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## Item # Canister Style Clocks, Canister Style Clocks (Back-Lighted)



# **Canister Style Clocks (Back-Lighted)**

The Canister style clock is a complete clock assembly which is usually back-lighted and is flush mounted, semiflush mounted, or surface mounted on an exterior wall. Canister clocks are available in diameters from 24" to 108" in round and square styles. Optional clear polycarbonate protective crystals are available on clock diameters up to 48". Full metal "Silhouette" overlay dials are available to provide additional depth and contrast to the clock dials.

All Canister Style Clocks are built to customer specifications including sizes, hand & dial marker styles, lighting, addition of optional items, etc. Contact Elderhorst Bells, Inc. for details.

# **OPTIONS - CLOCK SPECIFICATIONS**

### **OPTIONS**

Style	Round Square
Туре	Flush Mounted with Protective Crystal Flush Mounted without Protective Crystal Surface Mounted with Protective Crystal Surface Mounted without Protective Crystal Semi-Flush Mounted with Protective Crystal Semi-Flush Mounted without Protective Crystal

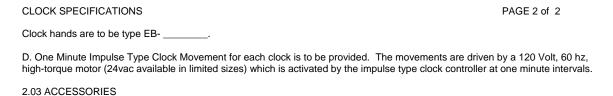
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## **EXTERIOR CLOCK SPECIFICATIONS - CANISTER STYLE CLOCK (BACK-LIGHTED)**

PART 1 – GENERAL
1.01 SUMMARY
A. Provide clock system consisting of clock(s), in diameter*, as shown on drawings, as specified, and as needed for a complete and proper installation.  *(Canister style clocks available in diameters- round- from 24" to 108" and square, or, rectangle sizes to 108" in both dimensions)
B. Coordinate clock system of this section with General Conditions and Supplementary Conditions.
1.02 SUBMITTALS
A. Submit shop drawings and wiring diagrams. Upon approval, General Contractor shall send to field or jobsite superintendent copy of final approved shop drawings and wiring diagrams.
B. Submit dial sample (if required)
C. Submit color sample – for exposed surfaces (if required)
1.03 QUALITY ASSURANCE
A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts, and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this section.
B. Use materials which shall be free from defects impairing strength, durability, and appearance; shall be of best commercial quality for purpose required; and shall comply with the approved drawings.
C. Use manufacturer who has had ten (10) years of experience in the manufacture of the specified product.
1.04 WARRANTY
A. Warrant the clock system for one year after the date of delivery of product installed by others. Warranty is not in effect as a result of improper installation or wiring, lightning damages, vandalism, or improper servicing.
PART 2 – PRODUCTS
2.01 MANUFACTURER
A. Use the CANISTER style clock as manufactured by Elderhorst Bells, Inc. 875 Gravel Pike, Palm, PA 18070, Phone# 800-810-7892, Fax: 215-679-3692, email: <a href="mailto:info@elderhorstbells.com">info@elderhorstbells.com</a>
B. Useclock(s) as shown on the drawings.  - flush mounted - with or without protective crystal*  - surface mounted - with or without protective crystal*  - semi-flush mounted - with or without protective crystal*
* PROTECTIVE CRYSTAL AVAILABLE IN DIAMETERS TO 48" MAXIMUM. FULL METAL OVERLAY DIALS ARE NOT AVAILABLE WITH PROTECTIVE CRYSTAL
2.02 MATERIALS
A. Clock housing to be constructed of 1/8" (.125") thick aluminum with a ¼" (.250") thick white cast acrylic dial face in a neoprene "U" gasket, and a back cover of aluminum sheet. The internal structure of the clock is of minimum ¾" aluminum box tubing (1/8", .125" wall thickness), with additional support of aluminum angle of the same thickness. All structural elements are welded together for a rigid self supporting assembly. All hardware is of stainless steel. Back-lighting is to be provided consisting of grid mounted LED lamp assemblies with matching transformers. Back covers are provided.
B. Clock dial markings (ACRYLIC DIAL MARKINGS) will be cut from 1/4" (.250") thick black acrylic and permanently bonded to the clock face.  Clock dial markings are to be type EB, (with optional EB-R minute/hour ring).

### OR

- B. Clock dial markings (METAL OVERLAY DIALS) will be cut from  $\frac{1}{4}$ " (.250") aluminum and mounted to the canister clock housing  $\frac{3}{4}$ " above the white acrylic clock dial. Metal Overlay Dial markings are to be type EB-\_\_\_\_ -O.
- C. Clock hands to be provided for each clock and are to be cut from 1/8" (.125") thick aluminum. The hub is to be machine bored for proper fit to the clock movement shaft. Balance rods or counterweights are to be affixed to the clock hands to properly balance the hands.



A. Provide an EB-200 series Clock Controller – this is a minute impulse type master-clock with a high degree of accuracy due to the quartz micro-processor time base. The unit incorporates a lithium battery backup for automatic time correction following power failure, and automatic daylight savings time correction. The controller is housed in a NEMA 6P surface wall mount enclosure. Field wiring diagrams are to be provided.

#### **OPTIONAL ITEMS:**

- B. TEMPORA-DIGITAL Clock/Chime system quartz based with lithium battery backup for automatic time correction following power failure. Automatic daylight savings time correction. The digital chime system allows for user programmable play of 1-4 bell peals, funeral tolls, Westminster Chime (or other hourly melody), Hour-strike, and a limited selection of included melodies. System includes an amplifier. The TEMPORA-DIGITAL system is housed is a steel rack mount type enclosure. (requires loudspeakers see below)
- reflex sound projector loudspeaker horn(s) will be provided with 60 watt drivers, (4 recommended for uniform sound dispersion).
- C. GPS- Global Positioning Satellite time synchronization system. System Includes antenna and receiver for automatic time correction from the GPS time signal. The GPS receiver is remote mounted in a NEMA 6P surface wall mount enclosure.

#### 2.04 FABRICATION

- A. Fabricate clock housing to size noted above. Install dial, clock movement, and lighting into clock housing and test for proper operation with Clock controller.
- B. Provide separate wiring for clock movement and for illumination.

#### 2.05 FINISHES

A. Finish all aluminum surfaces exposed to front viewing. Clock housing and hands shall be caustic etched, primed with two heavy coats of primer, and finished with two heavy coats of industrial enamel, (black standard). All concealed metal to be of mill finish aluminum.

#### 2.06 CAULKING

- A. Clean and dry all surfaces to be caulked.
- B. Apply silicon caulking with caulking gun, using nozzle of proper size to fit joint width.

#### PART 3 - EXECUTION

#### 3.01 PROJECT SITE CONDITIONS

- A. Verify that site conditions are suitable and accessible for delivery and installation.
- B. Confirm that all preparatory work is in place in accordance with approved shop drawings prior to installation.

#### 3.02 INSTALLATION

- A. Use skilled and experienced installation craftsmen familiar with such work, and in accordance with manufacturer's instructions and approved shop drawings.
- B. Coordinate with other trades as required to assure proper and adequate installation
- C. Install clock controller in an accessible area.
- D. Provide and install separate electrical circuits 120 vac, 60 hz for clock system and illumination, in accordance with local building and electrical codes.

#### 3.03 CLEAN-UP

- A. Clean all soiled and dirty areas, and touch up any scratches or abrasions.
- B. Clean up all debris caused by work of this section, keeping the premises clean and neat at all times.

#### **END OF SECTION**