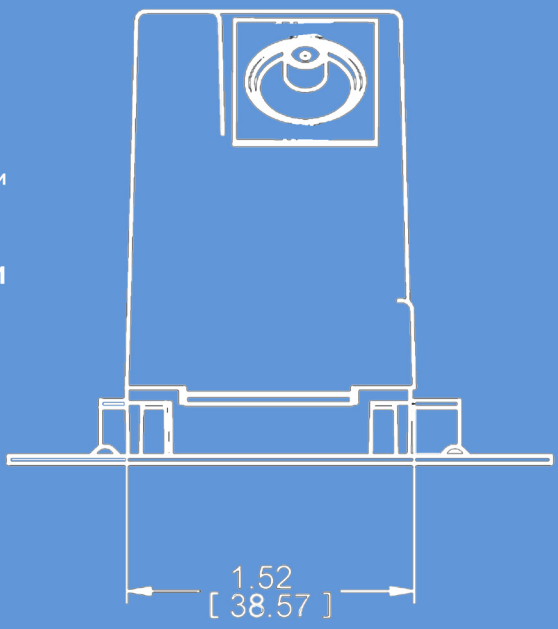
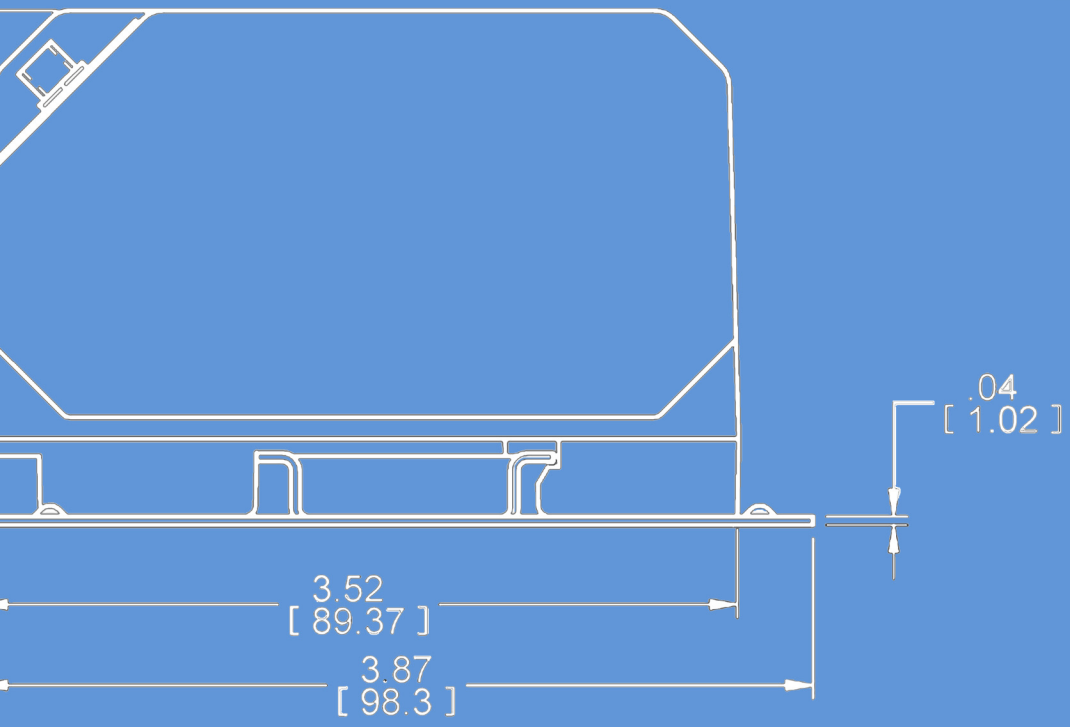
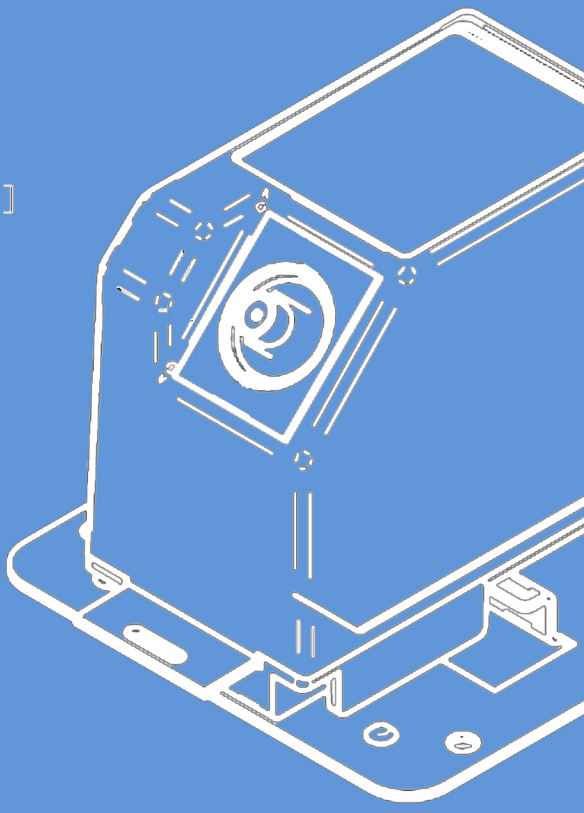
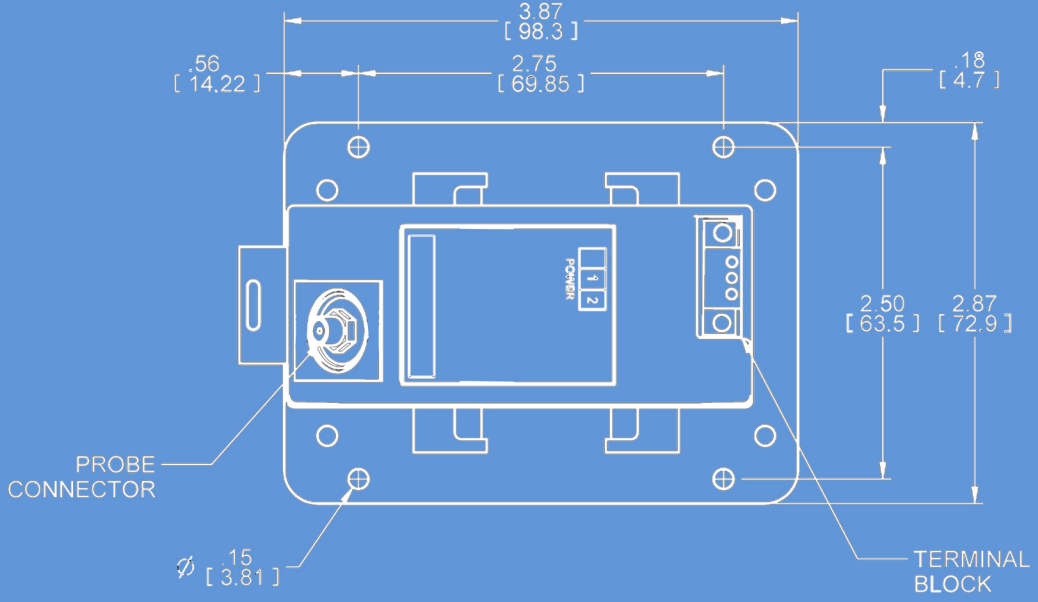
SETPOINT™

