PROXIMITY PROBE SYSTEMS

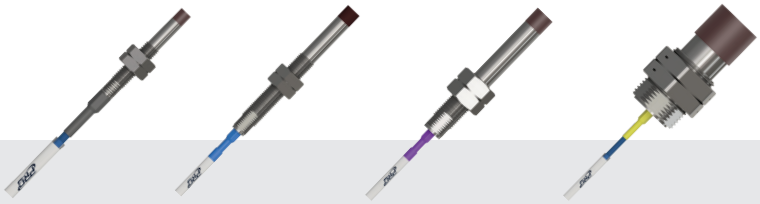
PROTECTION & RELIABILITY INSTRUMENTS

PROXIMITY PROBE SYSTEMS OVERVIEW

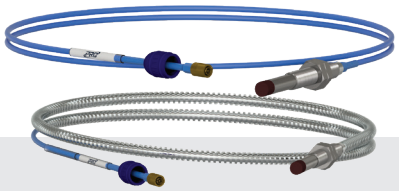
WHAT WE OFFER

CTC offers a complete line of proximity probe solutions designed, built, and tested to endure prolonged use in the harshest industrial environments. PRO Line proximity probe sets are available in standard and hazardous-area approved FFV™, 8 mm, 11 mm, and 25 mm systems. The variety of probe sizes offered allows for accurate and precise machinery measurements for applications involving radial dynamic, axial rotor position, 4-20 mA, and precise displacement readings that can measure both dynamic vibration or the static position of a conductive material for radial or axial applications. Complete PRO proximity probe systems are compatible with all standard condition monitoring software and machine protection systems, including Bently Nevada™ racks and software.

Probe Options



FFV™, 8 mm, 11 mm, and 25 mm Probe Tips



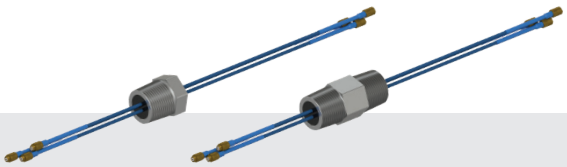
Standard & Armor Jacketed Probes

Driver Options

FFV™, 8 mm, 11 mm, and 25 mm Drivers

Extension Cable Options

Standard & Armor Jacketed Extension Cables

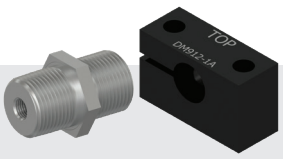


Single & Double-Sided NPT Fittings

Proximity Probe Accessories

Enclosures

Reverse Mount Housings



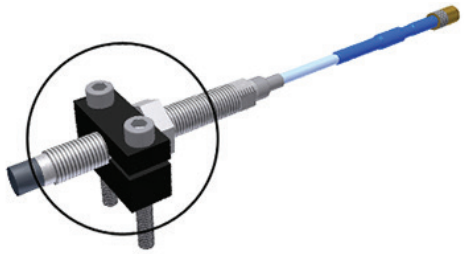
Mounting Bushings & Blocks

PROXIMITY PROBE MOUNTING OPTIONS

There are three primary ways to mount proximity probes:

1 Internal Mounting

Internal mounting refers to the mounting of proximity probes, also known as eddy current probes, completely inside the machine or bearing housing with PRO Line DM902 series brackets (or with custom manufactured brackets). Internal mounting allows the probe to measure the shaft surface, minimizes installation costs, and offers very precise measurement of the shaft position and vibration.



2 Through Mounting

Through mounting, also known as 'internal / external' mounting, is where the probe is mounted through the bearing casing using a mounting adapter bushing like PRO Line DM901 and DM903, and the casing is counter-bored to prevent the probe from side sensing or providing false readings from the bearing housing. This allows external access to the probe while also allowing the probe tip to be internal to the bearing housing or machine.

3 Reverse Mount Housing

External proximity probe mounting is typically used when other methods are not available. Special care must be given to the quality of the shaft surface, and mechanical protection of the exposed probes and cables is required. This method offers easy access to the probes and low installation costs. However, exposed areas of the shaft may experience scuffing, scratching, or rust which limits the measurement quality of the probes.

