The TimeCast™ series digital clocks are National Time's newest wired system clocks. These clocks have the intelligence to adapt to the system on which they are installed. Whether it is a 3-wire synchronous system with 58th minute correction or hourly correction, a 4-wire system with AC run and DC reset, or a 2-wire system with On-Demand Instant Correction, these clocks can distinguish and accept the most popular reset formats. For a complete list of supported reset formats, refer to the compatibility tables on page 2.

Features. 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.

Class change count-down timer function is also supported. A popular option in K-12 schools. When operating on a 2-wire clock system, the reset input can be used to initiate a count-down timer and the duration can be individually set at each clock. Alternately, a count-up timer function can be selected and will increment while the reset is active for other custom applications. For class change timer applications, order a DLU 3-Wire clock.

Exclusive Interactive Display. TimeCast™ 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, auto-dim threshold, timer mode, and desired reset format.

Power Choices. Run power can be 24VAC/DC or 120VAC with the included hard-wired transformer that fits in a standard electrical box, double face clocks share a single transformer.

The durable steel housing, plug-in connectors and universal mounting plate simplify installation. An optional low profile surface box allows for surface mounted conduit entry. Cases are attractively finished in Powder Grey or Black enamel.

Benefits:

- Fast, easy setup with National Time's exclusive multi-line display
- Supports many popular Reset Formats
- Automatic reset format detection
- 2, 3, or 4-Wire system compatibility
- Analog Clock Compatible
- 9 Brightness Levels with Auto-Dim Feature that adjusts to ambient light levels
- Easy to read wide bar digits are epoxy sealed for longevity
- Count-up/down Timer Function
- Battery-Less Backup Timekeeping
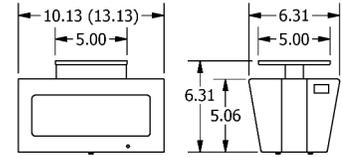- 12/24-hr Display Format
- Made in USA

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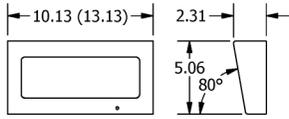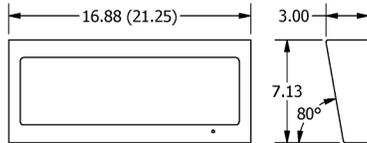

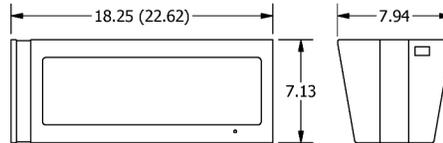**Single Face 225 Series**
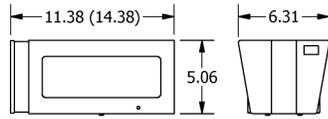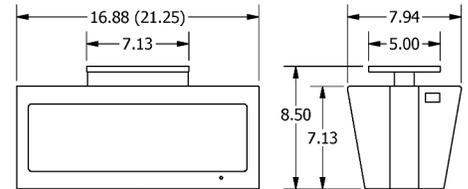

Double Face 225 Series Wall Mount

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		120VAC	
Part No.	Typ.	Max.	Typ.	Max.	Typ.	Max.
SF-D225R-4	40	49	59	65	30	31
SF-D225R-6	44	57	61	75	30	33
DF-D225R-4	53	71	71	89	31	34
DF-D225R-6	62	89	81	107	32	37

Current Draw 400 Series

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

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

Reset Compatibility

Supported 2-Wire Resets:

Reset pulse(s)	Common Manufacturers
Instant Reset: upon power up, or manually activated by the user, time data will be transmitted over the power wires. 24-hour: 0.25 second off at 12:00:00am	National Time & Signal (Circuit Type NTS:D/DX/RDS)
24-hour: 0.25 second off at 12:00:00am	Any programmable Master Clock by others

Supported 3-Wire Synchronous Resets:

| Reset pulse(s)	Common Manufacturers
Hour: 25 seconds each xx:00:00 12-hour: 25 minutes each 6:00:00	National Time & Signal (Circuit Type NTS:D/DX/RDS), Rauland, Lathem, and others
Hour: 8 seconds each xx:57:54 12-hour: 14 seconds each 5:57:54	Simplex, Lathem, IBM, Edwards, Cincinnati D10 D12, and others
Hour: 55 seconds each xx:58:05 12-hour: Ten 95 second pulses each odd minute from 5:05:00 to 5:23:00	Standard Electric Time, Faraday, Cincinnati D8, HoneyWell, and others
Hour: none 12-hour: 1 to 2 seconds pulse at 12:00:00am	Common digital clock resets by Faraday, National Time, and others

