

# Temposonics®

Magnetostrictive Linear-Position Sensors



M-Series  
Analog / PWM Test Kit

## Product Specification

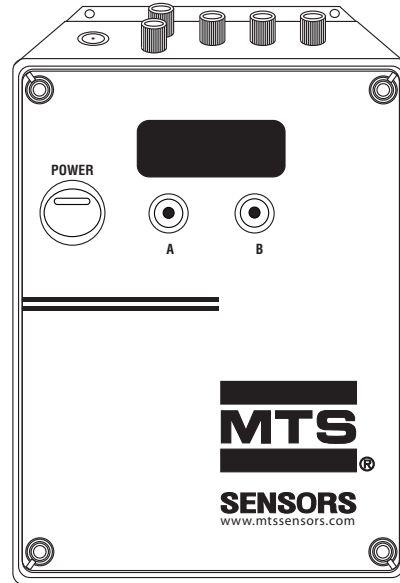
551139 A

### FEATURES:

- Easy connection to MTS' M12 integrated connector system
- Easy to use push-button controls
- Supports voltage (0-10 Vdc) and current (0-20 mA) outputs
- Supports scaled PWM and time of flight (tOF) PWM outputs
- Compact construction for use in field applications
- Provides both +5 Vdc and +12 Vdc sensor power supply
- Sealed lead acid battery that provides up to 8 hours of operation per charge
- Battery level monitoring
- Automatic detection of PWM sensor frequency
- Carrying case

### BENEFITS:

- Isolates sensor from vehicle system to independently determine functionality of the sensor
- Designed for use in both factory and in-field applications



M-Series Analog / PWM Tester

### Product overview

There exists a strong need in the off-highway market to quickly verify the functionality of an embedded sensor application throughout the supply chain. Sensor manufacturer's have sophisticated equipment to test, program, calibrate and verify that each sensor meets specifications. Once the sensor leaves the factory, verification of functionality throughout the supply chain can become more difficult. In many situations, without direct knowledge of how to connect a volt meter, current meter, or oscilloscope to the sensor verifying functionality can become a daunting task.

Functional verification is required because it is possible for the sensor to be exposed to potentially damaging situations during the hydraulic cylinder assembly process. As a result, many cylinder manufacturers prefer a way to verify functionality after the cylinder is assembled.

Additionally, equipment OEM's require the ability to verify sensor functionality and troubleshoot their equipment, both at the factory and in the field.

MTS Sensors Division developed the portable Analog / PWM Test Kit to provide direct feedback from M-Series Analog / PWM sensors.

The M-Series Analog / PWM Tester supports M-Series sensors with analog, 0-20 mA and 0-10 Vdc, scaled Pulse Width Modulated (PWM), and PWM time of flight (tOF) sensor outputs. With its rechargeable battery, the M-Series Tester can provide power directly to the sensor thus isolating the sensor from the rest of the vehicle.

This is useful in situations where a vehicle harness could be mis-wired or there could be an error in the software that makes the sensor appear to be malfunctioning. By isolating the sensor the operator can quickly determine if the sensor is functioning or not. This eliminates time wasted on replacing a functioning sensor.

Whether in the factory or in the field the M-Series Analog / PWM Tester can be quickly attached to the sensor under test by using one of two cables included in the kit. The first test cable comes with a M12 plug, that mates with MTS' M12 Integrated Connector System, and color coded banana plugs that mate with the terminals of the tester. The second cable is a simple pigtail cable with color coded banana plugs that allows the cable to be customized to other connector systems that may be in use.

All specifications are subject to change. Contact MTS for specifications and engineering drawings that are critical to your application. Drawings contained in this document are for reference only. Go to [www.mtssensors.com](http://www.mtssensors.com) for the latest support documentation.

## How to order

### Test kits are available in three AC outlet variations:

- North America
- European Union
- United Kingdom

### A test kit includes:

- M-Series Analog / PWM Tester
- M12 cable
- Pigtail cable
- 12 Vdc SLA charger with adapter
- Wrist Strap
- User's Guide (*part no. 551132*)
- Quick Start instruction label
- Carrying case

### M-Series Analog / PWM Test Kit variations:

To order a test kit, use the table below to choose the appropriate part number for your outlet configuration. Additional power adapters are available for purchase (*see Accessories*):

Description	Part no.
M-Series Analog / PWM Test Kit / Power Plug Adapter, <i>North America</i>	253871-1
M-Series Analog / PWM Test Kit / Power Plug Adapter, <i>European Union</i>	253871-2
M-Series Analog / PWM Test Kit / Power Plug Adapter, <i>United Kingdom</i>	253871-3

## Accessories

Description	Part no.
Power Plug Adapter, <i>North America</i>	370573
Power Plug Adapter, <i>European Union</i>	370572
Power Plug Adapter, <i>United Kingdom</i>	370574



National  
**FLUID POWER**  
Association®  
MEMBER

Part Number: 10-08 551139 Revision A

MTS and Temposonics, and are registered trademarks of MTS Systems Corporation.

All other trademarks are the property of their respective owners.

All Temposonics sensors are covered by US patent number 5,545,984. Additional patents are pending.  
Printed in USA. Copyright © 2008 MTS Systems Corporation. All Rights Reserved in all media.



**SENSORS**

#### UNITED STATES MTS Systems Corporation Sensors Division

3001 Sheldon Drive  
Cary, NC 27513  
Tel: (800) 633-7609  
Fax: (919) 677-0200  
(800) 498-4442  
www.mtssensors.com  
sensorsinfo@mts.com

#### GERMANY MTS Sensor Technologie GmbH & Co. KG

Auf dem Schüffel 9  
D - 58513 Lüdenscheid  
Tel: +49 / 23 51 / 95 87-0  
Fax: +49 / 23 51 / 56 491  
www.mtssensor.de  
info@mtssensor.de

#### JAPAN MTS Sensors Technology Corporation

737 Aihara-cho, Machida-shi  
Tokyo 194-0211, Japan  
Tel: +81 (42) 775 / 3838  
Fax: +81 (42) 775 / 5516  
www.mtssensor.co.jp  
info@mtssensor.co.jp