

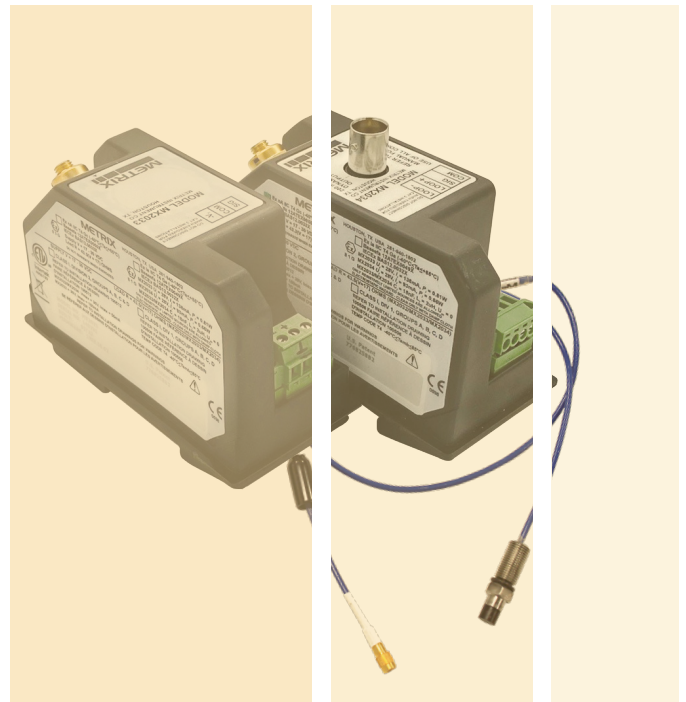


# DIGITAL PROXIMITY SYSTEM (DPS)

Any Probe  
(5mm, 8mm, 11mm)

Any Cable  
(<22m)

Any Material  
(Rotor)



**Field Configurable**  
**API 670 Compliant**  
**World class sales and support**

# Metrix Digital Proximity System (DPS)

Metrix is again revolutionizing the industry with our Digital Proximity System. Imagine being able to support a multitude of cable lengths, target materials and older probe systems with just a single device. Our new Digital Proximity System (DPS) combines the performance of a fully API 670 compliant eddy-current proximity measurement system with the flexibility of digital configurability. DPS saves our customers time and money.

## Full API 670 Compliance

The DPS was designed to fully comply with API 670 for linear range, interchangeability, standard probe mechanical configurations and all other details.

## Reduced Spare Parts Inventory

The DPS reduces the requirements for spare parts by allowing a single type of driver or transmitter to be field-configured for a wide range of probe types, cable lengths and target materials including 8mm ceramic and 11mm probe tips.

## Interchangeability

The New MX8030 triaxial probes and MX8031 triaxial extension cables with VibeLock™ connectors, as well as, MX2030 probes and MX2031 extension cables, are fully interchangeable with Bently Nevada<sup>1</sup> (BN) 3300 and 3300XL 5mm/8mm probe systems. This compatibility provides greater choice of suppliers without the need to replace installed probes, cables and drivers.

## Enhanced Phase Trigger and Speed Monitoring

One of the biggest uses of the DPS is to correct a faulty once per turn phase marker or speed system. Usually one has to shutdown the machine and open it up to determine the phase trigger issue. Times have changed, the DPS can be used to gain the scale factor to obtain an adequate pulse for the vibration monitoring system to detect, in order to report correct phase and speed values. This advanced speed adjustment feature is available with our free DPS software.

## Support for Older Probe Systems

Replacing a complete proximity transducer system can be expensive, and impractical when a machine must keep running and probes/cables are buried inside. DPS supports older probe systems, cable lengths, and target materials, using a single driver or transmitter. MX2033 drivers and MX2034 transmitters allow the user to change the configuration in the field for use with virtually any Metrix or BN proximity probe and cable.

## DPS Features

### Digitally Configure for:

- Different Common Shaft Materials
- Unknown Common Shaft Materials
- Trimmable System Lengths
- TightView™ for Limited Clearances
- Other Manufacturer's Probes and Cables
- Older Probes and Cables
- Field Configurable Changes
- No Cross Talk
- Configurable Spike Suppression
- Speed Pulse Adjustment
- 8mm Probe Extended Range



# The **DPS** is a 3-part system consisting of a **Probe Driver or Transmitter, Probe and Extension Cable.**

## **MX2033 (DRIVER) or MX2034 (TRANSMITTER)**

A driver or transmitter is available, depending on the required signal output format: MX2033, 3-Wire Driver and MX2034, 2 or 4-Wire 4-20 mA Transmitters. The models are fully compatible with a large variety of probes and cables from Metrix and other manufacturers.



