

SLD Premium Large Digital Clock (V2.3)



Features

- 6.0" (15.2 cm), 9.0" (22.9cm) or 12.0" (30.5cm) digits
- 24V, 110VAC, 230VAC or PoE power supply (PoE in select IP clocks only)
- 12 or 24 hour display
- Red display standard; Optional White, Green, or Amber displays
- Immediate correction for time change
- Microprocessor based clock
- Automatic LED brightness adjustment based on outside lighting conditions.
- Automatic Daylight Saving Time change (if applicable)

Highlights

- Built-in web interface - Each clock has a built in web interface allowing the user to set up, control, and monitor the clock
 - Web interface settings include: Network settings, NTP server selection, UTC/GMT offset selection, automatic Daylight Saving Time adjustments, and much more!
- Ability to alternate between time and date in U.S. (MM:DD:YY) and international (DD:MM:YY) format at user-changeable rates
- Ten year battery backup for internal real time clock and clock settings.
- Capable of Interfacing with Sapling's Elapsed Timer Control Panel (SBD-ELT-001-0), Temperature Sensor (SLD-TEMP-000-0), and Buzzer (L-BUZZ-3300-1) accessories.
- Four selectable display font options.
- The clock features time loss notification by flashing the colon
- In addition to your chosen synchronization method, all versions of the clock support a variety of wired protocols. These protocols include 2-Wire Communication, RS485, 58 minute, 59 minute, National Time and Rauland sync-wire, Dukane Digital, and Once a Day Closure.
- Can interface with a third party system via a contact closure such as a nurse call system that can automatically trigger an elapsed timer.
- Designed and Produced by Sapling Inc. in Pennsylvania, United States of America

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Sapling large Digital Clocks are offered with synchronization methods to cover all of your project needs. Each method comes with bonus features that add additional capabilities to the clock!

Wi-Fi Clocks

- Interfaces with Sapling's Clock Monitor software which will allow the user to view, monitor, and access all of the clocks in the system
- Receives time data from one of five pre-programmed third party NTP servers (user changeable) for added reliability and redundancy. Alternatively, it can be set to receive the time data from an in-house NTP Server or from any Sapling Master Clock model.
- Accepts encryption protocols for enterprise network environments.

Wired IP Clocks

- Interfaces with Sapling's Clock Monitor software which will allow the user to view and monitor all IP clocks in the system.
- Receives time data from one of five pre-programmed third party NTP servers (user changeable) for added reliability and redundancy. Alternatively, it can be set to receive the time data from an in-house NTP Server or from any Sapling Master Clock model.
- Select models available with Power-over-Ethernet (PoE) powering options.

900 MHz/2.4 GHz Wireless Clocks

- Each clock acts as a repeater for the time data signal
- Either 900 MHz or 2.4 GHz frequency hopping technology to ensure signal reliability
 - No FCC or special operating license required
- Receives time correction once every minute
- "BELL" and "FirE" messaging capabilities
- Capable of receiving pre-scheduled countdown command from the SMA Master Clock (optional SMA function)

900 MHz/2.4 GHz Wireless TalkBack Clocks

- Each clock acts as a repeater for the time data signal
- Either 900 MHz or 2.4 GHz frequency hopping technology to ensure signal reliability
 - No FCC or special operating license required
- Receives time correction once every minute
- "BELL" and "FirE" messaging capabilities
- Capable of receiving pre-scheduled countdown command from the SMA Master Clock (optional SMA function)

GPS Clocks

- Obtains Time Data at minimal infrastructure cost to the user via GPS satellites.
- Same reliable system as used by commercial and military navigation systems.

