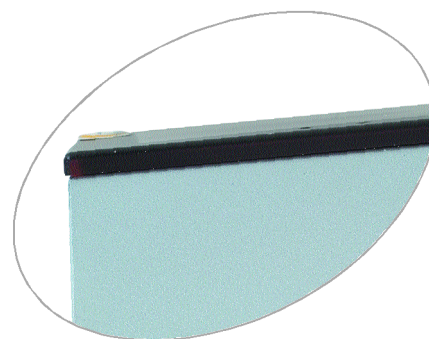


■ SBD 2000 Series 2.5" and 4" Digital Clock Description

Sapling Bar Display (SBD) 2000 Series digital clocks are available in 2.5" or 4.0" high characters with a four (4) digit display. The 2000 Series clocks are state-of-the-art bar display timepieces. This superior line of digital clocks features automatic daylight savings time correction (when used as a primary master clock), PM indicator, master, slave or independent clock capabilities. The SBD 2000 Series clocks have chronograph capabilities using the Sapling Control Box Option. The 2000 Series digital clock is based on our high efficiency, bright LED display. Our unique, specially molded, anti-glare front bezel gives a smooth surface with no visible external screws which allows for excellent visibility. The SBD 2000 can also perform diagnostic capabilities to the SAM, SRM, and SAH Series clocks through programming mode. It also has programmable brightness, alternating time and date display in both American and European formats, as well as "BELL", "FirE" and addressable messaging capabilities. The SBD 2000 Series is capable of interfacing with existing systems such as 59 minute correction, National Time and Rauland, 58 minute correction and Dukane systems while acting as a master clock for the 1000 and 2000 Series, SAM Series analog clocks via two (2) wire and RS485 analog slave clocks.



Ordering Info: Page 51



Highlights

- ▶ Microprocessor based
- ▶ Can interface with existing systems
- ▶ Master, slave and independent clock with chronograph capabilities
- ▶ 58 minute, 59 minute, National Time and Rauland sync wire inputs, Midnight Reset input, RS485 input and output and two (2) wire digital communication input
- ▶ Interface capabilities to most Rauland and Dukane Master Clock/ Intercom systems
- ▶ "BELL", "FirE" and addressable messaging capabilities
- ▶ Available in red or blue displays
- ▶ Automatic daylight savings time (when used as a primary master clock)
- ▶ 12 or 24 hour display
- ▶ Three (3) levels of programmable brightness
- ▶ Alternating time/date in both American and European formats
- ▶ Ten (10) year battery backup
- ▶ Immediate correction for time change, when used with RS485 or two (2) wire digital communication input
- ▶ Ease of maintenance—if input is lost, the colon will flash
- ▶ Analog and digital clocks can be mixed on the same line
- ▶ Easy programming options via two (2) switches
- ▶ Both 110 volt and 24 volt AC/DC power input in each clock
- ▶ UL, cUL, FCC approved
- ▶ Made in the U.S.A.



Architectural & Engineering Specifications

The clock shall be a Sapling SBD 2000 digital clock and will have either a full 2.5" or 4.0" high-efficiency red or blue LED numeral display. The clock shall operate as a master clock to the SBD 1000 or SBD 2000, the SAM Series via two (2) wire digital communication, or SRM RS485 clocks. The clock shall be capable of receiving inputs from other systems. The clock will have data LEDs to display the receiving or transmitting of data. It shall have a 12 or 24 hour display format. It shall have three (3) levels of adjustable brightness and will feature immediate correction for time changes. The digital clock shall be installed either flush, surface or double mount. The clock shall have messaging capabilities including "BELL" and "FirE". The clock will have chronograph capabilities via the Sapling Control Box, as well as the ability to alternate between the current time and date. When the input is lost, the colon on the display of the clock shall flash. The clock bezel shall be anti-glare red or blue with a smooth surface. No external screws will be visible on the bezel or clock housing. The clock is to have UL, cUL and FCC compliance.