DIGITAL PROXIMITY TRANSDUCER SYSTEM









METRIX
Experience Value

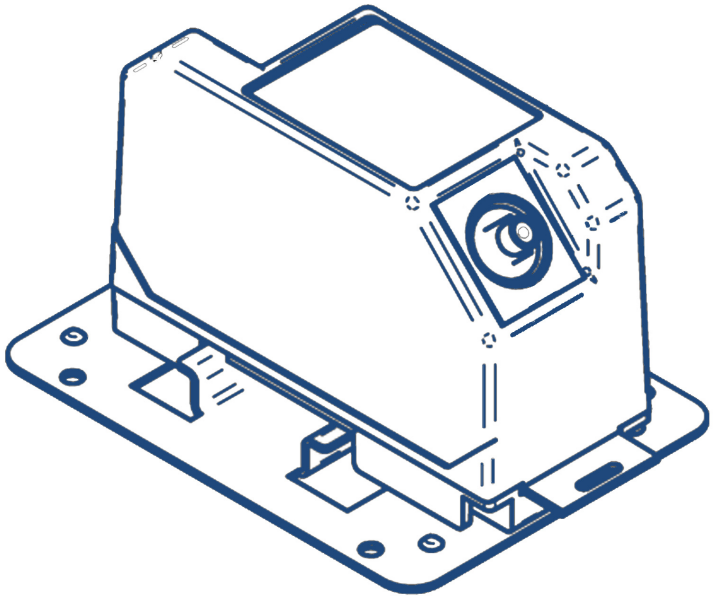
Revolutionary

SETPOINT™ DIGITAL PROXIMITY TRANSDUCER SYSTEM

That's the only way to describe our new SETPOINT™ digital proximity transducer system. Not only does its patented technology deliver the world's first digital proximity system, it also delivers this digital technology in both a conventional 3-wire version and a groundbreaking new 2-wire version. And did we mention that it fully complies with API 670? Or that it is compatible with all current and legacy Metrix™ and Bently Nevada™ proximity transducer systems? The SETPOINT digital proximity transducer system is what Metrix innovation is all about – giving you not just a **choice**, but an **advantage**.*

