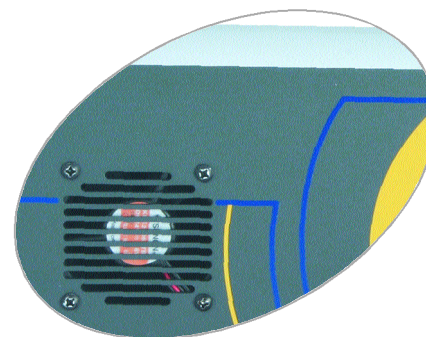
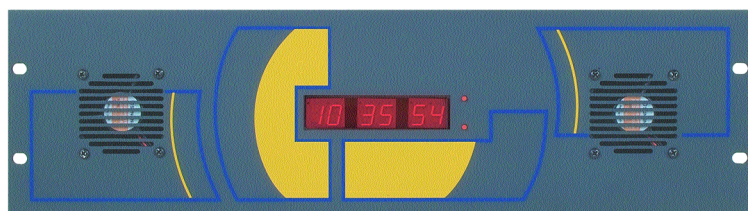


SSM Series Master Clock

Description

The SSM series master clock is a highly accurate, microprocessor based multi-functional clock controller. The SSM incorporates a TCP/IP LAN connection that receives the time signal from an atomic web site via the Internet. Upon connection of the LAN cable, the atomic clock web site will start up automatically. The SSM has a Converter option which allows the two (2) wire signal to be integrated into the SSM which will output 5.5 amps of current to the clock system. The SSM Master Clock is capable of receiving signals from all of the Sapling Master Clocks, as well as 59 minute correction 58 minute correction, National Time and Rauland and Dukane. The SSM is equipped with a programmable auxiliary relay that can be programmed anywhere from 1 – 99 seconds. By utilizing this relay, interfacing with other systems via once a day closure and interfacing with intercom systems become effortless. The SSM has a temperature controlled time base allowing calibration of the time base during variants of temperature. The SSM is user friendly and easy to operate via two (2) switches. The master clock incorporates diagnostic testing which allows the user to view the last time the clock received a signal, the current and temperature of the Converter (Converter option only), as well as a comprehensive test of the master clock. The SSM works on 110 volts / 60 Hz and 220 volts / 50 Hz. The SSM master clock is FCC approved.



Highlights

- ▶ TCP/IP internet connection that allows for time correction via synchronization with an atomic clock web site
- ▶ Comes equipped with a temperature controlled time base allowing calibration of the time during variants in temperature
- ▶ Perfect for two (2) wire digital communication and RS485 digital communication systems
- ▶ Multitude of different inputs can control the SSM series master clock such as 59 minute, 58 minute, National Time and Rauland, once a day pulse
- ▶ Microprocessor based
- ▶ Automatic bi-annual daylight savings time changes (when used as a primary master clock)
- ▶ Operation of auxiliary circuit for a once a day relay closure with precise second resolution
- ▶ Field programmable
- ▶ Two (2) levels of programming for technicians and end users
- ▶ Ten (10) year battery backup for timekeeping
- ▶ Capable of being controlled by an auxiliary master clock
- ▶ One (1) programmable signal durations per circuit (1–99 seconds)
- ▶ RS485 input and output for time correction and synchronization
- ▶ Diagnostic mode allows the user to maintain and troubleshoot the clock system from the master clock
- ▶ Converter option allows the master clock to transmit the two (2) wire signal to the secondary clocks
- ▶ LED Display
- ▶ Rack mountable
- ▶ FCC approved
- ▶ Made in the U.S.A.

Ordering Info: Page 60

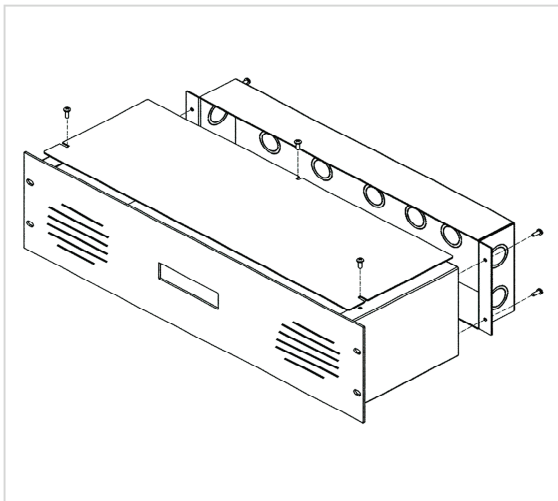
Architectural & Engineering Specifications

