

## Protection Relays

### Remote Indication and Monitoring

# RM1000 SERIES

## Remote Monitor

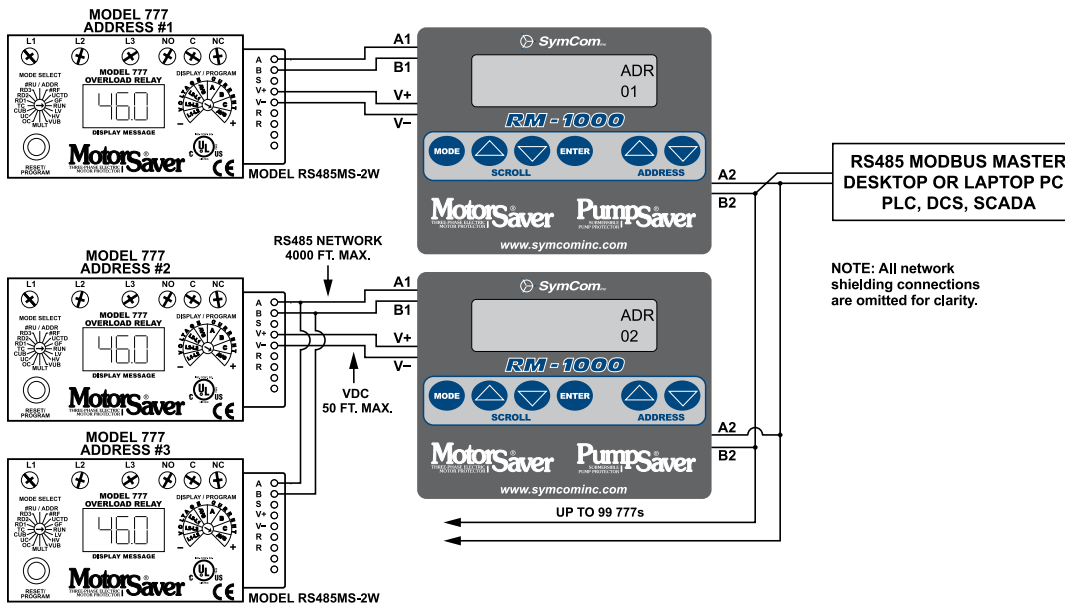


## Description

The RM-1000 Series is a motor-monitoring device to be used in conjunction with the 777 family of products (excluding the P1 Series), 77C family of products and the 601 voltage monitors, via Modbus protocol with a communications module. The RM-1000/777 motor management system combines unsurpassed electronic motor protection and critical, user-friendly, motor monitoring.

The RM1000 Series can monitor up to 16 MotorSaver® and/or PumpSaver® units through an RS-485 network using Modbus RTU protocol. A second communication port allows monitoring and control of up to 99 MotorSaver® and/or PumpSaver® units from a computer, PLC, DCS or SCADA system and can be accessed from the host computer or PLC with the RM1000 acting as a repeater for any of its motor protectors. In addition to the monitoring functions, the RM-1000 can be used to reset a tripped MotorSaver® or PumpSaver®.

## Wiring Diagram



## Ordering Information

MODEL	DESCRIPTION
RM1000	NEMA 3R and/or UL Type 12
RM1000-3R	NEMA 3R
RM1000 NEMA 4	NEMA 4X

The RM1000 Series is easily mounted remotely and improves safety for service and operations personnel by allowing them to control and monitor the device without opening the electrical cabinet. Using the RM1000 is a simple, cost-effective method for aiding compliance with arc flash safety regulations. The enclosure and keypad assembly is water and ultraviolet light resistant. The enclosure is NEMA 3R or NEMA 4X (optional) rated. The RM1000 and RM1000 NEMA 4 also carry a UL Type 12 rating, whereas the RM-1000-3R does not carry the UL Type 12 rating due to added weep holes. The added weep holes in the RM1000-3R make it suitable for applications subjected to condensing moisture/humidity.

## RM1000 SERIES

### Features

Displays:

- Individual line currents and average current
- Current and voltage unbalance
- Individual phase voltages and average voltage
- Displays last four faults, trip reason, and restart timer status
- MotorSaver® and/or PumpSaver® setpoints
- Run-hours on each motor
- Warning of pending (imminent) faults

Controls:

- Reset run-hour meter
- Reset MotorSaver® or PumpSaver®
- Change setpoints from the RM1000

Convenience:

- Power from RS485MS-2W communications module
- Monitor up to 16 777s with one display
- NEMA 3R outdoor rated
- Secondary steel enclosure available

### Accessories



#### RS485-RS232 Converter with cable & plug

Allows RS485 devices to be connected to a PC via the RS232 (serial) port. Provides convenient terminal blocks for making signal and DC power supply connections. Pre-wired.



#### RS485-USB

##### Converter with cable & plug/RS232:USB

Allows RS485 devices to be connected to a PC via the USB port. Provides convenient terminal blocks for making signal and DC power supply connections. Pre-wired.



#### RM1000 ENCL

Steel enclosure for protecting the RM-1000 remote communications monitor from adverse affects of weather and vandalism, while allowing normal communications connections to the RM-1000 unit.



#### Solutions Software: Solutions-M

Software features include data logging, real-time data monitoring and fault and event monitoring.

### Specifications

#### Input Characteristics

##### Control Power

12-24VDC (Supplied by RS485MS-2W)

#### Functional Characteristics

##### Communication

##### Baud Rate

##### Setup

##### Port #1 for 777(s)

1200-28800

None, Odd, or  
Even Parity

1 or 2 Stop Bits

Modbus RTU

RS-485

1-99 addresses

(max 16 per  
RM-1000)

100,000 actuations

Polyester

2000 hrs

##### Protocol

##### Serial Interface

##### Available Addresses

##### Port #2 for PC, PLC, etc.

1200-28800

None, Odd, or  
Even Parity

1 or 2 Stop Bits

Modbus RTU

RS-485

Responds to all port #1

##### Mechanical Life

##### Overlay Material

##### UV Exposure w/o degradation

##### Terminal Torque (depluggable

##### terminal block)

##### Panel Thickness

3 in.-lbs.

0.03" min, 0.12" max

#### General Characteristics

##### Ambient Temperature Range

##### Operating

##### Storage

##### Maximum Input Power

##### Class of Protection

##### RM1000, RM1000 NEMA 4

-40° to 70°C (-40° to 158°F)

-40° to 80°C (-40° to 176°F)

100mA

NEMA 3R and/or UL Type12,

NEMA 4X (optional)

NEMA 3R only

Up to 85%, non-condensing

##### RM1000-3R

##### Relative Humidity

##### Safety Marks

##### UL

##### CSA

##### CE

##### Enclosure Material

##### Display

##### Size

##### Keypad

UL508 (File #E68520)

22.2 No. 14 (File #46510)

IEC 60947-6-2

Black polycarbonate

Liquid Crystal with extended temp. range

2 rows x 16 characters

Six 0.5" stainless steel dome buttons for  
tactile feedback

**H** 91.92 mm (3.62"); **W** 115.42 mm (4.54");

**D** 22.86 mm (0.9")

1.5 lbs. (24 oz., 680.39 g)

##### Weight

##### Mounting Method

Surface mountable on backplane using  
4 screws