

M2 Wireless™ Monitoring System



Features

- Fully-configurable monitoring system.
- Gateway supports 30 remotes
- Applications include new packages, re-furnished packages, retrofits, etc.
- User configurable with Windows®-based software
- No programming experience required.
- Upload/Download capabilities for configurations and set points
- Eliminates switch wiring back to control panel
- Eliminates thermocouple wiring back to control panel
- Eliminates the costly conduit runs back to control panel
- Configurations stored in a non-volatile FRAM memory. (Gateway)
- Setpoints stored in non-volatile EEPROM memory. (Remotes)
- Approved CSA Certification for Class 1, Division2, Groups B,C,&D areas
- Approved FCC and Industry Canada Certifications for 900 MHz ISM band (10mW)
- Approved for use in United States and Canada

The M2 Wireless Monitoring System is a simple and unique system. The M2 Wireless system is well suited for many control applications. Configured via Modbus RS485 network, users can utilize Murphy's MConfig software, 3rd party Modbus software, and/or configured using programmable logic controllers. When used in a control system designed by Murphy, the Gateway, remotes and controller are defined and functioning to meet exact specifications for a variety of applications.

The Gateway (HUB) of the system continuously monitors input signals from remotes via an RF network. Digital Remotes are monitored via a switch to determine fault. Set points for Thermocouple Remotes are monitored in the remote. When an out-of-limits event occurs, the remotes will provide signals back to the Gateway. The system controller will read this data from the Gateway, the controller will then stop, shutdown or control equipment to change conditions.

The M2 Wireless system provides NEAR real-time data via a communication port to a connected control system. This advanced system offers multiple options for remote placement of en-devices deemed too costly to run conduit or prohibited by laws. (Example: crossing under a roadway with conduit). The industry standard Modbus® RTU protocol means greater support for a wide variety of communication equipment including radio and satellite communications systems.

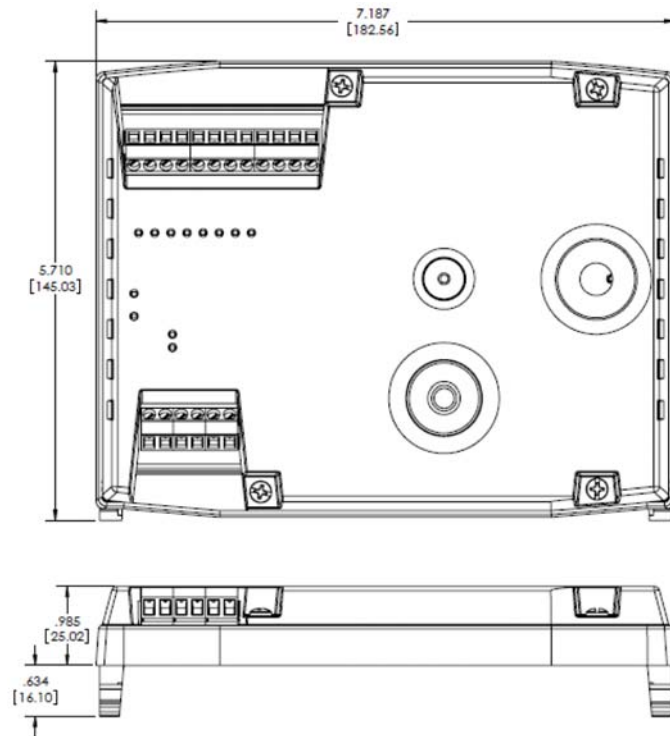
Basic Components

The M2 Wireless Monitoring System typically consists of a Gateway, 17 Digital Remotes and 7 Thermocouple remotes. No special cables are required. The Gateway is designed for use within a weatherproof enclosure only. The remotes are approved and designed in a CSA approved enclosure for indoor and outdoor usage.