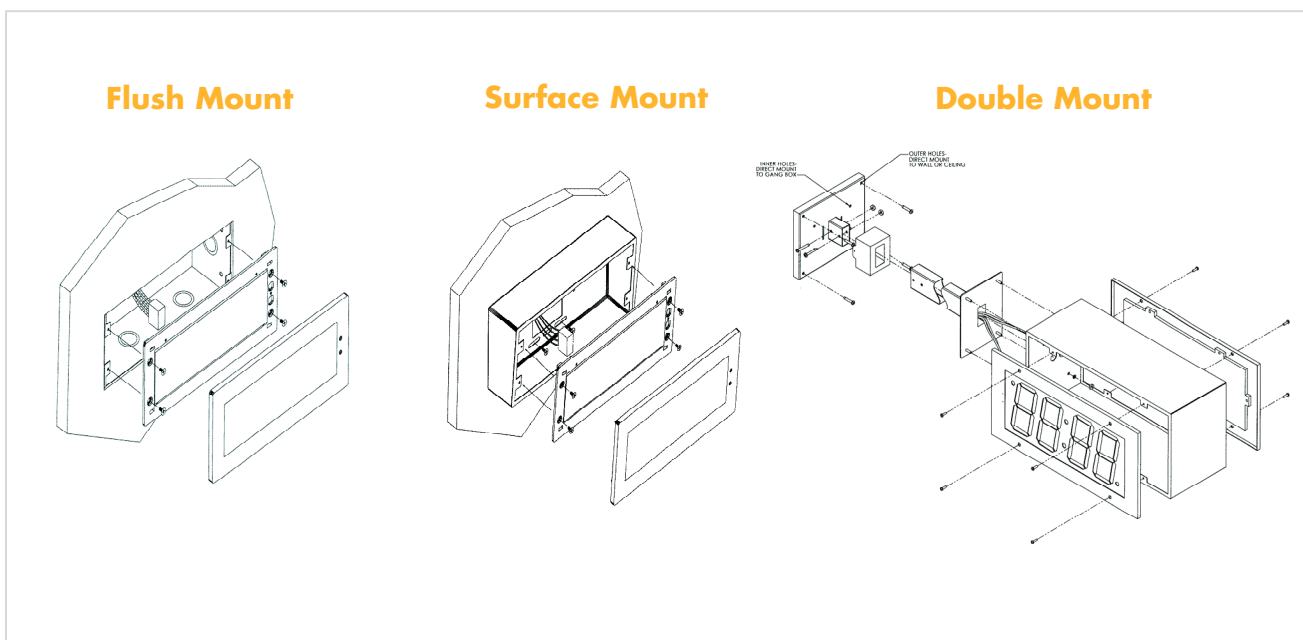


Accessories: Page 77

Specifications

Display Size:	2.5" and 4.0" characters
Display Color:	Vibrant red or blue
Visibility:	2.5" Clock—100 feet 4.0" Clock—250 feet
Bezel Color:	Anti-glare red or blue
Bezel Size: (L x W)	2.5" Clock—4.69" x 10.31" 4.0" Clock—6.75" x 13.31"
Temperature Range	
Operating:	0°C—45°C
Shelf:	-15°C—75°C
Input Voltage for	
2.5" Clock:	12—30 VDC (24 Volt) 12—30 VAC (24 Volt) 78—130 VAC (110 Volt)
4.0" Clock:	16—28 VDC (24 Volt) 14—28 VAC (24 Volt) 85—135 VAC (110 Volt)
Average Current	
Consumption (Max Brightness)	
2.5" Clock:	85 mA @ 24 VAC/30 mA @ 110 VAC
4.0" Clock:	190 mA @ 24 VAC/45 mA @ 110 VAC
Signal Input:	RS485 or Two (2) Wire Digital Communication
Signal Output:	RS485 protocol
Display Format:	12 or 24 hour mode
Brightness:	Three (3) levels, adjustable
Mounting:	Flush, wall and double mount
Shipping Weight:	2.5" Clock—2 lbs. 4.0" Clock—3.5 lbs.
Shipping Box Dimensions:	2.5" Clock—7.5" x 11.375" x 4.25" (L x W x D) 4.0" Clock—9.75" x 14.25" x 4.25"
Power Kit Includes:	1—5 pin power harness 1—4 pin RS485 harness 4—6-32 x 1/2 machine screw 1—6-32 hex nut 1—tooth lock washer 1—grounding wire, loop end
Compliance:	UL, cUL listed and FCC approved

