

TMS / ITS Approved Products List

CCTV Pole Cabinet

The Cabinet assembly shall be listed by a National Recognized Testing Laboratory (NRTL) as defined by the U.S. Department of Labor. The testing laboratory must be listed by OSHA in its scope of recognition for the applicable tests being conducted as required by this specification. A list of recognized testing labs for products sold in the United States may be found on the U.S. Department of Labor's web site: <http://www.osha.gov/>

The Cabinet assembly shall be listed and labeled by a NRTL as being in compliance with UL508 and UL50. The cabinet shall be ventilated, lockable, and have a protective housing for rack mounted fiber optic communications equipment and electrical power distribution components. The cabinet must include provisions for mounting EIA 19 inch rack mounted equipment that complies with EIA-310D including a slide out shelf.

The cabinet mounts directly to Mn/DOT's Closed Circuit Television Folding Pole, a galvanized steel pole (refer to <http://www.dot.state.mn.us/products/tms-its/CCTVMaterials.html>). The rear wall of the cabinet shall be reinforced such that mounts do not permit the cabinet to flex or rotate on the pole. An additional 0.250 inch thick gasket shall be provided to seal the access opening on the back wall and the opening in the pole.

Cabinet mounting kit

A cabinet mounting hardware kit shall be included for mounting and sealing the cabinet to the galvanized pole. The kit consists of the following:

1. Six stainless steel 3/8" – 16NC bolts, 5/8" length.
2. Six stainless steel flat washers, 3/8" (not required if washer head style bolts are used).
3. Six stainless steel lock washers, 3/8".
4. Two neoprene mounting plate gaskets, 0.063" thick.
5. One neoprene access hole gasket, 0.25" thick.

Cabinet Construction

The top of the cabinet shall be crowned approximately 0.5 inches to prevent rain and snow accumulation. The cabinet shall be fabricated from 0.125 inch, type 5052-H32 aluminum. To help prevent injuries, all fabricated material and added components must be made smooth to the touch. Exterior seams shall be continuously welded with edges filled to a 0.03 inch radius. All welding shall be done with gas tungsten arc welds that comply with AWS B3.0 and C5.6 for aluminum. All welds shall be neatly formed and free of cracks, blowholes and other irregularities. All nuts, bolts and fasteners shall be stainless steel unless an alternate corrosion proof material is approved.

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The Cabinet shall have a clear-anodized finish inside and out. The aluminum surfaces must have a uniform appearance after the anodizing process. Apply the anodic coating as per MIL-A-8625C for Type II, Class I Coating except:

1. The outer surface coating is 0.018 mm (0.0007 in)
2. The coating weighs 27 mg per 645 mm²
3. The coating is sealed by immersion in a 100 degrees C. aqueo percent nickel acetate solution for 15 minutes.

Before applying the anodic coating, the aluminum shall be:

4. etched with inhibited alkaline cleaner at 70 degrees C for 5 minutes;
5. rinsed with cold water;
6. immersed in a 50 percent (by volume) nitric acid solution for 2 minutes at 20 degrees C;
7. rinsed with cold water.

Door

The cabinet door opening shall be designed to prevent moisture intrusion. All flange joints are welded. The door shall have a 6 mm (0.25 inch) closed cell neoprene gasket that provides a uniform seal with the door frame surface and shall be permanently bonded to the door. The door shall incorporate at least two lift-off hinges. The lift-off hinges allow for easy door removal from the hinge side. Hinges shall be mounted such that the cabinet door opens out to the right. The hinges shall be die-cast zinc construction with a black powder coat paint finish and a black nylon washer. An alternate, all stainless steel design may be considered for approval. Hinges shall be mounted with appropriately sized stainless steel hardware.

A stainless steel door handle shall be centered vertically on the door panel. Placement of the handle shall be such that turning the key in the lock does not interfere with gripping the handle. The door latching mechanism must be designed to work with minimal effort while providing tight and uniform sealing with the door frame. The handle shall be at least 102 mm (4 inches) long and capable of a working load of 5560 N (1250 lbs.). The cabinet door shall also be equipped with provisions for a padlock.

A document holder shall be mounted to the lower portion of the inside of the door using threaded studs and locknuts.

Locks

The cabinet door lock shall be of brass construction, equal to a PELCO Type I Police Lock No. SM-1012 and shall have a 2-5/8" LONG KEY No. SM-0200. A cover that swings away freely shall be provided over the keyhole. The lock must be attached to the door so that the mounting bolt heads may be drilled and the lock assembly pushed through in the case of a failure to open. One key shall be supplied with each cabinet upon shipment.

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Ventilation

Provisions shall be made for adequate cross flow ventilation. A thermostatically controlled fan rated at a minimum 30 CFM airflow shall be installed in the cabinet to exhaust any heated air. The thermostat shall be a snap disc type rated at 85 degrees F. The exhaust air opening and external air inlet shall be large enough to allow sufficient air exchange per the rated fan capacity. Both openings shall be filtered on the inside and covered with shrouds on the outside. The external shrouds shall be designed to be non-restrictive to the airflow, louvered on the bottom and extend a minimum of one inch below the opening in the cabinet wall. The air filters must be designed for easy replacement.