The Master Clock shall be the Sapling SSM Master Clock. The master shall be capable of receiving a signal from an atomic clock web site via the Internet. The master clock shall be capable of receiving signals from all Sapling Master Clocks via RS485, as well as 59 minute correction, 58 minute correction, National Time and Rauland, and Dukane. The master clock shall have a Converter option in which the master is capable of sending out the two (2) wire digital communication protocol to Sapling slave clocks. The master clock will have a programmable auxiliary relay and shall be programmed anywhere from 1—99 seconds. Upon utilization of the relay, the master clock will be capable of interfacing with a once a day closure or interfacing with intercom systems. The time base shall be temperature controlled allowing calibration of the time base during temperature changes. The master clock shall be FCC approved.



Accessories: Page 77

Mechanical Drawing



Ordering Information

Master Clock

SSM-000-000-1 — Without Converter

SSM-100-000-1 — With Converter Option

Specifications

Time Base:	Crystal
Frequency Aging:	5ppm/year
Frequency Stability:	5ppm/year
Voltage Input:	85—265 VAC, 50/60 Hz
Power Input:	35 watts
Display:	Seven (7) segment LED display
Color:	Standard gray
Housing:	Smooth surface, rack mount metal case
Programmable Operation:	Via two (2) switches
Temperature Range	
Operating:	0°C—45°C
Shelf:	-15°C—75°C
Output Relay Closure	
Duration:	1—99 seconds
Programmable Time:	HH:MM:SS format
Contact Rating:	8 amps, 0—220 volts
Signal Input:	RS485, 59 minute, 58 minute, National Time and Rauland sync wire, once a day pulse
Signal Outputs:	RS485 and two (2) wire digital communication (with converter option only)
Internet Connection:	TCP/IP LAN port
Mounting:	Rack mount
Daylight Savings Time:	Enabled/Disabled (in master mode only)
Standby Time Keeping:	Ten (10) years
Housing Dimensions: (L x W x D)	5.25" x 19" x 6.25"
Shipping Weight:	Rack—9 lbs.
Shipping Box Dimensions: (L x W x D)	11.75" x 23.75" x 10.75"
Power Kit Includes:	1—6 foot power cord 1—UL Back plate 4—6-32 x 3/8 screw
Compliance:	FCC approved

Converter Option Specifications

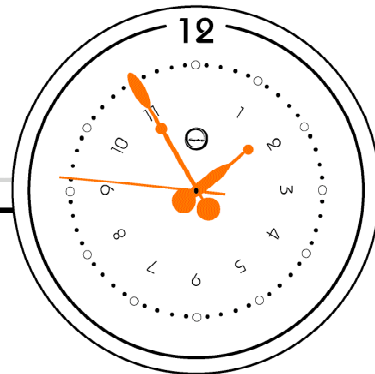
Output Current:	5.5 amps
Output Voltage:	± 24 volts DC
Diagnostic LEDs	
Load Tolerance LED:	80% of 5.5 amps
Temperature Tolerance LED:	80% of 53° C
Fans:	DC brushless 60 x 60 x 25mm 22.1 CFM 34.3 dB(A)

2 Wire Digital Communication

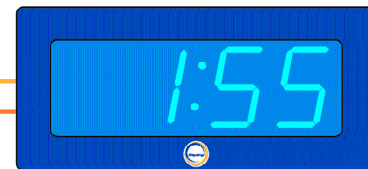


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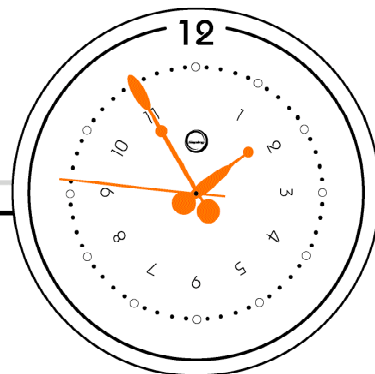
SSM Series Master Clock
with Converter Option



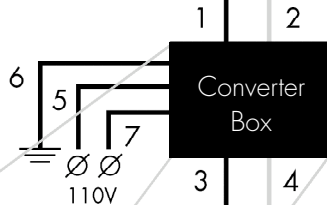
24V SAM Series Analog Clock



24V SBD 1000 Series Digital Clock
or
SBD 2000 Series Digital Clock



24V SAM Series Analog Clock



Option:

Converter Box
SCB-000-000-1
(5.5A Output)

RS485 Communication