Supported 4-Wire Resets:

Reset pulse(s)	Common Manufacturers
24VAC run, 24VDC reset 12-hour: 2 second pulse each 12:00:00	National Time & Signal D62/D64, Faraday

System Layouts

DLU

Includes wiring for 3 or 4-wire clock systems

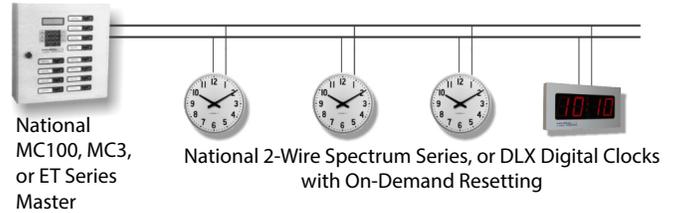Pre-configured for automatic detection of common 3-wire reset formats

Existing Systems with Conventional Reset

Master Clock

Existing 3-Wire Synchronous Clocks
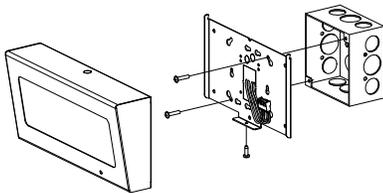
National 3-Wire Spectrum Series, or DLU Digital Clocks
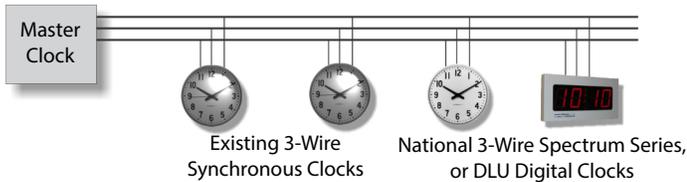
DLX

Includes wiring for 2-wire clock systems

Pre-configured for On-Demand Instant Correction and 2-wire reset formats

National Time System with Instant Correction

National MC100, MC3, or ET Series Master

National 2-Wire Spectrum Series, or DLX Digital Clocks with On-Demand Resetting
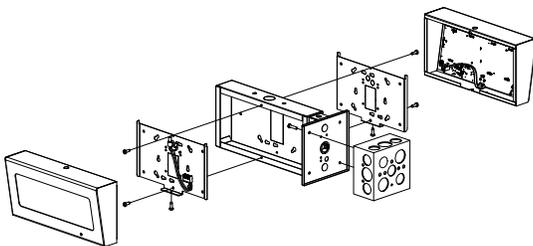
Typical Installations

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 large knock-out in the center of the bracket.
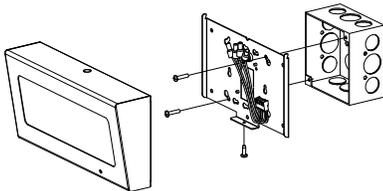

120V Hard Wired Transformer
The transformer assembly comes mounted to the back of the Standard Hanger Bracket. Connect the 120VAC wires to the transformer and mount the bracket to a Deep 4 Square box with the transformer inside the box.


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.
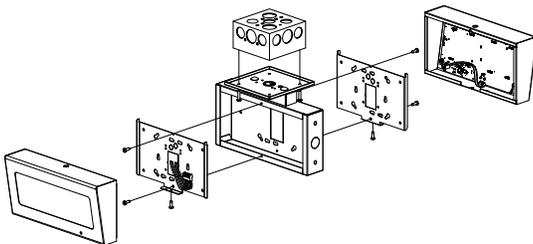

