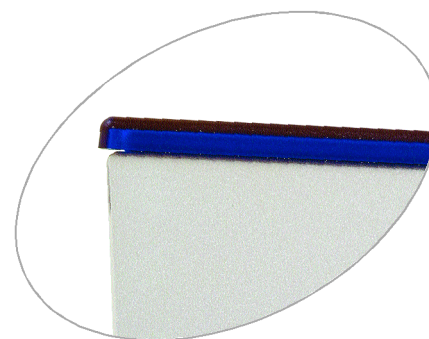


## ■ SBD 1000 Series 2.5" and 4" Digital Clock Description

Sapling Bar Display (SBD) 1000 Series digital clocks are available with either 2.5" high characters or 4.0" high characters in a four (4) digit display. The SBD 1000 Series digital clocks are reliable slave clocks that work on Sapling two (2) wire digital communication or a RS485 protocol. The clocks implement immediate correction upon receipt of the digital signal. The SBD 1000 has many options such as 12 or 24 hour format, display "Bell" or "FirE" messaging, as well as two (2) brightness settings. The SBD 1000 Series digital clocks can be mounted in a surface, flush or double mount housing. The 1000 Series clock also feature LEDs, viewable to the user, in order to show if it is receiving and transmitting data, making it easier to maintain and install. The unique, specially molded anti-glare bezel gives a smooth, clean look with no visible external screws.



Ordering Info: Page 39



### Highlights

- ▶ Immediate correction for time change
- ▶ Clocks will not deviate from each other
- ▶ Available in 2.5" display and 4.0" display
- ▶ 12 or 24 hour format
- ▶ Available in red or blue displays
- ▶ "BELL", "FirE" messaging capabilities
- ▶ Choice of two (2) wire digital communication protocol or RS485 protocol
- ▶ Bright LED display
- ▶ Two (2) settings for brightness
- ▶ Loss of communication alert
- ▶ LEDs for visual representation of the receiving and transmitting of RS485 data
- ▶ Diagnostic LEDs for visual indication for the two (2) wire signal and power
- ▶ Selection of anti-glare red or blue bezel
- ▶ No battery backup required
- ▶ Unlimited clocks can be run off the same communication line (RS485 only)
- ▶ Dynamic range for input voltages
  - 12—30 VDC (24 Volt model)
  - 12—30 VAC (24 Volt model)
  - 78—130 VAC (110 Volt model)
- ▶ Analog and digital clocks can be combined on the same power line (two (2) wire) or communication line (RS485)
- ▶ Plug in Molex connectors
- ▶ Available in flush, surface and double mount housings
- ▶ UL, cUL listed and FCC approved
- ▶ Made in the U.S.A.

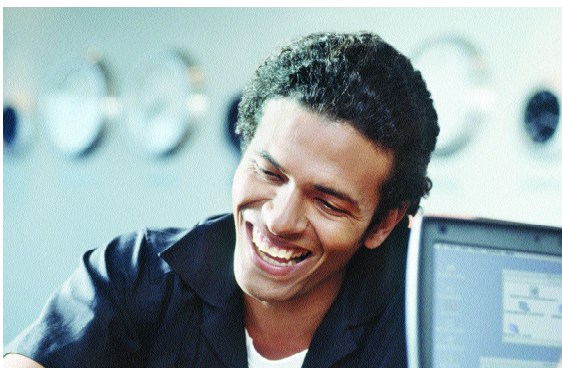


## Architectural & Engineering Specifications

The clock shall be a Sapling SBD 1000 Digital Clock and shall have either a full 2.5" or 4.0" high efficiency red or blue LED numeral display. The clock will operate as a RS485 digital slave clock or as a two (2) wire digital communication digital slave clock. The clock is to have data LEDs, viewable to the user, in order to display the receiving or transmitting of data. It shall have a 12 or 24 hour display format. The clock shall have two (2) levels of adjustable brightness and shall feature immediate correction for time changes. The clock shall be installed either flush, surface or double mount. The clock will have messaging capabilities including "BELL" and "FirE". 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 shall be visible on the bezel or clock housing. The clock shall have UL, cUL and FCC compliance.