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Specifications - All Clocks

Case Material:

Aluminum

Case Color:

Black

Mounting:

Wall or Double Mount

Brightness:

Four levels, adjustable

Wired Signal Input Options:

RS485, 2-Wire Digital Communication (24V model only), 59 minute correction, 58 minute correction, National Time/Rauland, Dukane, Once-a-Day Pulse

Wired Signal Output:

RS485, 59 minute correction, 58 minute correction, National Time/Rauland, Rauland Digital, Once-a-Day Pulse

Temperature Range

-40°F to 167°F (-40°C to +75°C)

Ingress Protection Rating:

IP 66 (Outdoor only)

Voltage Input:

22-28V (24 Volt Model)

85-130 VAC (115 Volt Model)

180-260 VAC (230 Volt Model)

48V Power over Ethernet (PoE Model)

Power over Ethernet Class (PoE Model Only):

Class 3

Average Current Consumption (Maximum Brightness for Red Display):

6.0" (15.2 cm) 4 and 6 Digit Clock:

250 mA @ 24 V

50 mA @ 115 VAC

25 mA @ 230 VAC

9.0" (22.9 cm) 4 and 6 Digit Clock:

340 mA @ 24 V

68 mA @ 115 VAC

34 mA @ 230 VAC

12.0" (30.5 cm) 4 and 6 Digit Clock:

775 mA @ 24 V

155 mA @ 115 VAC

78 mA @ 230 VAC

Wi-Fi**Data Protocols:**

NTP, SNTP

Network Protocols:

IPv4

Compatible Wi-Fi Communication Protocols:

802.11 b/g/n (2.4GHz only)

Compatible Security Protocols:

WEP, WPA, WPA2-PSK, WPA2-Enterprise

Enterprise Inner Authentication

PEAPv0 (MSCHAPv2)

Enterprise Inner Authentication

EAP-FAST, EAP-TTLS, EAP-PEAP

IP**Signal Input:**

(S)NTP via RJ45 connector

Data Protocols:

NTP, SNTP, Sapling Proprietary

Network Protocols:

IPv4

Wireless/Wireless Talkback**Receiver Sensitivity:**

-103 dBm

Transmitter Power Output:

8 dBm

Operating Frequency (900MHz model):

915-928 MHz frequency-hopping technology

Operating Frequency (2.4GHz model):

2.4 GHz frequency-hopping technology

Compliances**FCC:**

part 15 of the FCC Rules, Class B (DoC), IC ICES-003 Issue 6-2016

CE:

EN 55032, EN 55035, IEC 62236-4

IK Rating:

09

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Ordering Information:

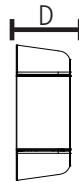
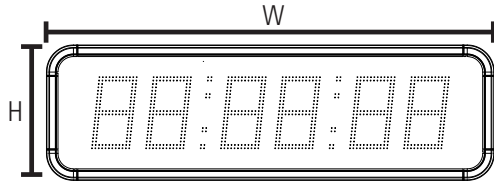
SLD Premium Large Digital Clock: SLD-XXB-33S-XXXX-XYZ

Double or Flag Mount Pole Kit: SLD-1XM-XXXX-XZ

Clock Configuration: *W: Wi-Fi for configuration **P: IP Network Cable for configuration *Available for all models with the exception of hard-wired IP clocks **Applicable only for hard-wired IP clocks	Time Input: D: Wired (2-wire, RS485, and Sync) L: Wireless (900MHz) G: Wireless (2.4GHz) T: TalkBack (900MHz) TG: TalkBack (2.4GHz) P: IP (via Network Cable) W: Wi-Fi S: GPS (Outdoor Only)	Digit Size: 060: 6.0" 090: 9.0" 120: 12.0" Number of Digits: 4: 4 Digit 6: 6 Digit	Indoor/Outdoor: I: Indoor only O: Outdoor or Indoor	Digit Color: R: Red (Standard) G: Green* W: White* A: Amber	Power Option: 0: Power over Ethernet (PoE)* 12: 110VAC or 230VAC 4: 24VAC or 24VDC	Number of Clocks: D: Double-mount (two displays) F: Flag-mount (one display)	Digit Size: 060: 6" 090: 9" 120: 12" Number of Digits: 4: 4 Digit 6: 6 Digit	Pole Length: S: Standard C: Custom Clock Orientation: W: Wall-mount C: Ceiling-mount
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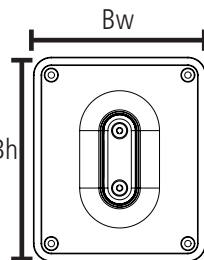
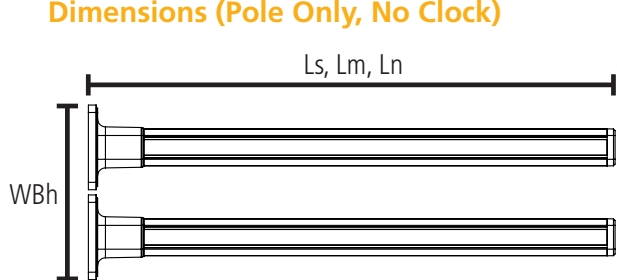
* Only available for certain models
 Ask your dealer for more information.

