

The TimeCast™ series digital clocks are the next generation of National Time's wireless clocks. These clocks offer both Radio Frequency and WiFi functionality to make TimeCast™ the simple choice for your wireless clock system, whether you want to leverage your building's existing WiFi network infrastructure or build a dedicated Radio Frequency timekeeping network. Whichever you choose, TimeCast™ clocks ensure reliable, synchronized time throughout your facility. TimeCast™ clocks can be configured in the factory or on-site for either Radio Frequency or WiFi operation.



Features. The TimeCast™ series digital clocks have more features that benefit your organization than any other. National Time's exclusive automatic dim feature decreases the brightness to compensate for low ambient light levels associated with surgical suites and video productions. This not only provides a pleasant brightness level, but also saves energy during nighttime hours. Nine brightness levels may be selected to satisfy the brightest locations. Add a durable metal housing to the long life epoxy filled digit segments and you won't find better value. Available in both 2.3" and 4" wide bar digits that increase the visibility over clocks of comparable size. 6-Digit versions displaying hours, minutes and seconds are also available. See the elapsed timer datasheet C-628 for TimeCast™ series digital clocks with elapsed timer capability.

Exclusive Interactive Display. The TimeCast™ wireless digital clocks feature National Time's exclusive interactive display on the side of each clock. The display provides a user friendly interface to simplify installation and configure clock settings, including brightness and auto-dim threshold. Additionally, status information such as signal strength, WiFi network status, number of other Radio Frequency clocks in range, time and date received, check in times, and firmware information is provided. In the absence of a base station or WiFi network, the time and date can be either entered by the user through the display interface, or acquired from a nearby clock. All TimeCast™ clocks report to National Time's free cloud service which monitors each clock's vitals and check-in history.



TimeCast™ Radio Frequency System. This wireless technology utilizes license-free frequency bands to communicate synchronized time to all of the clocks in your building. A cost-effective base station is the heart of the system keeping accurate time using a local or internet SNTP time server. Time and other data is broadcast from the base station to nearby clocks using a low wattage transmitter. Each clock in the system is capable of relaying this data to more distant clocks. A flood of time information synchronizes the time throughout your facility in fractions of a second. The multiple path Flooding TimeCast™ technique is simple and reliable for trouble-free data transmission. This efficient two-way data transmission provides verification of time synchronization, signal strength, and other clock information. All of this information is available to the user via **National Time's free cloud service**. Reports of clock system health can be accessed through the internet or by scheduled e-mail messages.



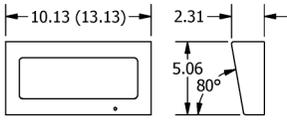
WiFi Clock System. In WiFi mode, each TimeCast™ clock connects to the existing building WiFi network and receives accurate time information from an SNTP time server. WiFi settings can easily be configured using National's WiFi Wizard setup interface. Using only a web browser on any WiFi enabled device, the user is led step-by-step through the fast setup process. TimeCast™ clocks connect to 2.4GHz 802.11b/g/n WiFi using WPA, WPA2, WEP, and open networks. The clocks also support EAP authentication with 802.1x MSCHAPv2. When WiFi clocks receive the time from the network, they also check-in to the National Time Device Cloud to report their signal strength and other clock information. A base station is not required for WiFi operation as each clock operates individually.

Power Choices. The 24V version can be powered with 24VAC or 24VDC. These can leverage easier to install low voltage power-limited wiring for less costly installation. For line voltage 120V installations, there is a choice of a hard wired transformer that fits in a standard electrical box or a wall transformer that plugs into a nearby standard outlet. Double face clocks can share a single transformer.

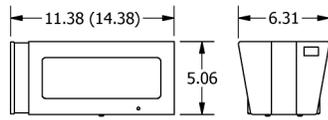
Benefits:

- Fast, easy setup with National Time's exclusive multi-line display
- License Free low energy, ISM band Radio Frequency technology
- Multiple path Flooding TimeCast™ technique for reliable two-way Radio Frequency system
- Can utilize existing WiFi infrastructure
- **Free cloud service** shows status for both Radio Frequency and WiFi clocks
- 9 Brightness Levels with Auto-Dim Feature that adjusts to ambient light levels
- Easy to read wide bar digits are epoxy sealed for longevity
- 12/24-hr Display Format
- Made in USA

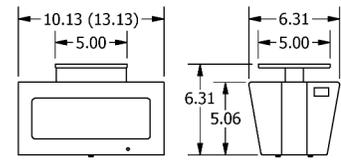
Dimensions shown are 4-Digit clocks, 6-Digit dimensions are in parenthesis.



