Small Single Door Enclosure Specifications

NEMA 4X

I. General

A. The purpose of this specification is to provide details of an enclosure that protects internal equipment from rain, dust, vandalism, and other conditions found in an outdoor or otherwise harsh environment.

B. The manufacturer must be able, upon request, to produce part numbers on all components for repair purposes. Certificates of compliance may be requested on each cabinet or on any component or part thereof.

II. Performance

A. The enclosure(s) will meet or exceed the requirements of a NEMA 4X rating and shall be UL Listed.

III. Cabinet Construction

A. General

1. The cabinet enclosure shall be constructed from 5052-H32, steel aluminum alloy which has a thickness of 0.125 in. Alternate material is type 304 stainless steel, minimum thickness 14 gauge. Specifier must choose either aluminum or stainless steel construction. External welds shall be made by the Heliarc welding method; whereas, internal welds will be made by the wire welding method. All welds shall be neatly formed and free of cracks, blow holes, and other irregularities.

2. All inside and outside edges of the cabinet shall be free of burrs.

3. The door opening shall be double flanged on all four (4) sides which increases strength around openings and keeps dirt and liquids from entering the enclosure when door is opened.

B. Door/Hardware

1. The cabinet door will be a minimum of 80% of the front surface area and shall be hinged on the right side when facing the cabinet.

a) The door shall be furnished with a gasket that satisfies the physical properties of as found in UL 508 table 21.1 and shall form a weathertight seal between the cabinet and door.

2. The hinges shall be continuous and bolted to the cabinet and door utilizing 1/4-20 stainless steel carriage bolts and nylock nuts.

a) The hinges will be made of 0.090-inch-thick aluminum or 0.075-inch-thick stainless steel with a 0.25-inch stainless steel hinge pin.

b) The hinge shall be capped by weld to render it tamperproof.

c) Hinge leaves will not be exposed externally when the door is closed, but hinge knuckles may protrude. All bolt holes shall be gasketed.

3. The latching mechanism shall be a slam type.

a) The specified Corbin Lock is deleted and replaced with weathertight 1/4 turn latches.

IV. Equipment Mounting

A. Aluminum Back Panel

1. The enclosure will be provided with a natural finish 5050-H32 aluminum back panel having a thickness of 0.125 inch.

2. The panel shall be a natural finish. All mounting hardware will be furnished.

3. Panels are to be mounted on standoffs pressed through the back wall of the enclosure.

B. Shelves (Optional on enclosures 15" or more in depth.)

V. Cabinet Finish

A. Unless otherwise specified, the outside of the cabinet will have a smooth, uniform, natural mill finish.

B. If unpainted, the following steps shall be taken as a minimum requirement.

1. The cabinet, doors, and any other parts will be treated with an iron phosphate conversion technique.

2. After phosphatizing, the parts shall be baked to eliminate any moisture in seams.

3. The finish coat of a polyester powder will be baked ten (10) minutes at 400-450° F.

4. The finish shall be commercially smooth, substantially free of flow lines, paint washout, streaks, blisters, and other defects that would impair serviceability or detract from general appearance.

VI. Cabinet Mounting

A. Pole or Wall Mounted Enclosure

1. Enclosures shall have mounting plates top and bottom of rear wall.

2. Mounting plates will have holes for wall mounting and vertical slots for pole mounting using banding.

VII. Approved Manufacturer

A. Cabinet is to be manufactured by APX Enclosures, Inc. or an approved UL Listed equivalent.