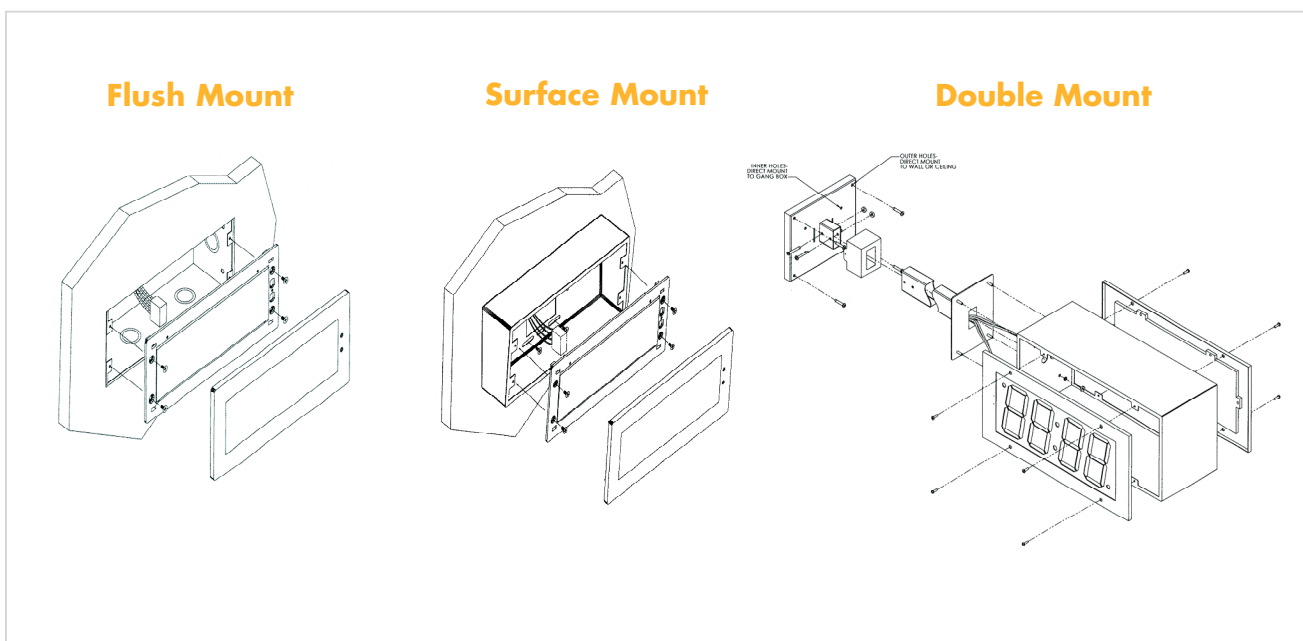
Accessories: Page 77



## 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"
Input Voltage for 2.5" Clock:	12—30 VDC (24 Volt) 12—30 VAC (24 Volt) 78—130 VAC (110 Volt)
Input Voltage for 4.0" Clock:	16—28 VDC (24 Volt) 14—30 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
Temperature Range	
Operating:	0°C—45°C
Shelf:	-15°C—75°C
Display Format:	12 or 24 hour mode
Brightness:	Two (2) levels, adjustable
Mounting:	Flush, wall or double mount
Shipping Weight:	2.5" Clock—2 lbs. 4.0" Clock—3.5 lbs.
Shipping Box Dimensions: (L x W x D)	2.5" Clock—7.5" x 11.375" x 4.25" 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 screws 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
100=No Bezel 103=With Bezel	25=2.5" 40=4.0"	1=110V/ 60Hz 4=24V/ 60Hz	R=Red B=Blue