Cabinet Interior

Provisions shall be made for two vertical equipment mounting flanges that are constructed, drilled and tapped according to the EIA-310-D Standard. The flanges are made of steel and are cadmium or zinc plated. Brackets or fixtures made to support these shall be welded to the cabinet interior and provide for 4 inches of adjustment in depth from the front wall. The adjustments shall be in 0.50" increments.

A drain hole shall be installed in the bottom of the cabinet. The hole is 0.75 inches in diameter and fitted with a screened vent plug.

An adjustable cover plate shall be mounted over the cable access hole located in the lower back wall. The plate shall slide up and down in order to close off the unused area of the opening after cables are installed in cabinet. A cable protection material shall be applied to the cable opening edge in order to protect cable from abrasion.

The cover plate shall be large enough to cover the entire opening at one end of the adjustment (when no cables are installed) while providing variable coverage throughout the range to the other end of adjustment (totally filled with cables). The plate shall be mounted using welded or pressed in place studs and stainless steel lock nuts with nylon type locking threads. The studs shall be 0.25 inch in diameter.

Four polymer spools shall be installed on the upper back wall of the cabinet for fiber cable management. Each spool is positioned 90 degrees apart, approximately 7 inches between each, with the first one being placed 2.25 inches from the top center of the back wall. The spools cannot extend more than 2 inches off the wall.

A slide out shelf shall be provided and mounted as low as possible on the EIA flanges. The shelf is a nominal 0.063 inch thick aluminum, has a depth of 10.0 inches and supports 50 lbs. of weight.

Fiber Optic Termination Panel

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A fiber optic termination panel shall be mounted 10.00 inches down on the EIA mounting rails. (Refer to <http://www.dot.state.mn.us/products/tms-its/CCTVMaterials.htm> for product specifications and approved products.)

Power Distribution Components

A power distribution assembly shall be mounted on the lower portion of the cabinet back wall. All components shall be located on an aluminum panel that is no larger than 19.0" L x 9.0" W. The panel is mounted no more than 0.25 inches away from the back wall. The panel components and wiring shall be protected by a transit voltage surge suppressor that meets the following specifications:

1. Provides both series and parallel protection.
2. Provides all mode protection
3. Rated at 15 Amps operating current.
4. Response time is less than one-nanosecond.
5. Has active sine wave tracking circuitry for elimination of ring wave transients.
6. Has an LED status indication that the unit is functional.
7. Uses an internal encapsulating compound that absorbs thermal stresses to ensure long life and environmental protection of the circuitry and components.
8. UL 94 flame rated for any plastics.
9. UL 1449 **Third** Edition and CUL rated.
10. Tested in accordance with ANSI/IEEE C62,41-1991-IEEE Guide for Surge Voltages in Low-Voltage AC Power Circuits.
11. Unlimited 10 year free replacement warranty.

The following components are located on the panel:

1. One - 3 position AC service terminal block that accepts No. 4 AWG and smaller wires, designed for direct compression of the stripped bare wire.
2. One DIN rail assembly for mounting a 15 AMP circuit breaker, AC load distribution terminal blocks, fan thermostat and fuse holder.
3. One AC load distribution block assembly. The block accommodates one main wire in and up to four load wires out.
4. A quad receptacle box containing two duplex receptacles, one is a GFCI.
5. One -12 position AC ground bus that accommodates No. 6 AWG and smaller wires.

Rack Mounted Outlet Strip

Provide and install one rack mounted, recessed housing style power strip with six front facing outlets mounted 14 inches up from the bottom of the EIA mounting flanges. (Refer to <http://www.dot.state.mn.us/products/tms-its/CCTVMaterials.htm> for product specifications and approved products.)

Warranty

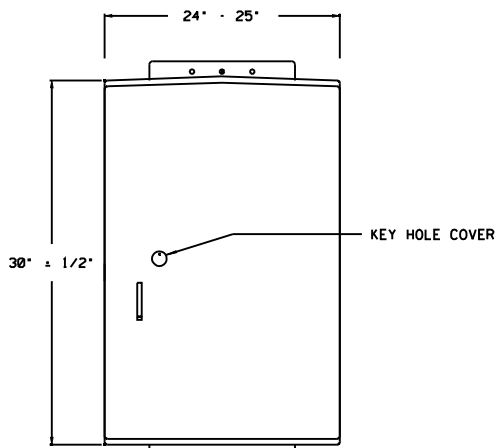
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The Manufacturer shall install a label on the inside of the door that identifies the cabinet type, date of manufacture, warranty expiration date, and Manufacturer's name. The warranty expiration date shall be expressed in the (mm/dd/yyyy) format.