Dimensions (Surface Mount)

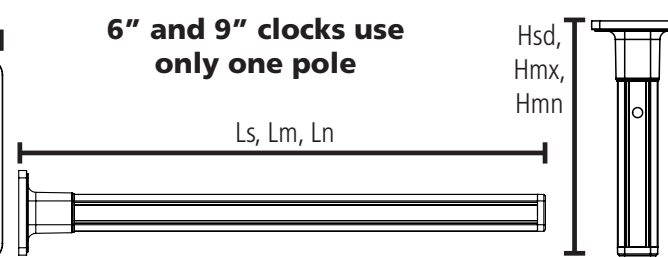


	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Overall Width	W = 26.0" (66.0cm)	W = 36.7" (93.2cm)	W = 47.2" (119.8cm)	W = 36.4" (92.6cm)	W = 51.8" (131.6cm)	W = 67.2" (170.8cm)
Overall Height	H = 11.0" (28.0cm)	H = 15.2" (38.6cm)	H = 19.9" (50.5cm)	H = 11.0" (28.0cm)	H = 15.2" (38.6cm)	H = 19.9" (50.5cm)
Overall Depth	D = 4.06" (11.2cm)	D = 4.06" (11.2cm)	D = 4.06" (11.2cm)	D = 4.06" (11.2cm)	D = 4.06" (11.2cm)	D = 4.06" (11.2cm)

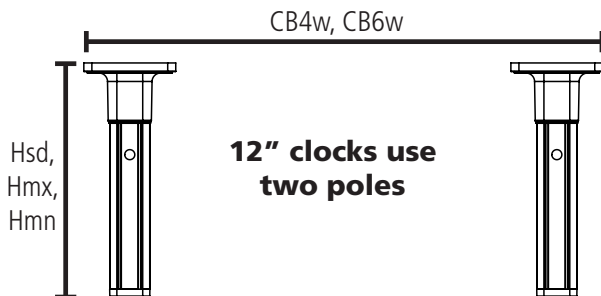
Dimensions (Pole Only, No Clock)



6" and 9" clocks use only one pole



Base Height	Bh = 12.6" (32.0cm)
Base Width	Bw = 10.6" (27.0cm)
12" Wall overall	
Base Height	WBh = 26.0" (66.0cm)
12" Ceiling overall	
Base Width	CB4w = 51.1" (129.9cm)
4 digits	
12" Ceiling overall	
Base Width	CB6w = 71.1" (180.7cm)
6 digits	