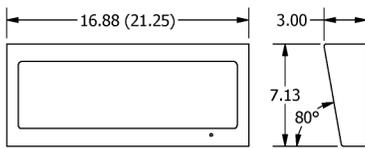
Single Face 225 Series



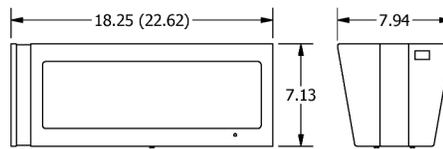
Double Face 225 Series Wall Mount



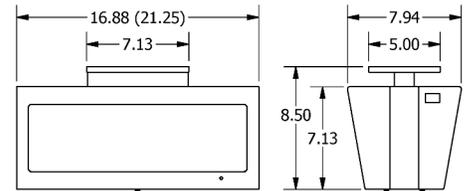
Double Face 225 Series Ceiling Mount



Single Face 400 Series



Double Face 400 Series Wall Mount



Double Face 400 Series Ceiling Mount

Current Draw 225 Series

Units mA	24VDC		24VAC		WT 120V		HW 120V		
	Part No.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
	SF-D225R-4	40	49	59	65	36	38	30	31
	SF-D225R-6	44	57	61	75	38	42	30	33
	DF-D225R-4	53	71	71	89	40	49	31	34
	DF-D225R-6	62	89	81	107	45	57	32	37

Typical current for brightness setting = 4; Maximum current for brightness setting = 9

Current Draw 400 Series

Units mA	24VDC		24VAC		WT 120V		HW 120V		
	Part No.	Typ.	Max.	Typ.	Max.	Typ.	Max.	Typ.	Max.
	SF-D400R-4	42	59	60	76	34	43	30	31
	SF-D400R-6	49	70	66	87	38	48	29	32
	DF-D400R-4	61	96	78	112	42	58	32	38
	DF-D400R-6	72	115	90	132	50	65	34	42

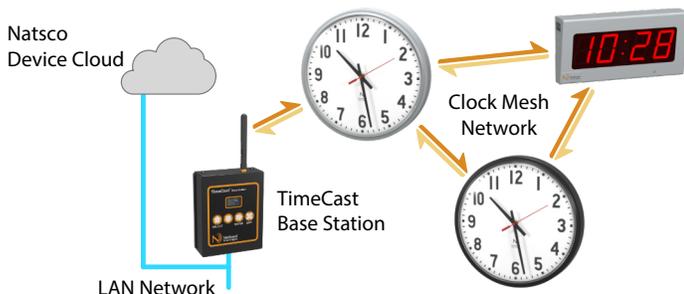
Indoor Use Only

Frequency: 2.4GHz ISM band; <1 Watt

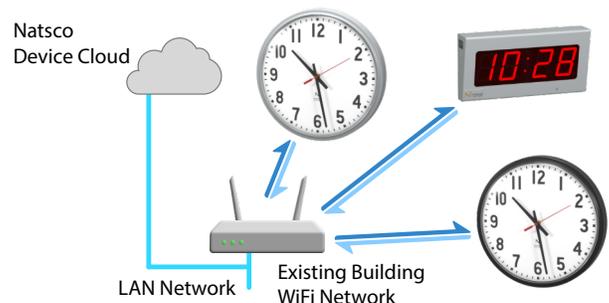
Supported WiFi Networks: 802.11b/g/n using WPA, WPA2, WEP, open, EAP using 802.1x MSCHAPv2

Typical System Layouts

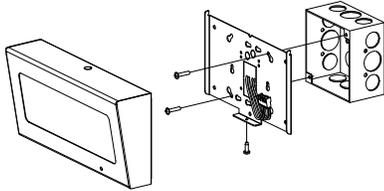
TimeCast Radio Frequency Clock System



TimeCast WiFi Clock System

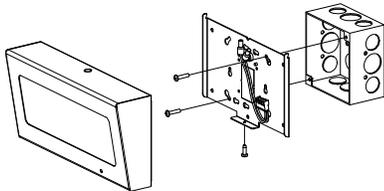


Typical Installations



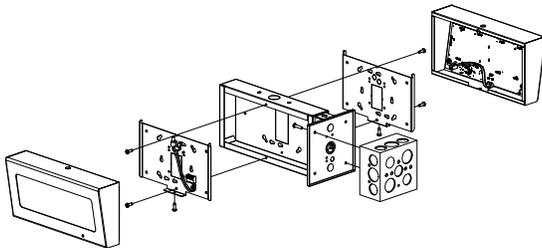
24V Clocks with Standard Hanger Bracket

Included with all TimeCast™ digital clocks, the Standard Hanger Bracket mounts to Handy/Single Gang/Double Gang/4 Square electrical boxes. Route the included wire harness through the 3/8" knock-out in the hanger bracket using the provided strain relief.