PRO LINE HIGHLIGHTS

PRO Line Proximity Probes offer you industry-leading quality and the best selection of hardware on the market. See why customers choose PRO Line products time and time again:

Industry's Best Lead Times

Enhanced Durability

- AISI 316L stainless steel probe case
- IP68 rated
- Aluminum driver case design ensures robust driver mounting

Driver Calibration Options for a Variety of Target Materials

- AL7075-T6 aluminum alloy
- 360 brass alloy
- 4140 steel
- 1045 carbon steel
- 200 nickel
- 17-4 stainless steel
- 304 stainless steel
- 316L stainless steel
- 420 stainless steel
- 410 stainless steel

Comprehensive Offerings

- FFV™, 8 mm, 11 mm, and 25 mm options
- Variety of thread sizes
- Intrinsically safe offerings
- Mounting hardware, enclosures and drivers available to complete your system

Built to Last. Protected for Life.

PRO Line products are the industry's best quality and are backed by an industry-leading warranty.

COMPETITIVE COMPARISON - PROBES

Feature	PRO Line Probes	Competitor's Probes
Warranty	**Lifetime warranty on materials and workmanship**	*Three year limited warranty*
Lead Time	**Weeks**	*Months*
API 670 Compliant	**Yes**	*Yes*
Probe Case Material	**AISI 316L stainless steel**	*AISI 304 stainless steel*
Probe Tip Rating	**IP68**	*Specialty probes needed*
Probe Tip Pressure Rating	**Viton™ O-ring tested at 100 psi**	*Sealing material consists of a Viton™ O-ring*
Cable Jacket	**Thicker cable jacket for increased durability when pulling through conduit**	*Tears through when pulling through conduit*
Reverse Mount FFv™ Probe Options	**1/4-24 thread, M8x1 thread, 3/8-24 thread, M10x1 thread**	*3/8-24 thread, M10x1 thread*
Temperature Ratings	**51 to 177 °C (-60 to 350 °F)**	*51 to 177 °C (-60 to 350 °F)*
Linear Range 5 mm (FFv™)	**10 - 70 mils (60 mils)**	*10 - 70 mils (60 mils)*
Linear Range 8 mm	**10 - 90 mils (80 mils)**	*10 - 90 mils (80 mils)*
Linear Range 11 mm	**20 - 180 mils (160 mils)**	*20 - 180 mils (160 mils)*
Recommended Gap 5 mm FFv™ Probe	**40 mils**	*40 mils*
Recommended Gap 8 mm Probe	**50 mils**	*50 mils*
Recommended Gap 11 mm Probe	**100 mils**	*100 mils*

COMPETITIVE COMPARISON - DRIVERS

Feature	PRO Line Drivers	Competitor's Drivers
Warranty	**Lifetime warranty on materials and workmanship**	*Three year limited warranty*
Lead Time	**Weeks**	*Months*
API 670 Compliant	**Yes**	*Yes*
Driver Outputs	**BNC isolated output and terminal block**	*Terminal block*
Driver Input Connections	**Four position, screw clamp, pluggable terminal block**	*Spring cage connections*
4-20 mA Gap Driver	**FFV™, 8 mm, 11 mm, 25 mm**	*Not available*
4-20 mA Radial and Axial Driver	**FFv™, 8 mm, 11 mm, 25 mm**	*Probes only*
Robust Driver Mounting	**Aluminum mounting hardware**	*Plastic mounting hardware*
Material Specifications	**Standard offerings of: AL7075-T6 aluminum alloy 360 brass alloy 4140 steel 1045 carbon steel 17-4 stainless steel 304 stainless steel 316L stainless steel 420 stainless steel 410 stainless steel**	*4140 stainless steel*
4-20 mA Radiated Immunity* * tested frequencies of 103 MHz - 180 MHz	**Maximum increase of 3.13% of 16 mA current range**	*Maximum increase of 54.38% of 16 mA current range*
Temperature Ratings	**51 to 177 °C (-60 to 350 °F)**	*51 to 177 °C (-60 to 350 °F)*
Frequency Response 5 mm	**0 - 10 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring**	*0 - 10 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring*
Frequency Response 8 mm	**0 - 10 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring**	*0 - 10 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring*
Frequency Response 11 mm	**0 - 10 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring**	*0 - 8 kHz: +0, -3 dB typical with up to 1000 ft. of field wiring*