000 µm, pk-pk (Vibration)
30-70 mils, avg gap (Position)
20-80 mils, avg gap (Position)
10-90 mils, avg gap (Position)
10-50 mils, avg gap (Position)
20-70 mils, avg gap (Position)
10-60 mils, avg gap (Position)
20-160 mils, avg gap (Position)
20-180 mils, avg gap (Position)
750-1750 µm, avg gap (Position)
500-2000 µm, avg gap (Position)
250-2250 µm, avg gap (Position)
250-1250 µm, avg gap (Position)
500-1750 µm, avg gap (Position)
250-1500 µm, avg gap (Position)
500-4000 µm, avg gap (Position)
500-4500 µm, avg gap (Position)

Proximity Probe System Options	
	Events Per Rev.
500 RPM (Speed)	1-99 (All)
2000 RPM (Speed)	1-99 (All)
3600 RPM (Speed)	1-99 (All)
4000 RPM (Speed)	1-95
5000 RPM (Speed)	1-52
6000 RPM (Speed)	1-47
7500 RPM (Speed)	1-38
10000 RPM (Speed)	1-31
15000 RPM (Speed)	1-25
50000 RPM (Speed)	1-19
60000 RPM (Speed)	1-4
75000 RPM (Speed)	1-4
100000 RPM (Speed)	1-4

Velocity Sensor Input in mV/ips (mV/mm/s)	
100 mV/ips (3.9 mV/mm/s)	SV6300A recommended
105 mV/ips (4.1 mV/mm/s)	5485C recommended
145 mV/ips (5.7mV/mm/s)	
150 mV/ips (5.9 mV/mm/s)	
200 mV/ips (7.9 mV/mm/s)	
500 mV/ips (19.7 mV/mm/s)	

Accelerometer Sensor Input in mV/g (mV/mm/s^2)
10 mV/g (1 mV/m/s^2)
25 mV/g (2.55 mV/m/s^2)
50 mV/g (5.10 mV/m/s^2)
100 mV/g (10.20 mV/m/s^2)
500 mV/g (51 mV/m/s^2)

Proximity Driver Output in mV/mil (mV/µm)
100mV/mil (3.937 mV/µm)
200mV/mil (7.87 mV/µm)

NOTES:
1. The Maximum Input for the Impact Measurement can be estimated based on the amplitude of an accelerometer monitoring the reciprocating compressor crosshead. This example assumes an accelerometer with 100mV/g (10.2 mV/m/sec2) scale factor. The Maximum Input should include 5 times the measured acceleration value. For example: If the accelerometer from your portable data collector is mounted on the crosshead of an operating reciprocating compressor, and the acceleration reads 350 mV pk, one would choose < 2500 mV pk (350 mV x 5 = 1750 mV pk).

2. Bandpass Filters affect 4-20 mA output but have no effect on dynamic output.

3. Changing the filter options on channel 1 will limit the filter options for channel 2, and the same for channels 3 and 4. See Filter table above.

Filters Applied to All Sensors	
Bandpass Filter [2, 3]	**Bandpass Filter [2, 3]**
None	75-125 Hz
2-10k Hz	100-500 Hz
2-200 Hz	110-2000 Hz
2-500 Hz	125-175 Hz
2-1500 Hz	175-225 Hz
2-2000 Hz	200-2000 Hz
2-2100 Hz	225-275 Hz
2-4000 Hz	275-325 Hz
10-500 Hz	300-1800 Hz
25-75 Hz	325-375 Hz
30-120 Hz	375-425 Hz
50-150 Hz	425-475 Hz
50-2000 Hz	500-2500 Hz

MX5000-SIM Filter Compatibility Chart

		Ch2 / Ch4																									
		None	2-1500 Hz	2-2000 Hz	2-10k Hz	2-4000 Hz	500-2500 Hz	2-200 Hz	300-1800 Hz	10-500 Hz	2-500 Hz	2-2100 hz	25-75 Hz	30-120 Hz	75-125 Hz	125-175 Hz	175-225 Hz	225-275 Hz	275-325 Hz	325-375 Hz	375-425 Hz	425-475 Hz	110-2k Hz	50-2000 Hz	50-150 Hz	100-500 Hz	40-300 Hz
Ch1 / Ch3	None	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-1500 Hz	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-2000 Hz	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-10k Hz	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-4000 Hz	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	500-2500 Hz	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-200 Hz	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	300-1800 Hz	N	N	N	N	N	N	Y	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	10-500 Hz	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
	2-500 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	2-2100 hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	25-75 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	30-120 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	75-125 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	125-175 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	175-225 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	225-275 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	275-325 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	325-375 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	375-425 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	425-475 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	110-2k Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	50-2000 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	50-150 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	100-500 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	40-300 Hz	N	N	N	N	N	N	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

IMPACT MEASUREMENT

The impact measurement uses an accelerometer input and outputs a 4-20 mA signal proportional to the number of impact events over the threshold in a set time period. The relationship between the mA signal and the number of impact events remains the same. The time frame (reset time) over which the events are measured can be changed using the MX5000 software. This allows you to match the measuring time frame with the RPM range of your equipment. Chart #1 indicates mA output vs. impact events over the set threshold.