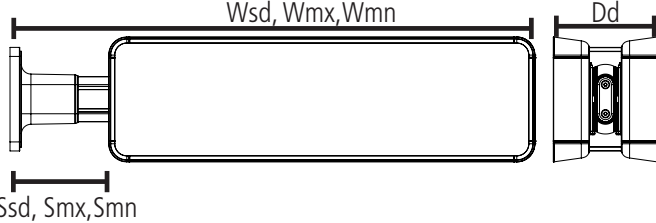
12" clocks use two poles

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Wall Mount						
Std Pole Length:	Ls = 37.1" (94.2cm)	Ls = 47.8" (121.4cm)	Ls = 58.4" (148.3cm)	Ls = 47.6" (120.8cm)	Ls = 63.0" (160.0cm)	Ls = 78.4" (199.1cm)
Max Pole Length:	Lm = 45.4" (115.2cm)	Lm = 56.1" (142.4cm)	Lm = 66.7" (169.4cm)	Lm = 55.8" (141.8cm)	Lm = 71.2" (181.9cm)	Lm = 86.7" (220.1cm)
Min Pole Length:	Ln = 33.4" (84.7cm)	Ln = 44.1" (111.9cm)	Ln = 54.7" (138.9cm)	Ln = 43.8" (111.3cm)	Ln = 59.2" (150.4cm)	Ln = 74.6" (189.6cm)
Ceiling Mount						
Std Pole Height:	Hsd = 21.1" (53.5cm)	Hsd = 23.1" (58.7cm)	Hsd = 32.1" (81.6cm)	Hsd = 21.1" (53.5cm)	Hsd = 23.1" (58.7cm)	Hsd = 32.1" (81.6cm)
Max Pole Height*: Hmx =	29.3" (74.5cm)	Hmx = 31.4" (79.7cm)	Hmx = 40.4" (102.6cm)	Hmx = 29.3" (74.5cm)	Hmx = 31.4" (79.7cm)	Hmx = 40.4" (102.6cm)
Min Pole Height*: Hmn =	17.3" (44.0cm)	Hmn = 19.4" (49.2cm)	Hmn = 28.4" (72.2cm)	Hmn = 17.3" (44.0cm)	Hmn = 19.4" (49.2cm)	Hmn = 28.4" (72.2cm)

* Applies to custom length poles only.

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Dimensions (Double, Wall, 6" and 9")



Double Mount
Wall Overall
Width
Standard:
Maximum*:
Minimum*:

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Wsd =38.0" (96.5cm)	Wsd =48.7" (123.6cm)	Wsd =59.2" (150.3cm)	Wsd =48.4" (123.0cm)	Wsd =63.8" (162.1cm)	Wsd =79.3" (201.3cm)
Maximum*:	Wmx=46.2" (117.4cm)	Wmx=56.9" (144.6cm)	Wmx=67.5" (171.3cm)	Wmx=56.7" (144.0cm)	Wmx=72.1" (183.1cm)	Wmx=87.5" (222.3cm)
Minimum*:	Wmn=34.2" (87.0cm)	Wmn=44.9" (114.2cm)	Wmn=55.5" (140.8cm)	Wmn=44.7" (113.6cm)	Wmn=60.1" (152.6cm)	Wmn=75.5" (191.8cm)

Distance
between clock
and wall
Standard:
Maximum*:
Minimum*:

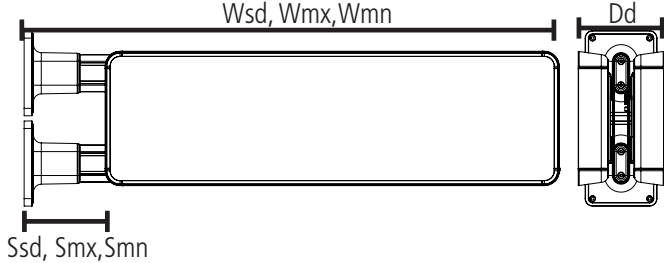
Standard:	Ssd = 12.0" (30.5cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.5cm)	Ssd = 12.0" (30.5cm)
Maximum*:	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.3" (51.5cm)	Smx = 20.3" (51.5cm)
Minimum*:	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.2" (20.9cm)	SSmn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)

Double Mount
overall depth:

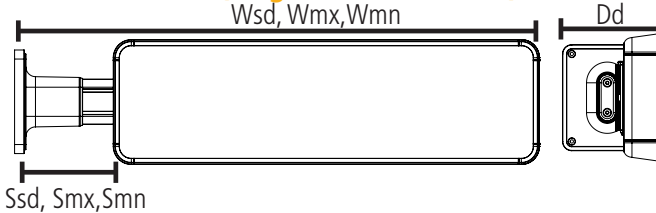
Double Mount overall depth:	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)
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* Applies to custom length poles only.

