

# Precision Quincy Industries

## Standard Specification

### Rail-Transit Shelter: Communication & Signaling

**Model PQI-RT1020 AL**

**Model PQI-RT1030 AL**

**Model PQI-RT1040 AL**



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## 1.01 Rail-Transit Shelter: Communication & Signaling

- A. Standards: Shall meet or exceed the requirements of the latest edition of the standard specifications:
- 1 ANSI – American National Standards Institute.
  - 2 AWS – American Welding Society.
  - 3 ASTM – American Society for Testing and Materials.
  - 4 AISC – American Institute of Steel Construction.
  - 5 IBC – International Building Code.
  - 6 IEEE – Institute of Electrical and Electronics Engineering.
  - 7 MBMA – Metal Building Manufacturing Association.
  - 8 NEC – National Electrical Code.
  - 9 NEMA – National Electrical Manufacturers Association.
  - 10 NFPA 101 – National Fire Protection Association “Life Safety Code”.
  - 11 SSPC – Steel Structures Painting Council.
  - 12 IECC – “Energy Efficiency” (thermal envelope, lighting, HVAC).
- B. Manufactured by Precision Quincy Industries or engineer approved equal.
- C. Prefabricated standard nominal 10’x20’, 10’x30’, 10’x40’ aluminum equipment Shelters suitable for field installation on piers or concrete slab.
1. Outside Dimensions (approximate): 120” wide x 240”, 360”, or 480” long x 11.5’ high (Bottom of base to top of roof), 9.5’ (Floor to ceiling).
  2. Inside Dimensions (approximate): 112” wide x 232”, 352”, or 472” long x 11.5’ high (Bottom of base to top of roof), 9.5’ (Floor to ceiling).
- D. Design Specification:
1. Floor Load: 150 pounds per square foot.
  2. Snow Load: 40 pounds per square foot.
  3. Wind Speed: 110 mph Exposure C.
  4. Seismic: Risk Category II, Site Class D.
  5. Type NEMA 3R
- E. Construction:
1. Base: Formed aluminum channel with integrated mounting plates and permanent lifting lugs. Replaceable covers located on each end of special floor pans that can be removed

to allow access to integrated mounting plates located at the bottom of the base. Mounting plates have hole for bolt and nut to tighten and secure enclosure to ground. Rodent guard is welded inside each special pan to prevent vermin from getting inside. Base designed to lift enclosure, with all equipment in place.

2. Floor: .187" formed 3003-H14 aluminum steel box sections.
3. Walls: Self-framing formed panel .100" 3003-H14 Aluminum, with 2" interior plug weld every 6" on the interior interface between two adjacent wall panels.
4. Roof: Welded, .100" 3003-H14 formed roof sheets, high pitch, gable style, with passive ventilation. Pitch angle of 12 degrees. Lengthwise and widthwise roof seam caps tack welded on the roof top sheet.

#### F. Interior Finish:

1. Floor: Slip-resistant gray epoxy covered by ¼" V-groove switchboard floor matting (ASTM D178-93).
2. Walls & Ceiling: Class-A Fire-Rated white textured FRP laminate over plywood substrate (ASTM E84).

#### G. Insulation:

1. Base: R-15 Unfaced fiberglass batt insulation in floor cavities protected by a rodent guard. (Energy code: R-15 Covers All the zones).
2. Walls: R-19 Rigid foam board insulation with vapor barrier in wall cavities. (Energy code: R-19 Covers All the zones).
3. Roof: R-25 Fiberglass batt insulation with vapor barrier in cavities between ceiling & roof. (Energy code: R-19 to R-25 in Zones 1 to 5, Above R30 for Zones 6,7,8).

#### H. Doors & Hardware:

1. Type: .100" aluminum, R-14 insulated, pan-in-pan doors with replaceable filter & sliding shut-off plate.
2. Size: (2) 36" wide x 84" high single door outward opening.
3. Lock set: Heavy-Duty 3-point with padlock able exterior handle and interior safety override per door.
4. Hasp: ¼"x2"x2" supplemental padlock angles per door.
5. Hinges: (3) Welded Lift-off hinges with brass pin and grease fittings per door.
6. Door Gasket: 1" D-shaped neoprene gasket with full perimeter contact and trip-resistant door jamb.
7. Door Holder: 90-degree & 170-degree with solid prop-rod per door.
8. Drip Cap: Welded aluminum channel above doorway.