Double Face Ceiling Mount
For ceiling mount installations, the Double Face Bracket can be assembled using the holes in the top of the Corridor Box. Mount the Double Face Bracket to a securely installed 4 Square electrical box.
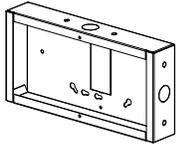
D225-SURF BOX : Surface Mount Box for 4-Digit D225
The Surface Mount Box can be mounted to Handy/Single Gang/Double Gang/4 Square electrical boxes or directly to the wall surface. The Surface Mount Box provides room for a hard wired transformer and has knock-outs for conduit entry. The D225 Surface Box adds 1.75" of depth.
*For 6-Digit D225 clocks, use the D225-6-SURF BOX*
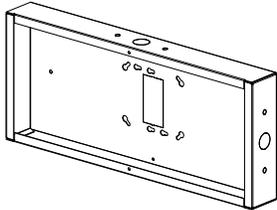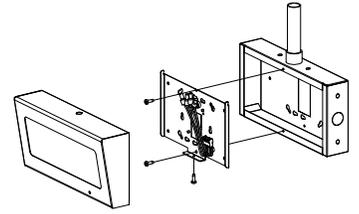
**D400-SURF BOX : Surface Mount Box for 4-Digit D400**
The Surface Mount Box can be mounted to Handy/Single Gang/Double Gang/4 Square electrical boxes or directly to the wall surface. The Surface Mount Box provides room for a hard wired transformer and has knock-outs for conduit entry. The D400 Surface Box adds 2" of depth.
For 6-Digit D400 clocks, use the D400-6-SURF BOX
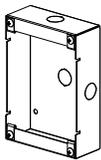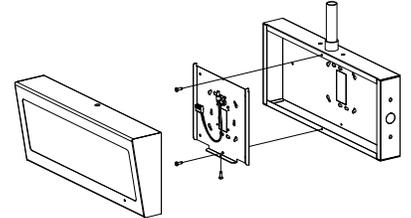
**D400-CORR-SURF BOX : Double Face D400 Surface Mount Box**
The Surface Mount Box for D400 Double Face clocks mounts directly to the wall surface. Knock-outs on the sides of the surface box allow for conduit entry. The Surface Mount Box adds 2" of depth.
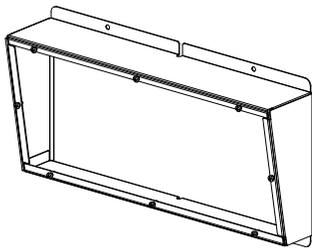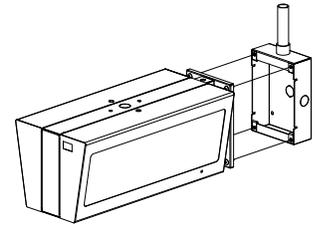
CV-GUARD-SF-SL : Clear-View Guard, Semi-Flush
The steel protective guard has a clear polycarbonate window for obstruction free viewing. See Bulletin C-624 for more information on the Clear-View Guard.
For clocks with a Surface Mount Box, use the CV-GUARD-S-SL
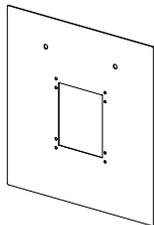
ADAPT-143 : Flush Mount Adapter for Digital Clocks
Adapter plate allowing D225 and D400 digital clocks to mount to a National Time 143 Flush Clock Wall Box. The ADAPT-143 plate is 10" x 10".
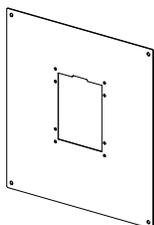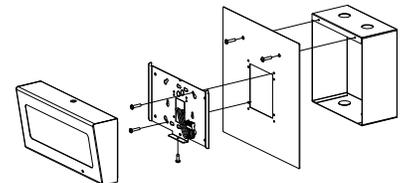
ADAPT-GENERIC : Generic Adapter Plate for Digital Clocks
Adapter plate allowing D225 and D400 digital clocks to install over existing wall boxes by other manufacturers. The ADAPT-GENERIC plate is 10" x 10" with four mounting holes at the corners of the plate.
Custom adapter plates are available upon request.