Dimensions (Double, Wall, 12")



Dimensions (Flag, Wall, 6" and 9")



Flag Mount
Wall Overall
Width
Standard:
Maximum:
Minimum:

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Wsd =38.0" (96.5cm)	Wsd =48.7" (123.6cm)	Wsd =59.2" (150.3cm)	Wsd =48.4" (123.0cm)	Wsd =63.8" (162.1cm)	Wsd =79.3" (201.3cm)
Maximum:	Wmx=46.2" (117.4cm)	Wmx=56.9" (144.6cm)	Wmx=67.5" (171.3cm)	Wmx=56.7" (144.0cm)	Wmx=72.1" (183.1cm)	Wmx=87.5" (222.3cm)
Minimum:	Wmn=34.2" (87.0cm)	Wmn=44.9" (114.2cm)	Wmn=55.5" (140.8cm)	Wmn=44.7" (113.6cm)	Wmn=60.1" (152.6cm)	Wmn=75.5" (191.8cm)

Distance
between clock
and wall
Standard:
Maximum*:
Minimum*:

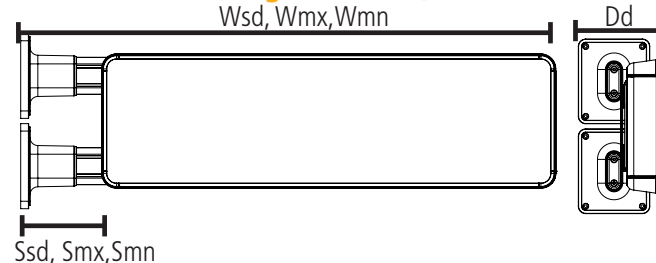
Standard:	Ssd = 12.0" (30.5cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.5cm)	Ssd = 12.0" (30.5cm)
Maximum*:	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.3" (51.5cm)	Smx = 20.3" (51.5cm)
Minimum*:	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.2" (20.9cm)	SSmn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)

Flag Mount
overall depth:

Flag Mount overall depth:	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)
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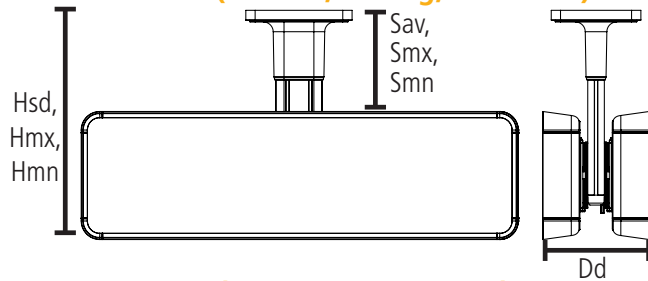
* Applies to custom length poles only.

Dimensions (Flag, Wall, 12")



SLD Premium Large Digital Clock (V2.3)

Dimensions (Double, Ceiling, 6" and 9")



Double Mount
Wall Overall
Width
Standard:
Maximum*:
Minimum*:

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Hsd =23.0" (58.4cm)	Hsd =27.2" (69.0cm)	Hsd =32.1" (81.6cm)	Hsd =23.0" (58.4cm)	Hsd =27.2" (69.0cm)	Hsd =32.2" (81.8cm)
Maximum*:	Hmx=31.3" (79.4cm)	Hmx=35.5" (90.0cm)	Hmx=40.4" (102.6cm)	Hmx=31.3" (79.4cm)	Hmx=35.5" (90.0cm)	Hmx=40.5" (102.8cm)
Minimum*:	Hmn=19.3" (49.0cm)	Hmn =23.5" (59.6cm)	Hmn=28.4" (72.2cm)	Hmn=19.3" (49.0cm)	Hmn=23.5" (59.6cm)	Hmn=28.5" (72.3cm)

