

MT-190 Magnetic Amplifier Module



SPECIFICATIONS:

Power required:	3.3 to 12 Vdc, 15 mA
Operating Distance:	extended to 0.25" [6.35 mm] gap from target
Output Signal:	Same as power supplied, TTL compatible with 5 Vdc supplied
Operating Temperature:	20° to 160° F [-6° to 70° C]
Standard Cable Length:	1.5 feet [0.457 m]
Dimensions:	2.65" (L) x 1.38" x 1.05" [67.3 x 35.0 x 26.7 mm]
Weight:	1.728 oz. [48.988 g]
Specifications are subject to change without notice.	

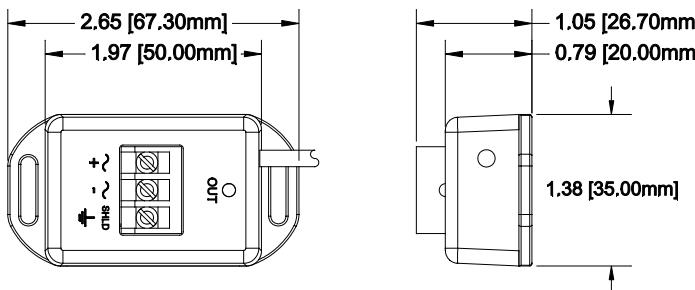
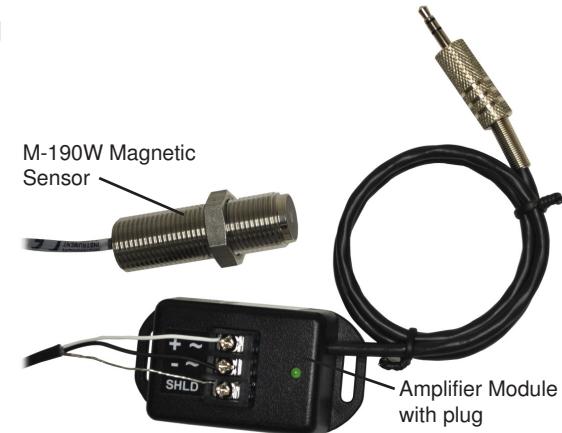


Figure 1 Amplifier Module Dimensions



MT-190P Magnetic Trigger Sensor/Amplifier with plug

OVERVIEW:

The MT-190 Magnetic Amplifier Module enhances the performance of the M-190W Magnetic Sensor (see other side). The Amplifier extends the operating gap for the sensor 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 M-190W Magnetic Sensor is combined with an Amplifier Module to become an MT-190P or MT-190W. The Amplifier Module has an 8 foot [2.438 m] cable with 3 tinned wires and a ground shield (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 and Data-Chart 1250 Paperless Recorders.

The MT-190P is compatible with the following Monarch instruments: Pocket Laser Tachometer 200 (PLT200), SPSR Self-Powered Sensor, Deluxe Nova-Strobes (dax, dbx, DBL) and Phaser-Strobes (pbx, PBL).

The MT-190W and MT-190P can also output pulses to a user's data acquisition system.

CONNECTION DETAIL:

The Magnetic Sensor must be connected to the Magnetic Trigger Amplifier Module. Refer to Figure 2 for connection detail. The connection details for the Amplifier Module are shown below Figure 2.

When using the MT-190W with any Monarch instrument, refer to the instrument instruction manual 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.

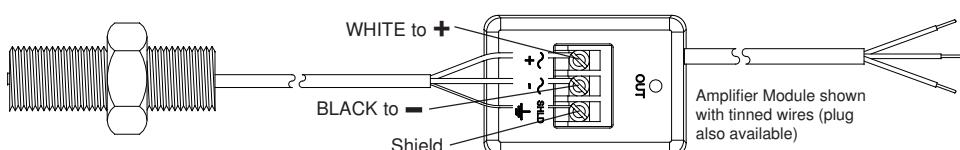
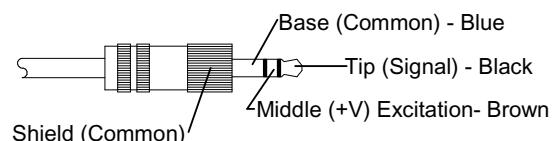


Figure 2 Magnetic Sensor to Amplifier Connection Detail

Connection Detail for Amplifier Tinned Wires:

Wire Color	Function	
Brown	Positive Power Supply	(+V)
Blue	Common	(Com)
Black	Signal (+V to 0 Vdc Pulse)	(Sig)
Shield	Sensor Shield	(Com)

Connection Detail for Amplifier Plug:



OPERATION:

Magnetic sensors convert motion of a ferrous target into an AC voltage output proportional to speed. The Amplifier Module amplifies the signal and converts it to square wave pulses. The target must not be smaller than the magnetic poll 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.