Model Number	Description
2.3" Digital Clocks - Single Face	
SF-D225R-4-DLX-24V	TimeCast 2.3" Digital Clock, Red 4-Digit, 24V, DLX 2-Wire
SF-D225R-4-DLX-120V	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Transformer, DLX 2-Wire
SF-D225R-6-DLX-24V	TimeCast 2.3" Digital Clock, Red 6-Digit, 24V, DLX 2-Wire
SF-D225R-6-DLX-120V	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Transformer, DLX 2-Wire
2.3" Digital Clocks - Double Face[1]	
DF-D225R-4-DLX-24V	TimeCast 2.3" Double Face Digital, Red 4-Digit, 24V, DLX 2-Wire
DF-D225R-4-DLX-120V	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Transformer, DLX 2-Wire
DF-D225R-6-DLX-24V	TimeCast 2.3" Double Face Digital, Red 6-Digit, 24V, DLX 2-Wire
DF-D225R-6-DLX-120V	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Transformer, DLX 2-Wire
4" Digital Clocks - Single Face	
SF-D400R-4-DLX-24V	TimeCast 4" Digital Clock, Red 4-Digit, 24V, DLX 2-Wire
SF-D400R-4-DLX-120V	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Transformer, DLX 2-Wire
SF-D400R-6-DLX-24V	TimeCast 4" Digital Clock, Red 6-Digit, 24V, DLX 2-Wire
SF-D400R-6-DLX-120V	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Transformer, DLX 2-Wire
4" Digital Clocks - Double Face[1]	
DF-D400R-4-DLX-24V	TimeCast 4" Double Face Digital, Red 4-Digit, 24V, DLX 2-Wire
DF-D400R-4-DLX-120V	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Transformer, DLX 2-Wire
DF-D400R-6-DLX-24V	TimeCast 4" Double Face Digital, Red 6-Digit, 24V, DLX 2-Wire
DF-D400R-6-DLX-120V	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Transformer, DLX 2-Wire

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.

National Time & Signal

Model Number	Description
2.3" Digital Clocks - Single Face	
SF-D225R-4-DLU-24V	TimeCast 2.3" Digital Clock, Red 4-Digit, 24V, DLU 3-Wire
SF-D225R-4-DLU-120V	TimeCast 2.3" Digital Clock, Red 4-Digit, w/120V Transformer, DLU 3-Wire
SF-D225R-6-DLU-24V	TimeCast 2.3" Digital Clock, Red 6-Digit, 24V, DLU 3-Wire
SF-D225R-6-DLU-120V	TimeCast 2.3" Digital Clock, Red 6-Digit, w/120V Transformer, DLU 3-Wire
2.3" Digital Clocks - Double Face[1]	
DF-D225R-4-DLU-24V	TimeCast 2.3" Double Face Digital, Red 4-Digit, 24V, DLU 3-Wire
DF-D225R-4-DLU-120V	TimeCast 2.3" Double Face Digital, Red 4-Digit, w/120V Transformer, DLU 3-Wire
DF-D225R-6-DLU-24V	TimeCast 2.3" Double Face Digital, Red 6-Digit, 24V, DLU 3-Wire
DF-D225R-6-DLU-120V	TimeCast 2.3" Double Face Digital, Red 6-Digit, w/120V Transformer, DLU 3-Wire
4" Digital Clocks - Single Face	
SF-D400R-4-DLU-24V	TimeCast 4" Digital Clock, Red 4-Digit, 24V, DLU 3-Wire
SF-D400R-4-DLU-120V	TimeCast 4" Digital Clock, Red 4-Digit, w/120V Transformer, DLU 3-Wire
SF-D400R-6-DLU-24V	TimeCast 4" Digital Clock, Red 6-Digit, 24V, DLU 3-Wire
SF-D400R-6-DLU-120V	TimeCast 4" Digital Clock, Red 6-Digit, w/120V Transformer, DLU 3-Wire
4" Digital Clocks - Double Face[1]	
DF-D400R-4-DLU-24V	TimeCast 4" Double Face Digital, Red 4-Digit, 24V, DLU 3-Wire
DF-D400R-4-DLU-120V	TimeCast 4" Double Face Digital, Red 4-Digit, w/120V Transformer, DLU 3-Wire
DF-D400R-6-DLU-24V	TimeCast 4" Double Face Digital, Red 6-Digit, 24V, DLU 3-Wire
DF-D400R-6-DLU-120V	TimeCast 4" Double Face Digital, Red 6-Digit, w/120V Transformer, DLU 3-Wire

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 Brackets[2]	
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	*Consult Factory for custom mounting plates*

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.