Distance
between clock
and ceiling

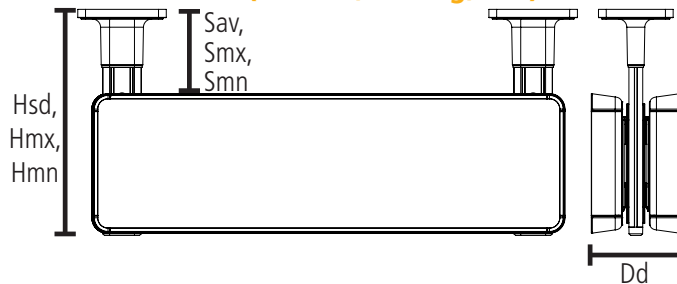
	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.2" (31.1cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.2" (31.1cm)
Maximum*:	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.5" (52.3cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.5" (52.3cm)
Minimum*:	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.5" (21.8cm)	SSmn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.5" (21.8cm)

Double Mount
overall depth:

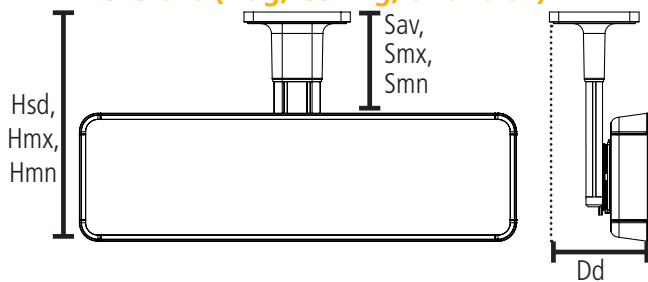
Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)
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* Applies to custom length poles only.

Dimensions (Double, Ceiling, 12")



Dimensions (Flag, Ceiling, 6" and 9")



Flag Mount
Wall Overall
Height
Standard:
Maximum*:
Minimum*:

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Hsd =23.0" (58.4cm)	Hsd =27.2" (69.0cm)	Hsd =32.1" (81.6cm)	Hsd =23.0" (58.4cm)	Hsd =27.2" (69.0cm)	Hsd =32.1" (81.6cm)
Maximum*:	Hmx=31.3" (79.4cm)	Hmx=35.5" (90.0cm)	Hmx=40.4" (102.6cm)	Hmx=31.3" (79.4cm)	Hmx=35.5" (90.0cm)	Hmx=40.4" (102.6cm)
Minimum*:	Hmn=19.3" (49.0cm)	Hmn =23.5" (59.6cm)	Hmn=28.4" (72.2cm)	Hmn=19.3" (49.0cm)	Hmn=23.5" (59.6cm)	Hmn=28.4" (72.2cm)

Distance
between clock
and ceiling

	4 Digits 6.0" (15.2cm)	4 Digits 9.0" (22.9cm)	4 Digits 12.0" (30.5cm)	6 Digits 6.0" (15.2cm)	6 Digits 9.0" (22.9cm)	6 Digits 12.0" (30.5cm)
Standard:	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.2" (31.1cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.0" (30.4cm)	Ssd = 12.2" (31.1cm)
Maximum*:	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.5" (52.3cm)	Smx = 20.2" (51.4cm)	Smx = 20.2" (51.4cm)	Smx = 20.5" (52.3cm)
Minimum*:	Smn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.5" (21.8cm)	SSmn = 8.3" (21.0cm)	Smn = 8.3" (21.0cm)	Smn = 8.5" (21.8cm)

Flag Mount

overall depth:	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)	Dd =12.7" (32.2cm)
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In 12" models, the bracket end cap is lower than the bottom of the clock. Hsd/Hmx/Hmn for 12" models refers to the distance between the lowest part of the end cap and highest point of the mounting pole base.

* Applies to custom length poles only.

Dimensions (Flag, Ceiling, 12")