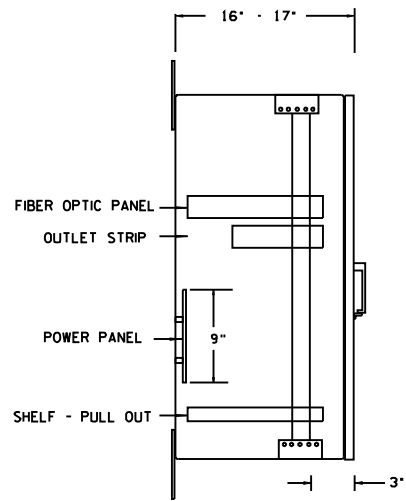
The warranty shall cover all materials and workmanship for twenty-four months after delivery of the cabinets. During the warranty period the Manufacturer shall furnish replacements for each failed component at no cost to the Department. When a Mn/DOT Representative notifies the Manufacturer that a component has failed, the Manufacturer shall acknowledge the notification within twenty-four hours and furnish the replacement part within forty-eight hours. Replacement parts must be in stock or readily available for a period at least equal to the warranty period. The Mn/DOT Representative shall be notified of any Items that are no longer of common stock and will render final approval of any alternate source arrangements. The Manufacturer shall be responsible for all the shipping arrangements and costs.

Documentation

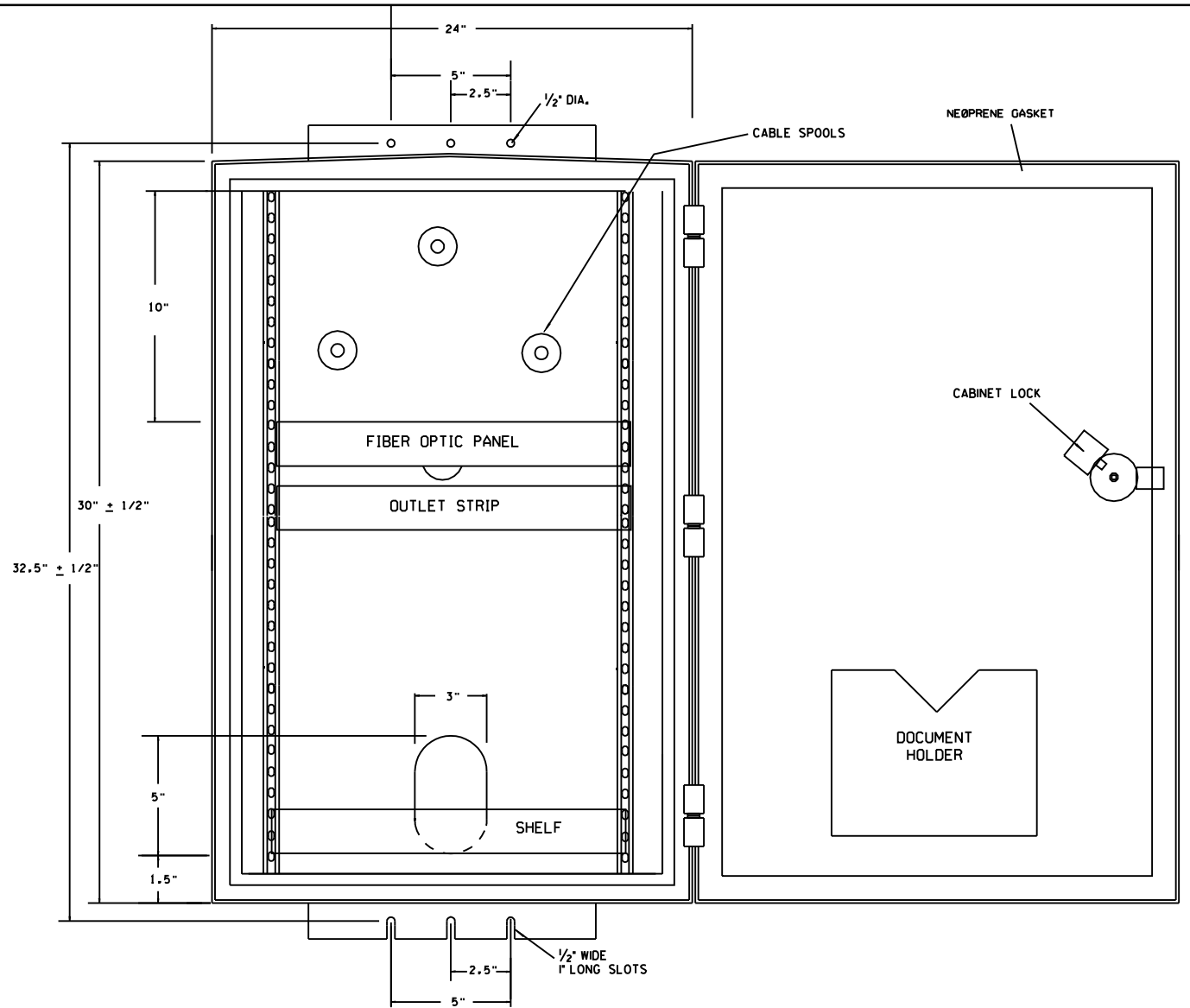
A cabinet bill of materials, individual component specification sheets, and a wiring diagram shall be provided in the document holder.



FRONT VIEW



SIDE VIEW



DRAWING NOT TO SCALE

CCTV CABINET