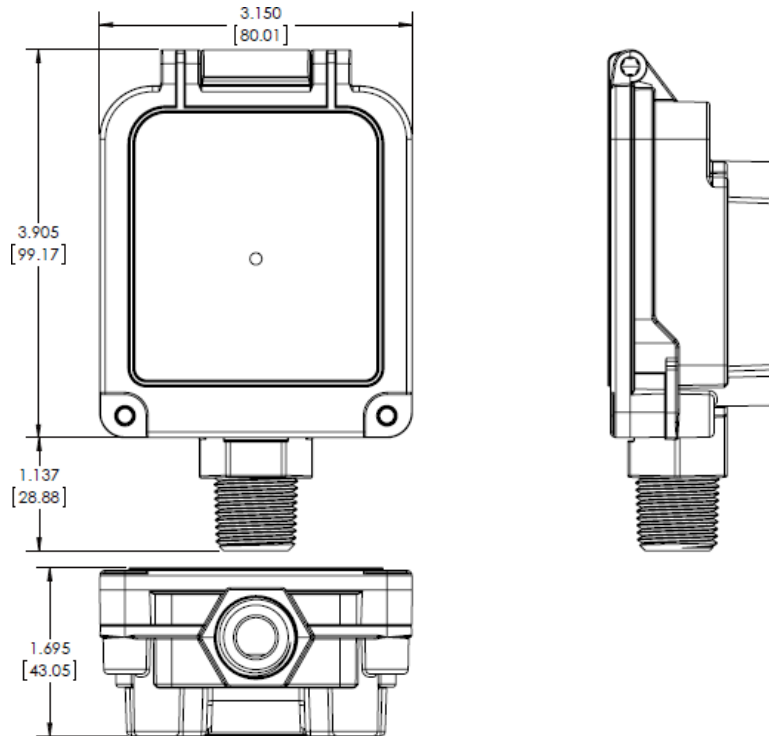
- Gateway: M2-G-XX: System Monitor
 - Digital Remote: M2-DI: 1DI (N.O. or N.C)
 - Thermocouple Remote: M2-TC, 1TC (Type J or K)
- DI=Digital Input ; TC=Thermocouple Input

Dimensions

Gateway



Remote



Specifications

M2-G-XX Gateway:

Operating Temperature: -40 to +85°C (185°F).

Power Input: 10-30VDC, 1W typical, 1.1W (max)

One (1) DC Digital Input: NO, (active low), non-incendive.
(Gateway Reset)

Nine (9) Outputs:

- Eight (8) FET Outputs (non-latching, sink)
- One (1) Relay Output, form C, dry contact (latching)

1 Serial Port: Software configurable

- MODbus Slave RS485

900 MHz RF Output power setting 10mw, FCC approved

Range: 10mW 250ft with line of sight and low noise

M2-DI

Power Requirements:

- One (1) Lithium, 3.6VDC AA" battery, 120mW
- Battery Life 3 years (typical) @25°C (77°F) – normally closed input
- Battery Life 5 years (typical) @25°C (77°F) – normally open input

How to Order

Selecting a M2 Wireless Monitoring System

1. Specify **M2-G-XX** Gateway (50702321)
2. Specify **Remotes** necessary for application
 - **M2-DI** Digital Input Remote (50702322)
 - **M2-TC** Thermocouple Input Remote (50702323)

Accessories

Configuration Software

MurphyNET Configuration Suite - MConfig™ configuration tool for modifying wireless system, set points, timers and faults. Includes file transfer utilities for configuration upgrades. Free download from www.fwmurphy.com/software/.

Replacement Parts and Assemblies

M2 Wireless Antenna Kit	(53000011)	Replacement antenna and bulkhead
M2 Wireless Remote Antenna Kit	(53702324)	External remote mounted antenna bracket and cable
M2 Wireless PC Interface Kit	(53702325)	USB to RS485 converter and cable
M2 Wireless Remote Battery	(00031384)	Replacement Lithium 3.6VDC, AA battery

RJ Mann & Associates Inc.

Engine Controls & Panels/Compressor Parts

860 North 9th Avenue, Brighton, CO 80603

Ph: (303) 659-5139 Fax: (303) 659-5309

www.rjmann.com

Warranty - A limited warranty on materials and workmanship is given with this FW Murphy product.
A copy of the warranty may be viewed or printed by going to <http://www.fwmurphy.com/warranty>

One (1) DC Digital Input: NO or NC, (active low), non-incendive

LED indication

Connect to dry contact switch only

Enclosure: CSA approved enclosure for indoor and outdoor use. See Remote insert for enclosure certification.

M2-TC

Power Requirements:

- Two (2) Lithium, 3.6VDC "AA" batteries, 120mW (max)
- Battery Life 4 years typical@25°C (77°F) - 15 second pole rate

One (1) Thermocouple Input: Configurable type J or K.

- LED indicators

Connect to **ungrounded** thermocouples only

Built-in cold junction compensation

Enclosure: CSA approved enclosure for indoor and outdoor use. See Remote insert for enclosure certification. ± 5°C (4°F) – -128°C (-200°F) to 648/1093°C (1200/2000°F) Type J or K thermocouples.