MC SERIES - SERIAL I/O OPTION 354

GPS-427A

MC4181 W/ OPTION 354

18:01:20

AE26R-427A

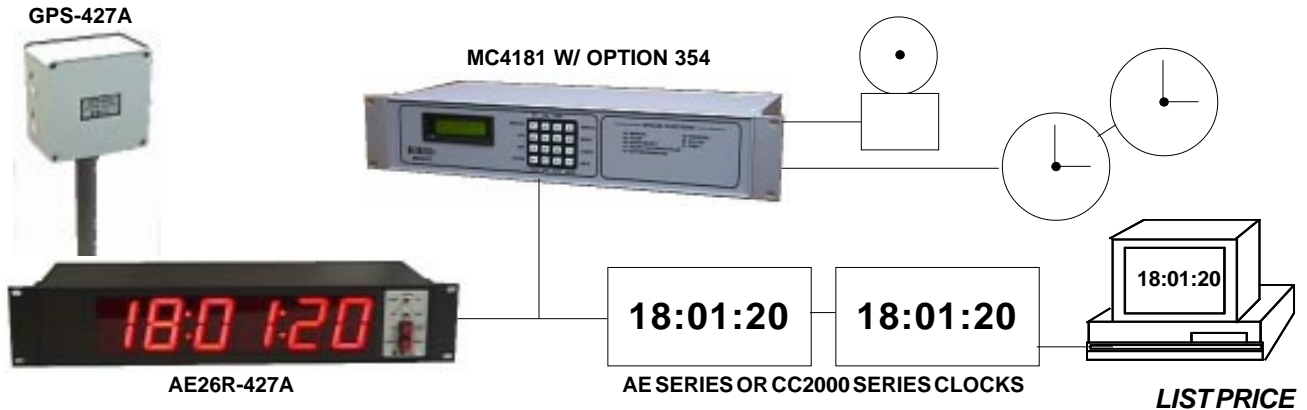**18:01:20**   **18:01:20**

AE SERIES OR CC2000 SERIES CLOCKS

18:01:20

LIST PRICE

SYNCHRONIZE MC SERIES MASTER CLOCKS
TO YOUR COMPUTER, AND/OR A GPS MASTER CLOCK

Synchronize clocks / bells / computers / time & attendance systems.

Drives ATS AE Series and CC2000 Series System Clocks and Time Zone Clock Systems.

Reference to existing computer system or to UTC (Universal Coordinated Time) from a GPS Master.

Option MC-OPT-354 provides an Intelligent RS232 Serial I/O for the MC Series Master Clocks. Totally synchronized systems, from simple clock/bell systems to large, complex time systems are possible.

The RS232 Input receives time, date and day of the week from other devices such as a Computer or GPS Master Clock to set the MC Series Master Clock's internal clock. The RS232 Output sends the MC Series Master Clock's time to ATS AE or CC Series System Clocks, and or to your computer for setting the PC's internal clock. PC software is required to read this data. Demo programs are available (MC-DISK1) at no charge.

All the other features and functions of the MC Series Master Clocks are available for controlling analog clocks, ringing bells and controlling other load devices.

Up to 50 ATS AE Series or CC2000 Series Devices can be connected to the RS232 Output, at distances up to 2000 feet away. Signal drivers are available to provide systems with unlimited numbers of System Clocks and at greater distances. .

Option MC-OPT-354 is available for the MC4181 and MC4181N Series Master Clocks. It is standard on the MC4181LV Series Master Clock.

INPUT SPECIFICATIONS

A set of simple 10 Byte messages are required to send data and control information to the MC Series Master Clock with the Option MC-OPT-354 installed. These 10 Byte messages must include an address, a mode, six characters of data, and attribute data.

Signal: Two wire synchronous RS232. 2400 baud, no parity, 8 data bits, 1 stop bit.

The decimal value of each byte is shown below:

Byte 0 : Start character - 17

Byte 1 : Address byte - 12, 13, and 15 are currently implemeted.

    Address 12 - used for sending the day of the week (1 = Sunday, 7 = Saturday).
    Address 13 - used for sending the date (MMDDYY).
    Address 15 - used for sending the time (HHMMSS).

Byte 2 : Mode byte - uses bytes 0, 3, and 4 as input data.

    Mode 0 - ASCII character mode (used for sending Day and Date).
    Mode 3 - 12 hour time (used for sending time in 12 hour format).
    Mode 4 - 24 hour time (used for sending time in 24 hour format).
    However, the MC Series Master Clock only displays time in 12 hour format.

Bytes 3 to 8: Six character bytes - the data being sent with this message.

    D00000 for day of the week.
    MMDDYY for the date.
    HHMMSS for the time.

Byte 9: Miscellaneous digit byte - 1 = PM, otherwise set to 0.

For example, to send Wednesday as the day of the week you would send the following 10 byte message:

Byte 0   17
Byte1   12
Byte 2   0
Bytes 3 to 8   4, 0, 0, 0, 0, 0
Byte 9   0

For example, to send the date August 3, 1999 you would send the following 10 byte message:

Byte 0   17
Byte1   13
Byte 2   0
Bytes 3 to 8   0, 8, 0, 3, 9, 9
Byte 9   0

For example, to send the time 12:34:56 PM you would send the following 10 byte message:

Byte 0   17
Byte1   15
Byte 2   3
Bytes 3 to 8   1, 2, 3, 4, 5, 6
Byte 9   1

OUTPUT SPECIFICATIONS

The MC Series Master Clock with the Option MC-OPT-354 installed continuously transmitts its time via a 10 Byte message. AE Series and/or CC2000 Series System Clocks and Displays can receive this data for setting their time. Also, a PC can be set up to receive this same data for setting the PC's clock (time only). Demo programs are available (MC-DISK1) at no charge. The 10 Byte message is transmitted once each minute as the master clock goes through 00 seconds.

Signal: Two wire synchronous RS232. 2400 baud, no parity, 8 data bits, 1 stop bit.

The decimal value of each byte is shown below:

Byte 0   :   Start character - 17

Byte 1   :   Address byte - 15 is currently implemeted.

                    Address 15 - used for sending the time (HHMMSS).

Byte 2   :   Mode byte - 3.

                    Mode 3 - 12 hour time (used for sending time in 12 hour format).
                    AE Series Clocks will only displays time in 12 hour format when connected to the MC
                    Series Master Clock.
                    CC2000 Series can be set to display either 12 or 24 hour format.

Bytes 3 to 8:   Six character bytes - the data being sent with this message.

                    HHMMSS for the time.

Byte 9:   Miscellaneous digit byte - 1= PM, otherwise set to 0.

For example, it sends the time 12:34:56 PM as follows:

Byte 0   17
Byte1   15
Byte 2   3
Bytes 3 to 8   1, 2, 3, 4, 5, 6
Byte 9   1

For systems that require date displays and/or day of the week displays, use the AE Series GPS Master Clocks.

FOR ASSISTANCE CALL 800-444-7161