### **MX2033 3-Wire Probe Driver:** Dynamic Voltage Output (mV/ $\mu$ m or mV/mil)

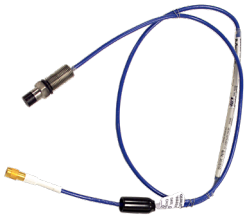
The MX2033 signal output is compatible with industry-standard continuous vibration monitoring systems and is in the format specified in API Standard 670. It uses -24Vdc excitation and provides the output signal in mV/ $\mu$ m (mV/mil), typically 7.87 mV/ $\mu$ m (200mV/mil).



### **MX2034 4-20 mA Transmitter:** 4-20 milliamp Current Output (mA/ $\mu$ m or mA/mil)

The MX2034 signal output provides **thrust, radial vibration, or shaft speed** measurements directly to PLCs, DCSs, SCADA systems, or other instrumentation that accepts an ISA-standard 4-20 mA signal, without the use of a separate monitor system. The 4-wire model also includes the raw signal that can be sent to a monitoring system. The transmitter is powered by +24 Vdc, supplied by the current loop. A short-circuit protected BNC connector provides convenient access to the raw vibration signal when connecting to signal analyzers, portable data collectors and test instrumentation.

## **PROBE SERIES MX8030 and MX2030**



**MX8030 probe series** consist of 5mm and 8mm tip diameter probes with VibeLock™\* Connectors and Triaxial Cables. The 8mm probe comes in a ceramic tip version used in harsh environments. These models are available with all standard thread sizes and body configurations required in API 670 Standard. Both probes offer a full 80 mil (2mm) range, and are designed to offer full API 670-compliant performance characteristics when used with a matching MX8031 extension cable and MX2033 driver. MX8030 probes are fully interchangeable with BN 3300 and 3300 XL 5mm/8mm probes. The MX8030 can also be used in an extended range mode where it can detect a full 160 mil (4mm) range.

**MX2030 probe series** is the same as the MX8030 series except it is used with a matching MX2031 extension cable and does not include VibeLock\* connectors or triaxial cables.












## **EXTENSION CABLE SERIES MX8031 AND MX2031**



**MX8031 extension cables** are available with and without protective armor and feature VibeLock™\* Connectors and Triaxial Cables. They are compatible with all Metrix MX8030 series 5mm & 8mm probe systems, and BN 3300 / 3300XL 5mm & 8mm probe systems.

**MX2031 extension cables** are the same as the MX8031 series except it is used with a matching MX2030 proximity probe and does not include VibeLock\* connectors or triaxial cables.

## HAZARDOUS AREA APPROVALS

AREA	PROBE/CABLE	DRIVER
North America	Class I, Div 1, Grps A,B,C,D -40°C to +177°C Intrinsically Safe and 	Class I, Div 1, Grps A,B,C,D, T4 -40°C ≤ Ta ≤ +85°C Intrinsically Safe (MX2034) 
	Intrinsically Safe and Non-Incendive	Class I, Div 2, Grps A,B,C,D, T4 -40°C ≤ Ta ≤ +85°C Non-Incendive (MX2034) 
International ATEX/IECEX  	 II 1G Ex ia IIC T3 Ga -40°C ≤ Ta ≤ +177°C  II 1G Ex ia IIC T4 Ga -40°C ≤ Ta ≤ +110°C Intrinsically Safe	 II 1G Ex ia IIC T4 Ga -40°C ≤ Ta ≤ +85°C Intrinsically Safe
	 II 3G Ex nA IIC T3 Gc -40°C ≤ Ta ≤ +177°C  II 3G Ex nA IIC T4 Gc -40°C ≤ Ta ≤ +110°C Non-Incendive	 II 3G Ex nA IIC T4 Gc -40°C ≤ Ta ≤ +85°C Non-Incendive

All Metrix proximity probes and cables fall under the 10,000 series.

## SAFETY INTEGRITY LEVEL

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.

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



MX8030/MX2030 SERIES COMPATIBILITY TABLE	
Series	System Length (m)
10000 & 7200	5 & 9
3300XL	5 & 9
3300 NSV	5 & 7
3000	15 & 20 feet

### Accessories

- MX8030 Probe
- MX8031 Extension cable
- MX2030 Probe
- MX2031 Extension cable
- 100527 DPS user label kit
- 9647 DIN to 4 hole flat base mounting adapter
- 5497PM Reverse Probe Mount
- 5499 Heavy Duty Proximity Probe Housing
- 9060 Static Calibrator
- MX2040 Dynamic Signal Checker

Visit our website for a full list of proximity accessories.



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