Digital = flexible

Imagine being able to stock just a single proximity system driver. No more worrying about 5M or 9M system lengths. No more worrying about matching your driver to probe tip diameters. The system can even learn special target material calibrations. Simply take a one-size-fits-all driver and download the appropriate response characteristics into its non-volatile RAM. After all, in an age where you can download firmware updates for just about everything else, isn't it time your proximity transducers moved into the 21st century? You can get there today with our SETPOINT digital proximity transducer system.



2 is better than 3

What's the big deal about one less wire? Cost, for starters. Not only does a 2-wire system use 33% less wiring, it represents 33% fewer connections in the critical path of your monitoring system, 33% fewer terminals to label, land, and test, and a 33% reduction in your cable bundle girths making them easier to pull.

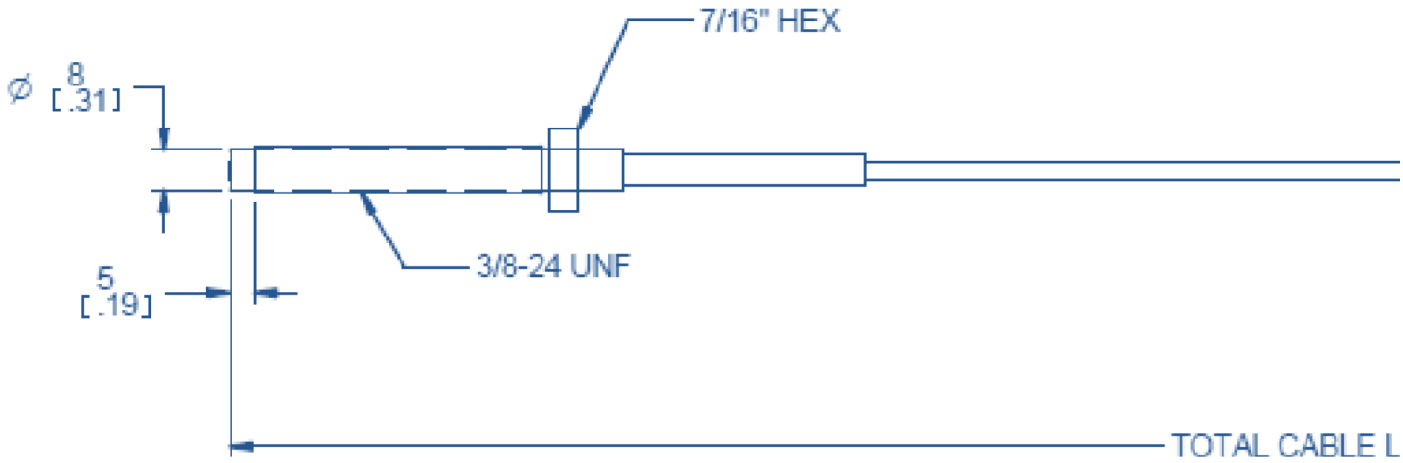
A 2-Wire system also provides dramatically improved immunity to EMI and RFI compared to a 3-wire system – and by dramatic, we're talking *40 times better*. What's more, it allows the use of ubiquitous and relatively inexpensive 2-wire I.S. barriers for hazardous area installations rather than the specialized, and more expensive, signal/power barriers required by conventional 3-wire systems.

Less cost, less hassle, and less susceptibility to problems – it all adds up to more value.

Need 3? No problem

Whether you need a conventional 3-wire voltage-mode device providing an API-compatible signal, or our innovative new 2-wire version providing a current-mode signal, the new SETPOINT digital proximity transducer system can deliver it. When used in conjunction with our new SETPOINT API 670 monitoring system, you can take advantage of all the benefits a 2-wire connection provides, or continue to use a 3-wire system — the monitor supports both.

* Digital drive technology: US patent 7768258.
2-WIRE technology: US patent applied for.



Experience innovation

The fundamental circuit designs inside a proximity probe system haven't changed much since originally described in the scientific literature of the 1930s. A coil of wire, an oscillator/demodulator, and some coaxial cable. While the original vacuum tube circuits gave way to solid-state designs in the late 1950s, they have remained inherently analog - until now.