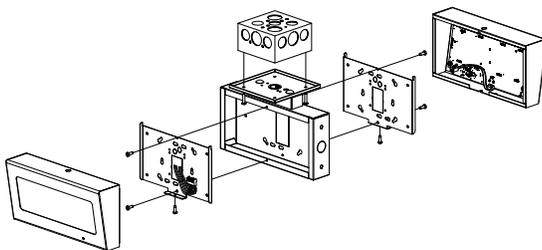
120V Hard Wired Transformer

The transformer assembly comes mounted to the back of the Standard Hanger Bracket. Connect the 120VAC wires to the transformer and mount the bracket to a Deep 4 Square box with the transformer inside the box.



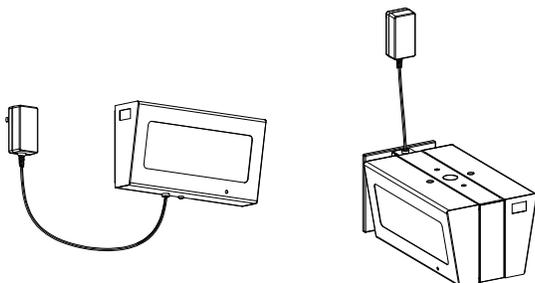
Double Face Wall Mount

The Double Face Bracket mounts to a securely installed 4 Square electrical box. For the 120V Hard Wired version, the transformer assembly comes mounted to the back of the Standard Hanger Bracket. The transformer goes inside of the Corridor Box.



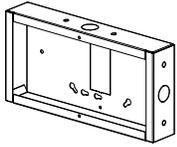
Double Face Ceiling Mount

For ceiling mount installations, the Double Face Bracket can be assembled using the holes in the top of the Corridor Box. Mount the Double Face Bracket to a securely installed 4 Square electrical box.



120V Wall Transformer

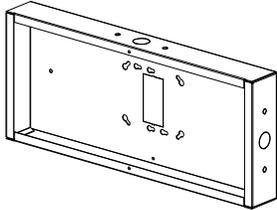
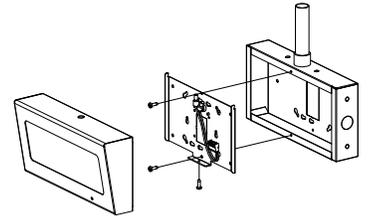
Wall Transformer versions include the Standard Hanger Bracket. The wall transformer with 6' cord plugs into a nearby outlet. There are knock-outs in the top and bottom of the clock case and Double Face Bracket to allow the wall transformer cable to pass through using the provided strain relief.



D225-SURF BOX : Surface Mount Box for 4-Digit D225

The Surface Mount Box can be mounted to Handy/Single Gang/Double Gang/4 Square electrical boxes or directly to the wall surface. The Surface Mount Box provides room for a hard wired transformer and has knock-outs for conduit entry. The D225 Surface Box adds 1.75" of depth.

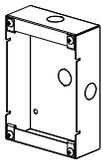
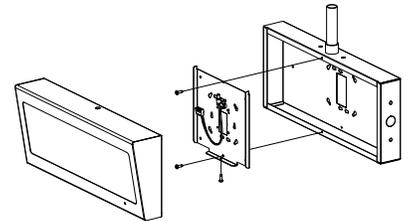
For 6-Digit D225 clocks, use the D225-6-SURF BOX



D400-SURF BOX : Surface Mount Box for 4-Digit D400

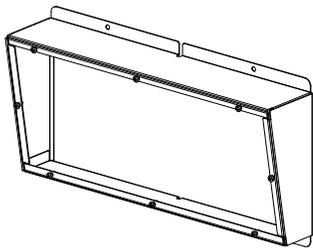
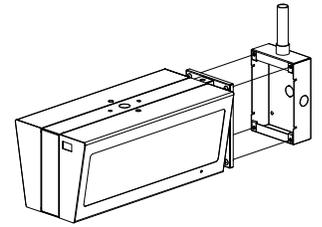
The Surface Mount Box can be mounted to Handy/Single Gang/Double Gang/4 Square electrical boxes or directly to the wall surface. The Surface Mount Box provides room for a hard wired transformer and has knock-outs for conduit entry. The D400 Surface Box adds 2" of depth.