Mechanical Drawing



Ordering Information

Digital Clock

SBD-**MMM**-**ZZ4**-**VC**

MMM=Model	ZZ=Clock Size	V=Voltage	C=Color
200=No Bezel 203=With Bezel	25=2.5" 40=4.0"	1=110V/ 60Hz 4=24V/ 60Hz	R=Red B=Blue

Options:

Additional Power Kits: D-PK-2-110
 Surface Mount Housings: SBD-004-254-1 or SBD-004-404-1
 Flush Mount Housings: SBD-006-254-0 or SBD-006-404-0
 Control Box: See page 78 for details

Double Mount Bracket

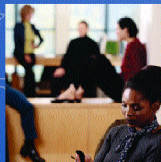
SBD-**007**-**ZZ4**-**CL**

ZZ=Clock Size	C=Color	L=Pole Length
25=2.5" 40=4.0"	B=Black W=White	Standard: 04=4" Optional: 12=12" 24=24" 36=36" 48=48"

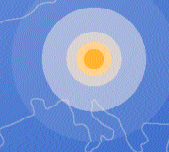
Example:

SBD-007-254-B04: 2.5" Black, 4" Length
 SBD-007-404-W36: 4.0" White, 36" Length
 SBD-007-254-W24: 2.5" White, 24" Length

Chicago
14:27:56



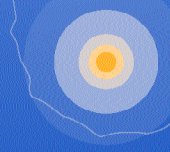
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21:27:56