At Metrix, we've been making proximity probe systems since 1965. While we understand the value that analog systems have provided over the years, we also understand their limitations. We weren't afraid to ask "what if?" It led us to pioneer the use of digital technology for proximity measurements – first in our TXR/TXA vibration transmitters – proving that digital technology was not only commercially viable, but technically superior. We then built on that pioneering work to extend the benefits of digital technology to a fully API 670-compliant proximity transducer system. The result is the Metrix SETPOINT digital proximity transducer – the world's first digital system and the world's first system to support both 2-wire and 3-wire connectivity.

Experience quality

Robustness in a proximity probe system is simply non-optional. We know the conditions you face in the field. Extremes of heat and cold – from the inside of a gas turbine to the outside of a cryogenic expander. Hydrocarbons. Lubricating oil. Moisture. Physical abuse from stray wrenches and boots. We also understand that probes are often buried inside the machine and may be difficult or impossible to access while the machine is running. With more and more machines moving toward turnarounds that are 3 years, 5 years, or even longer, your probes need to go the distance so that your machinery can go the distance.

The SETPOINT digital proximity transducer system delivers the quality you need with the most robust, technically advanced offering in the industry. It's quality you can truly rely on.

Experience value

While the SETPOINT digital proximity transducer system provides state-of-the-art technology, full compliance to industry standards, and is backed by more than 40 years of engineering know-how, it also provides something else we're very proud of: *value*.

Value because it's compatible with virtually every installed proximity system in your plant, dramatically reducing your spare parts requirements. Value because it's so easily configurable, saving time and money. Value because it reduces wiring and installation costs. Value because it delivers unsurpassed performance. And value because all this capability comes at a very attractive price. Not only is the SETPOINT digital proximity transducer system ideal for new installations where its cost-saving 2-wire capabilities can be fully realized, it's also ideal for existing installations, particularly those using older proximity probe technology where prices for replacement parts may be extremely expensive. The SETPOINT system's innovative digital technology allows you to now stock a highly affordable driver that works with virtually all of your probe systems, whether new or old.

Selected Specifications

COMPATIBILITY*

Sensor Input: Accepts one non-contacting probe and extension cable from the following product families:

- Metrix SETPOINT series
- Metrix 3300 series (XL, RAM, NSv™, and std)
- Metrix 10000 series
- Metrix 3000 series
- Bently Nevada™ 3300 series (XL, RAM, NSv, and std)
- Bently Nevada™ 7200 series (5mm, 8mm, 11mm)
- Bently Nevada™ 3000 series

* Compatibility with other systems, such as extended range proximity probes, will be made available upon request and following initial product release for the API 670 market.

PERFORMANCE

When the SETPOINT driver is used with Metrix SETPOINT series probes and extension cables, the system fully complies with API Standard 670.

When the SETPOINT driver is used with other series probes and extension cables, it will provide performance comparable* to the system's published specifications when used with its conventional analog driver.

*When SETPOINT transducer system components are mixed with other suppliers' components, performance will usually meet or exceed the compatible system's specifications. However, due to potential statistical variances in other manufacturers' components, and of which Metrix is unaware, there may be small changes in offsets and linearity that exceed the published specifications. When known, these differences can be compensated in the field using the system's programmable capabilities.

PHYSICAL

Driver: 35mm DIN rail and 4-hole flat base mounting options available.

Probe: 5mm and 8mm probe tip diameters available in both forward and reverse-mount case styles. Metric and English threads available per API 670 requirements.

Extension cable: 4.0, 4.5, 8.0, and 8.5 meter lengths available; armored and non-armored. Others upon request.

APPROVALS (pending)

CE: Complies with the European CE mark

CSA: Class 1, Div 2, Groups A-D (non-incendive)
Class 1, Div 1, Groups A-D (when used with appropriate I.S. barrier)

ATEX: II 1 G EEx ia IIC T4/T5
(T5 @ -35C<Ta<+85C, T4 @ -51C<Ta<+100C)
II 3 G EEx nA IIA-C T4/T5
(T5 @ -35C<Ta<+85C, T4 @ -51C<Ta<+100C)

TARGET MATERIAL CALIBRATION

The SETPOINT driver is calibrated to a reference target of AISI 4140 steel per API 670. Other material calibrations are available upon request and will become part of the inventory of available curves. For certain materials, Metrix may request that the customer supply a target block for use in our reference laboratory.

Product Availability

Quotations for the SETPOINT transducer system are available now. Contact your nearest Metrix representative or our factory in Houston. To find the location nearest you, visit www.metrixvibration.com and click on "find local rep."

Production release for the SETPOINT transducer system is March 30, 2011, with first shipments available in 2Q2011.

METRIX
Experience Value

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