



"Your Direct Source for Condition Monitoring, Test & Measurement"

www.reliabilitydirectstore.com

2911 South Shore Blvd, Suite 170, League City, TX USA 77573 Phone: 281-957-5283 Fax: 281-334-4255

MT-190 Magnetic Trigger Sensor with Amplifier



SPECIFICATIONS:

Speed Range:	1-99,999 RPM
Operating Distance:	0.25" [6.35 mm] gap from target
Minimum Target Size:	0.106" [2.692 mm] minimum diameter
Power required:	3.3 to 24 Vdc, 4 mA
Output Signal:	Same as power supplied, TTL compatible with 5 Vdc supplied
Operating Temperature:	-100° to 225° F [-73° to 107° C]
Standard Cable Length:	Magnetic Sensor - 8 feet [2.438 m], Amplifier - 1.5 feet [0.457 m]
Dimensions:	2.0" (L) x 0.625" [50.8 x 15.875 mm]
Weight:	6.4 oz [181 g]

Specifications are subject to change without notice.

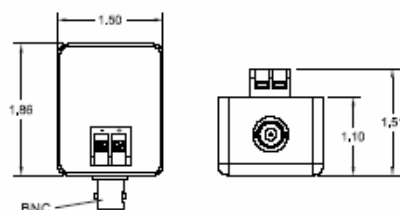


Figure 1 Amplifier Module Dimensions



MT-190P Magnetic Trigger Sensor/Amplifier with plug

OVERVIEW:

The MT-190 Magnetic Trigger Sensor has an Amplifier Module that enhances the performance of the M-190W Magnetic Sensor. The Amplifier extends the operating gap to 0.25 inches [6.35 mm] from the ferrous target. The MT-190 Magnetic Trigger Sensor with Amplifier can sense gear teeth, bolt heads or shaft keys. The MT-190 provides a pulsed output signal and is TTL compatible with 5 Vdc supplied.

The MT-190 has an 8 foot [2.438 m] cable with 3 tinned wires (MT-190W) or 1/8 [3.5 mm] phone plug (MT-190P) termination.

The MT-190W is compatible with all Monarch ACT Series panel tachometers. The MT-190W can also be powered by 3.3-24 Vdc to output pulses to a user's data acquisition system.

The MT-190P is compatible with the following Monarch instruments: Tach-4AR, Nova-Strobe DB Plus, Nova-Strobe DA Plus, Phaser-Strobe, Self-Contained DA Plus SC, and SPS-5.

CONNECTION DETAIL:

The Magnetic Sensor must be connected to the Magnetic Trigger Amplifier Module. Refer to Figure 2A for connection detail.

When using the MT-190W with an ACT-2A, ACT-3A, or ACT-3, refer to Figure 2B for sensor connection detail.

When using the MT-190W with an ACT-1B, refer to Figure 2C for sensor connection detail.

When using the MT-190P with any Monarch instrument, plug the 1/8 [3.5 mm] phone plug into the input jack on the respective instrument.

When using the Amplifier Module with the GE-200 Gasoline Engine Sensor, the 15 foot [4.572 m] MX-005 cable is connected to the OM-200 sensor and then the BNC end of the MX-005 cable is connected to the BNC connector on the Magnetic Trigger Amplifier Module.

OPERATION:

Magnetic sensors convert motion of a ferrous target into an AC voltage output proportional to speed. The Amplifier Module converts the signal to pulses. The target must not be smaller than the magnetic pole piece (0.106 inches, 2.692 mm) or larger than the diameter of the sensor (0.625 inches, 15.875 mm). Gear teeth are preferred, but bolt heads, slots or keys also work. The Monarch ACT Series panel tachometers will typically operate from all 2-wire design magnetic sensors. The stainless steel and waterproof housing of the M-190W sensor allow operation in harsh locations. The user can increase the cable length up to a total of 500 feet [152.4 m] in length.

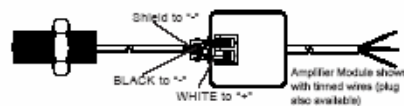


Figure 2A

Magnetic Sensor to Amplifier Connection Detail

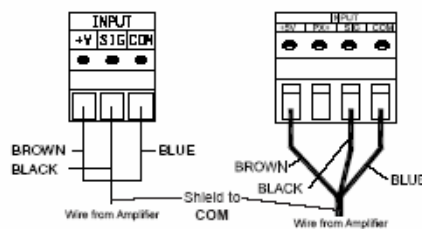


Figure 2B

Amplifier to ACT-2A/3/3A Connection Detail

Figure 2C

Amplifier to ACT-1B Connection Detail

RELIABILITY DIRECT, INC.

2911 S. Shore Blvd., Suite 170 League City, TX USA 77573 Tel: 281.957.9283 Fax: 281.334.4255

