

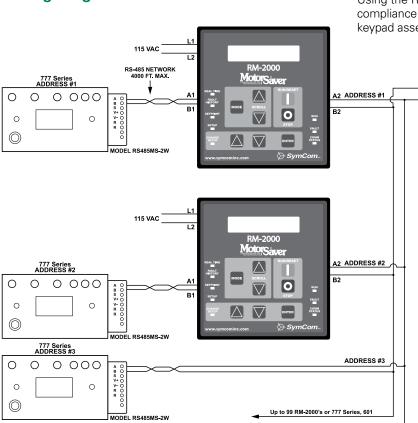
RM2000 SERIES

Remote Monitor





Wiring Diagram



Description

The RM2000 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 Model 601 voltage monitors, via Modbus protocol with a communications module. The RM2000/777 motor management system combines unsurpassed electronic motor protection and critical, user-friendly, motor monitoring.

The RM2000 has membrane keypad controls which allow both monitoring and control of a 777 MotorSaver® through an RS-485 network using Modbus RTU protocol. A second communication port allows monitoring and control of up to 99 RM2000 devices from a PLC, DCS, or SCADA system or a PC with Solutions software installed. The RM2000 will act as a repeater for its motor protector when accessed from the host computer or PLC. In addition to the monitoring functions, the RM2000 can be used to reset a tripped MotorSaver® or PumpSaver®.

The RM2000 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 RM2000 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.

RS-485 MODBUS MASTER

DESKTOP OR LAPTOP PC, PLC. DCS. SCADA*

*NOTE: RS-485 converter or interface will be required

to connect to a device without an RS-485 port

NOTE: All network shielding connections are omitted for clarity.

Ordering Information

MODEL	DESCRIPTION
RM2000	Remote display monitor for 777 family relays
RM2000-CBM+	Coal Bed Methane Special. Optimizes gas production from coal bed methane wells while protecting submersible pump
RM2000-RTDW	Includes additional input for ground-fault module

Port #2 for PC, PLC, etc.

None, Odd, or Even Parity

1200-28800

1 or 2 Stop Bits

Modbus RTU

RS-485

A01-A99

Stores up to 4 faults with time and date stamp,

includes voltages and currents at time of trip

10 years @ 25°C without external power

Two independent electro-mechanical

115VAC ±10%; 50/60Hz

2500V for 10ms

Port #1 for 777

1200-28800

Even Parity

Modbus RTU

Form C (SPDT)

Silver/Tin Oxide

240VA @ 120VAC

-20° to 70°C (-4° to 158°F)

-30° to 70°C (-22° to 158°F)

NEMA 3R and/or UL Type 12

Up to 85%, non-condensing

C22.2 No. 14 (File #46510)

UL508 (File #E68520)

IEC 60947-6-2

5A @ 120VAC

1 Stop Bit

RS-485

Λ1

RM2000 SERIES

Features

Displays:

- Average current, individual line currents and current unbalance
- Current to ground
- Average voltage, line-line voltages and voltage unbalance
- Instantaneous power
- Power factor
- Last four faults
- All parameters programmed into 777 MotorSaver®
- Remaining restart delay times

Controls:

- Start and stop buttons
- Key lock input to prevent setpoint changes
- Change 777 setpoints from keypad

The RM2000 is also equipped with a real-time clock, which allows access to the following motor management information (most readings can be reset):

- Total motor run-time
- Time and date of last four faults, along with voltage and current at time of trip
- Time and date of last 10 motor starts
- Total number of motor restarts
- Minimum time between any two starts with time and date
- Run-time since last start
- kWh consumed
- kVARs consumed

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.



Solutions Software: Solutions-M

Specifications

Input Characteristics

Control Voltage Transient Protection

(Internal)

Functional Characteristics

Communication **Baud Rate** Setup

Protocol Serial Interface Available Addresses Real-time Clock

Battery Back-up Life Last fault memory

Configuration

Contact Material Output Characteristics

(RM2000-RTDW version only)

Pilot Duty Rating General Purpose Rating General Characteristics

Ambient Temperature Range Operating Storage

Maximum Input Power Class of Protection

Relative Humidity Safety Marks

CSA CF

UL

Enclosure

Material Black polycarbonate

Display Liquid crystal with extended temp. range Size 2 rows x 20 characters

3 W

Liahtina LED Backlight

Keypad Eight 0.5" stainless steel dome buttons for

tactile feedback 100.000 actuations

Overlay Material Polvester **UV** Exposure

w/o degradation **Terminal Torque**

Mechanical Life

(depluggable terminal block) 3 in.-lbs.

H 162.56 mm (6.4"); **W** 154.94 mm (6.1");

2000 hrs.

D 27.94mm (1.1")

Weight 1.2 lbs. (19.2 oz., 544.31 g)

Mounting Method Surface mountable on backplane using

4 screws