#### Options:

Additional Power Kits: 24 Volt: D-PK-1-24 or 110 Volt: D-PK-1-110

Surface Mount Housing: 2.5": SBD-004-254-1

4.0": SBD-004-404-1

Flush Mount Housing: 2.5": SBD-006-254-0

4.0": SBD-006-404-0

### 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

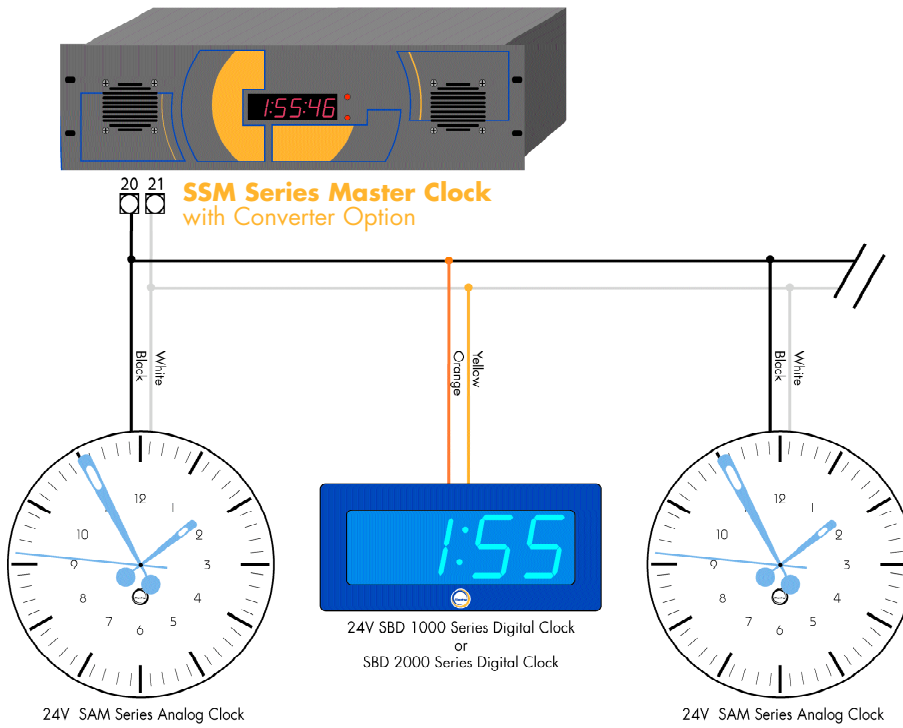


Where timing and technology meet

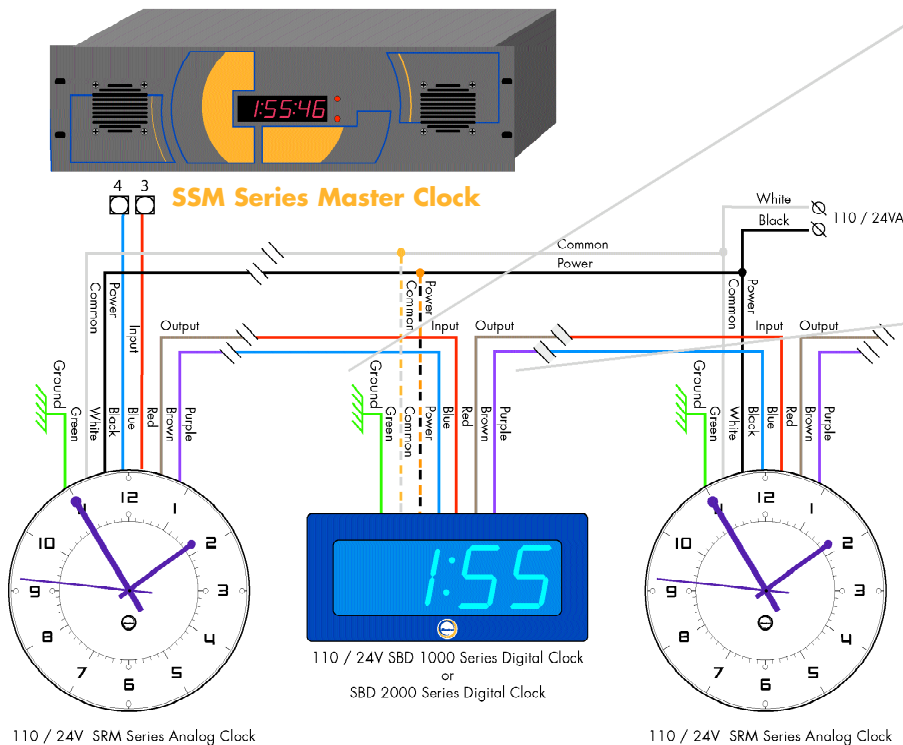
## 2.5" and 4" Digital Clock



### 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)