#### I. Electrical 120/240V 1P 3W 60Hz:

1. A. Electrical Panel: (1) QO124M150, LOAD Center QO MB 240V 150A 1PH 24SP surface mounted, NEMA 1R.

2. TVSS: Surge Protection Device 120V/240V 3W+Grnd Nominal Discharge 20kA, Fault Current Rating 65kA UL 1449 4th Edition Listed Part No. AC21SM
3. Duplex Receptacles: GFCI, 20A, 125V, 2P, 3W, Self-grounding, NEMA 5-20R, indoor wall mounted, white color.
  - a. 10'x20' building, Qty-10
  - b. 10'x30' building, Qty-12
  - c. 10'x40' building, Qty-14
4. Exterior-Receptacle: Self-grounding GFCI Spec: 20A; 125V, 2P, back/side feed, NEMA 5-20R \*\*marked "WR" weather resistant\*\*

#### J. Lighting:

1. Interior: Surface mounted LED strip light fixture, 48", 30W, 120V, 4000 lumens, 4000k color temperature, cool white light appearance, 2 lamps.
  - a. 10'x20' building, Qty-8
  - b. 10'x30' building, Qty-10
  - c. 10'x40' building, Qty-12
2. Switch: (2) 3-way, 20A, 120VAC, toggle On-Off switches, extra heavy duty, self-grounding, at each entry door. White color.
3. Exterior (1) 18W, LED Wall Pack. 2124 Lumens 5000K Color Temp Photo electric cell. Dark Bronze. 120-277V. UL Listed. Per door.
4. EMERGENCY EXIT LIGHT TYPE: Single face, red w/arrows, 120/277 VAC, nickel/cadmium battery.

#### K. Environmental:

1. (1) 3-ton vertical wall mount HVAC unit with 6kW heat.
2. (1) Digital thermostat-7 day programmable, 1 stage heat, 1 stage cool, fan switch: auto & on. auto change over. keypad lockout. non-volatile program memory.
3. Intake: (1) 1000 CFM, filtered, gravity damper, ventilation fan with tamper-resistant exterior hood.
4. Exhaust: (1) with motorized backdraft damper and tamper-resistant exterior hood.
5. Thermostat: (1) Attic fan type: line voltage temp: 80°-130°f spec: 120/240 V
6. Switch: Exhaust Fan switch engraved nameplate

#### L. Grounding & Alarms:

1. Ground Bar: (1) 1/4"x4"x20" copper ground bus with insulated standoff.
2. Ground Strap: (1) Braided copper ground strap from frame to door per door.
3. Fire Alarm: Ceiling mounted heat/smoke detector(s) with AC cut-out.
4. Intrusion: (1) Magnetic reed switch, N.O. SPST, 100V, 0.5A 7.5VA, nonmetallic, per door.
5. (1) 50 pair punch down block with cover.

#### M. Miscellaneous:

1. UG Entrance: Full flexibility floor entrances with cover plates and cable chutes.
2. Cable Tray: "Cable Tray ready" and sell a trapeze mounting kit

3. Main Terminal Board: (1) ¾"x48"x84" MDO plywood terminal board coated with fire-retardant white paint.
4. Shelves: (2) ¾"x12" wide plywood shelf coated with fire-retardant white paint.
5. Desk: (1) Wall mounted shop desk.

**N. Warranty:**

1. 1-year structural and parts
2. 1-year purchase parts and components
3. Pass-through on Purchased Parts/Components.
4. Extended structural warranty available.

**Option Package-A:**

Included:

1. Electrical Panel: (1) QO130M200, LOAD Center QO MB 240V 200A 1PH 30SP surface mounted, NEMA 1R.
2. Redundant HVAC (1 additional) 3-ton vertical wall mount HVAC unit with 6kW heat.
3. (1) Lead/Lag Controller: programmable; digital spec: stat, hi-lo temp, smoke, alarm, economizer, supply power-24VAC.

Excluded:

1. Electrical Panel: (1) QO124M150, LOAD Center QO MB 240V 150A 1PH 24SP surface mounted, NEMA 1R.
2. (1) Digital thermostat-7 day programmable, 1 stage heat, 1 stage cool, fan switch: auto & on. auto change over. keypad lockout. non-volatile program memory.

**Option Package-B:**

Optional Certification: P.E. stamped drawing with structural and HVAC calculations.

**Option Package-C:**

HVAC exterior vandal cage.

**Option Package-D:**

Optional window.