For 6-Digit D400 clocks, use the D400-6-SURF BOX



D400-CORR-SURF BOX : Double Face D400 Surface Mount Box

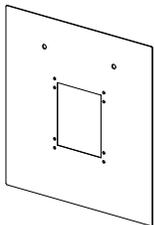
The Surface Mount Box for D400 Double Face clocks mounts directly to the wall surface. Knock-outs on the sides of the surface box allow for conduit entry. The Surface Mount Box adds 2" of depth.



CV-GUARD-SF-SL : Clear-View Guard, Semi-Flush

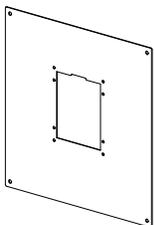
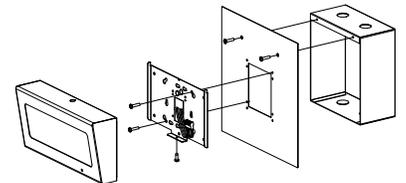
The steel protective guard has a clear polycarbonate window for obstruction free viewing. See Bulletin C-624 for more information on the Clear-View Guard.

For clocks with a Surface Mount Box, use the CV-GUARD-S-SL



ADAPT-143 : Flush Mount Adapter for Digital Clocks

Adapter plate allowing D225 and D400 digital clocks to mount to a National Time 143 Flush Clock Wall Box. The ADAPT-143 plate is 10" x 10".



ADAPT-GENERIC : Generic Adapter Plate for Digital Clocks

Adapter plate allowing D225 and D400 digital clocks to install over existing wall boxes by other manufacturers. The ADAPT-GENERIC plate is 10" x 10" with four mounting holes at the corners of the plate.

Custom adapter plates are available upon request.

Model Number	Description
2.3" Digital Clocks - Single Face	
SF-D225R-4-RF-24V	TimeCast 2.3" Digital Clock, Red 4-Digit, 24V, Radio Frequency
SF-D225R-4-RF-120V	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Hard-Wired Transformer, Radio Frequency
SF-D225R-4-RF-120VWT	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Wall Transformer, Radio Frequency
SF-D225R-6-RF-24V	TimeCast 2.3" Digital Clock, Red 6-Digit, 24V, Radio Frequency
SF-D225R-6-RF-120V	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Hard-Wired Transformer, Radio Frequency
SF-D225R-6-RF-120VWT	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Wall Transformer, Radio Frequency
2.3" Digital Clocks - Double Face¹	
DF-D225R-4-RF-24V	TimeCast 2.3" Double Face Digital, Red 4-Digit, 24V, Radio Frequency
DF-D225R-4-RF-120V	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Hard-Wired Transformer, Radio Frequency
DF-D225R-4-RF-120VWT	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Wall Transformer, Radio Frequency
DF-D225R-6-RF-24V	TimeCast 2.3" Double Face Digital, Red 6-Digit, 24V, Radio Frequency
DF-D225R-6-RF-120V	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Hard-Wired Transformer, Radio Frequency
DF-D225R-6-RF-120VWT	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Wall Transformer, Radio Frequency
4" Digital Clocks - Single Face	
SF-D400R-4-RF-24V	TimeCast 4" Digital Clock, Red 4-Digit, 24V, Radio Frequency
SF-D400R-4-RF-120V	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Hard-Wired Transformer, Radio Frequency
SF-D400R-4-RF-120VWT	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Wall Transformer, Radio Frequency
SF-D400R-6-RF-24V	TimeCast 4" Digital Clock, Red 6-Digit, 24V, Radio Frequency
SF-D400R-6-RF-120V	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Hard-Wired Transformer, Radio Frequency
SF-D400R-6-RF-120VWT	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Wall Transformer, Radio Frequency
4" Digital Clocks - Double Face¹	
DF-D400R-4-RF-24V	TimeCast 4" Double Face Digital, Red 4-Digit, 24V, Radio Frequency
DF-D400R-4-RF-120V	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Hard-Wired Transformer, Radio Frequency
DF-D400R-4-RF-120VWT	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Wall Transformer, Radio Frequency
DF-D400R-6-RF-24V	TimeCast 4" Double Face Digital, Red 6-Digit, 24V, Radio Frequency
DF-D400R-6-RF-120V	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Hard-Wired Transformer, Radio Frequency
DF-D400R-6-RF-120VWT	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Wall Transformer, Radio Frequency

Default Color is Grey. Add Suffix -BLK to Part Number for Black Enclosures.