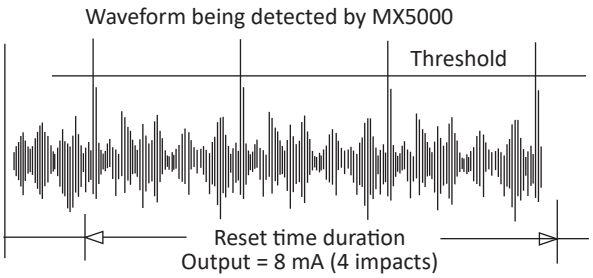
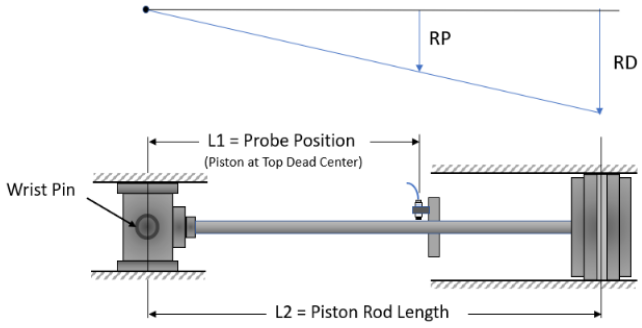


CHART 1	
Severity Level	**Output**
16 impacts > threshold	20 mA
14 impacts > threshold	18 mA
12 impacts > threshold	16 mA
10 impacts > threshold	14 mA
8 impacts > threshold	12 mA
6 impacts > threshold	10 mA
4 impacts > threshold	8 mA
2 impacts > threshold	6 mA
No impacts > threshold	4 mA
Loss of Power	0 mA

Translates number of impact events into 4-20 mA signal

ROD DROP MEASUREMENT

The rod drop measurement has its root at the vertical rod position measurement in the machine. What we infer from the similar triangle methodology is that the vertical rod position measurement correlates with the actual rod drop and rider band wear within the cylinder. The correlation has to do with the ratio of the piston rod length (L2) to the probe position length (L1). The logic being, if the piston rod position moves downward relative to the probe, then the piston must move downward, and for this to happen, the rider bands have to be wearing. It should be noted that the rider bands are sacrificial parts within the reciprocating compressor, they are intended to wear. The rider bands support the piston, allowing the piston rings to remain centered, this allows the piston within the cylinder to do its job and compress the gas. As the rider bands wear with time, there comes a point when the rider band has to be changed out or risk the piston coming into contact with the cylinder, which is a major fault and needs to be avoided.



RP = Rod Position
RD = Rod Drop

By Similar Triangles

$$\frac{RP}{L1} = \frac{RD}{L2}$$

$$(RP)\ \frac{L2}{L1} = RD$$

HAZARDOUS AREA APPROVALS

AREA	MX5000-SIM
North America	CLASS I, DIVISION 2, GROUPS A, B, C & D, CLASS I, ZONE 2, AEx ec nC IIC T4 Gc -40°C ≤Ta≤ +85°C Increased Safety APPROVALS PENDING
International ATEX/IECEX/ UKEX	Ex ec nC IIC T4 Gc -40°C ≤Ta≤ +85°C II 3 G Increased Safety

NOTES:
6. When connected & wired w/approved Metrix sensor. Request Application Wiring Drawing 187YYYY for details. If sensors are rated for Class I Div 1 or Zone 0 or 1 as long as the MX5000-SIM remains in an approved area with barriers this is allowed.
7. MET, ATEX, IECEx, hazardous area approvals.
8. When using a proximity sensor with a barrier a 6KΩ resistor will need to be utilized (the barrier supplies power to the MX2033 driver, but the MX5000-SIM circuit needs to see a load on the proximity power to the driver in order to not go “Not OK”).
9. Relay setpoint defaults are set at 25% and 50% of the full scale range and associated time delays are set at 3 seconds.

*For SIL approval, see the desired Hazardous Area Certification.

Note: Metrix is continuously improving our products. Please refer to our website to download the latest version of this document.