Nepal
02:27:56



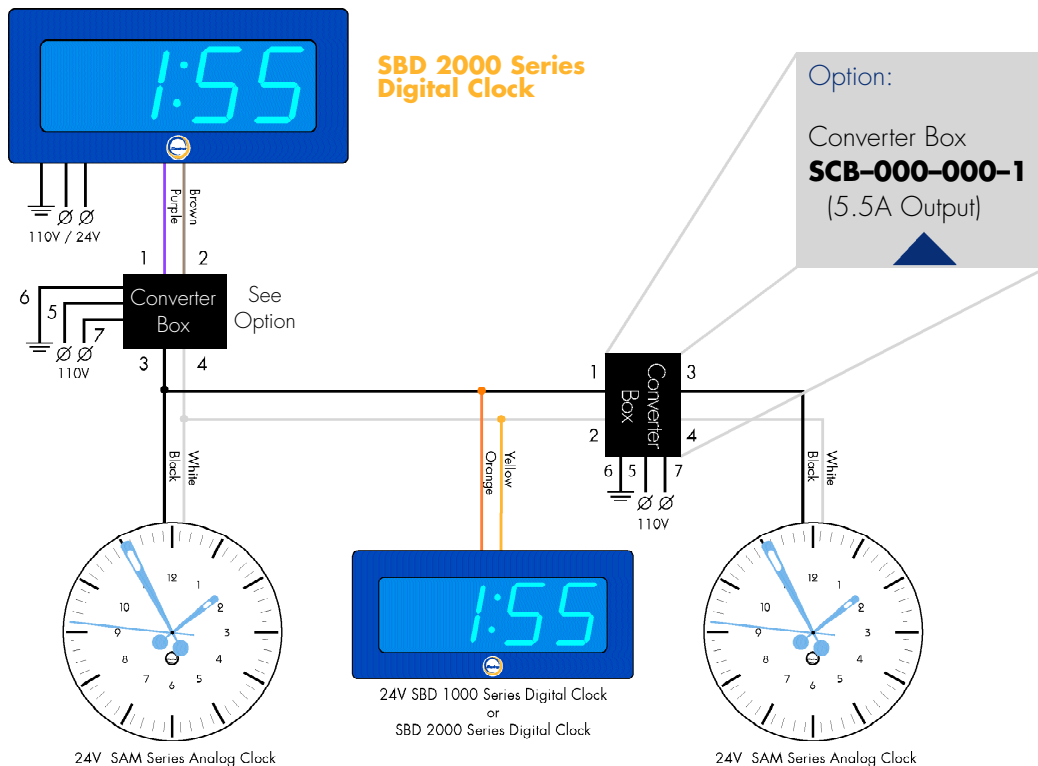
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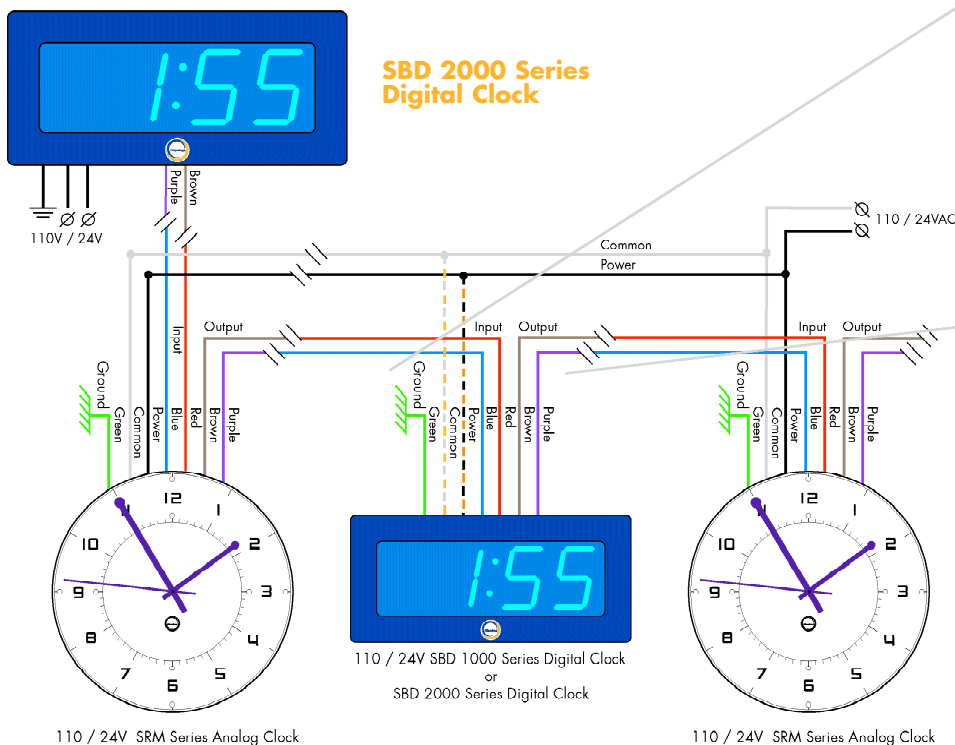
Where timing and technology meet

2.5" and 4" Digital Clock

2 Wire Digital Communication



RS485 Communication



* Please note the following:

For 110V model:
Connect the black and white wires from the 5 pin harness on the digital clock to power and neutral.

For 24V model:
Connect the orange and yellow wires from the 5 pin harness on the digital clock to power and neutral.

**
If a transformer is needed for a 24 volt system, please select from the following:

Part Number:
35-M015 (6.2A)
35-M020 (10.4A)
35-M025 (20.8A)
35-M030 (31.2A)