1. Double Face clock assemblies include a Single Face clock and a secondary clock display for the back side of the unit.

Model Number	Description
2.3" Digital Clocks - Single Face	
SF-D225R-4-WIFI-24V	TimeCast 2.3" Digital Clock, Red 4-Digit, 24V, WiFi
SF-D225R-4-WIFI-120V	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Hard-Wired Transformer, WiFi
SF-D225R-4-WIFI-120VWT	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Wall Transformer, WiFi
SF-D225R-6-WIFI-24V	TimeCast 2.3" Digital Clock, Red 6-Digit, 24V, WiFi
SF-D225R-6-WIFI-120V	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Hard-Wired Transformer, WiFi
SF-D225R-6-WIFI-120VWT	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Wall Transformer, WiFi
2.3" Digital Clocks - Double Face¹	
DF-D225R-4-WIFI-24V	TimeCast 2.3" Double Face Digital, Red 4-Digit, 24V, WiFi
DF-D225R-4-WIFI-120V	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Hard-Wired Transformer, WiFi
DF-D225R-4-WIFI-120VWT	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Wall Transformer, WiFi
DF-D225R-6-WIFI-24V	TimeCast 2.3" Double Face Digital, Red 6-Digit, 24V, WiFi
DF-D225R-6-WIFI-120V	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Hard-Wired Transformer, WiFi
DF-D225R-6-WIFI-120VWT	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Wall Transformer, WiFi
4" Digital Clocks - Single Face	
SF-D400R-4-WIFI-24V	TimeCast 4" Digital Clock, Red 4-Digit, 24V, WiFi
SF-D400R-4-WIFI-120V	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Hard-Wired Transformer, WiFi
SF-D400R-4-WIFI-120VWT	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Wall Transformer, WiFi
SF-D400R-6-WIFI-24V	TimeCast 4" Digital Clock, Red 6-Digit, 24V, WiFi
SF-D400R-6-WIFI-120V	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Hard-Wired Transformer, WiFi
SF-D400R-6-WIFI-120VWT	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Wall Transformer, WiFi
4" Digital Clocks - Double Face¹	
DF-D400R-4-WIFI-24V	TimeCast 4" Double Face Digital, Red 4-Digit, 24V, WiFi
DF-D400R-4-WIFI-120V	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Hard-Wired Transformer, WiFi
DF-D400R-4-WIFI-120VWT	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Wall Transformer, WiFi
DF-D400R-6-WIFI-24V	TimeCast 4" Double Face Digital, Red 6-Digit, 24V, WiFi
DF-D400R-6-WIFI-120V	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Hard-Wired Transformer, WiFi
DF-D400R-6-WIFI-120VWT	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Wall Transformer, WiFi

Default Color is Grey. Add Suffix -BLK to Part Number for Black Enclosures.

1. Double Face clock assemblies include a Single Face clock and a secondary clock display for the back side of the unit.

Model Number	Description
Surface Boxes	
D225-SURF BOX	Surface Box for 4-Digit D225 Clocks
D225-6-SURF BOX	Surface Box for 6-Digit D225 Clocks
D400-SURF BOX	Surface Box for 4-Digit D400 Clocks
D400-6-SURF BOX	Surface Box for 6-Digit D400 Clocks
D400-CORR-SURF BOX	Corridor Kit Surface Box for Double Face D400 Clocks
Double Face Brackets²	
D225-4-CORR KIT	Corridor Kit for D225, 4-Digit Clocks
D225-6-CORR KIT	Corridor Kit for D225, 6-Digit Clocks
D400-4-CORR KIT	Corridor Kit for D400, 4-Digit Clocks
D400-6-CORR KIT	Corridor Kit for D400, 6-Digit Clocks
Accessories	
CV-GUARD-SF-SL	Clear-View Protective Guard for Semi-Flush Installations
CV-GUARD-S-SL	Clear-View Protective Guard for Surface Installations
ADAPT-143	Adapter Plate (10x10) for mounting to NATSCO #143 Analog Clock Box
ADAPT-GENERIC	Adapter Plate (10x10) corner mounting holes
ADAPT-CUSTOM	<i>Consult Factory for custom mounting plates</i>

Default Color is Grey. Add Suffix -BLK to Part Number for Black Enclosures.

2. Included with Double Face Clocks. For Single Face, Flag-Mount installations, order the Corridor Kit separately.