



# CABINET - INSTRUMENT TRANSFORMER

ER 3-130-H

Indoor - Outdoor

PAGE 1 OF 5

480 Volts - 800 Amperes Maximum

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**USE :** For commercial and industrial installations, purchased and installed by customer. To enclose 600 volt insulation class instrument transformers on indoor or outdoor meter installations. For installing two or three each of voltage and current transformers with provisions to bypass, remove, or replace while energized.

**STANDARD ORIGINATED**  
03-94

**PREVIOUS STANDARD REVISION**  
01-01-18

**PREVIOUS STANDARD NUMBERS**  
ER 15-456-B (03-29-90)

**REVISION SUMMARY:** Convert to current format. Emphasize Erickson cabinets intended for outdoor use require additional purchase of vent kit.

**REFERENCE(S):** (All references are latest revision; unless noted)

**National Standard(s)**

- a. National Electrical Code® (NEC®) 408.56: Minimum Spacings
- b. NEC® 408.58: Panelboard Marking

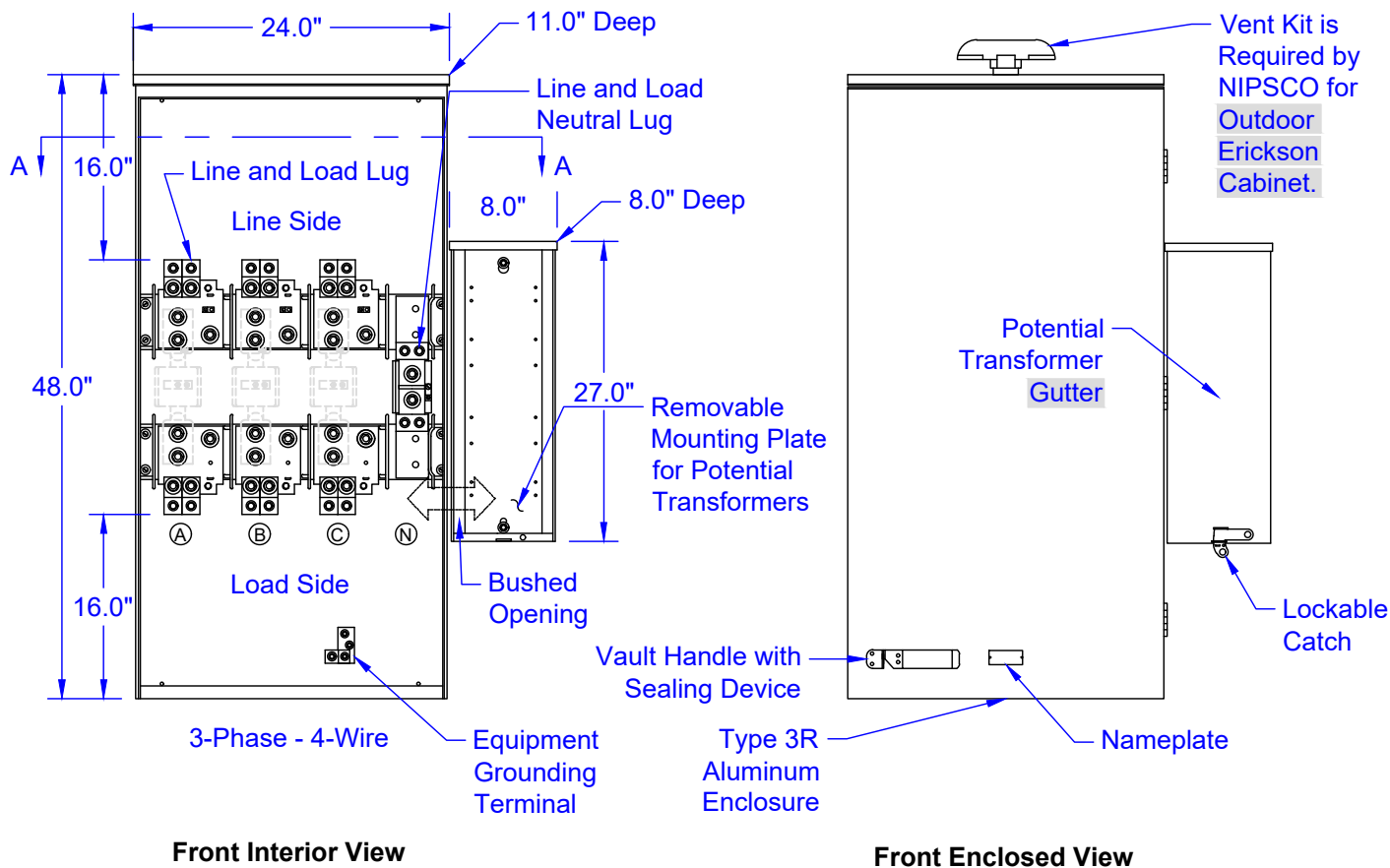
**SPECIFICATIONS:**

**1. GENERAL:**

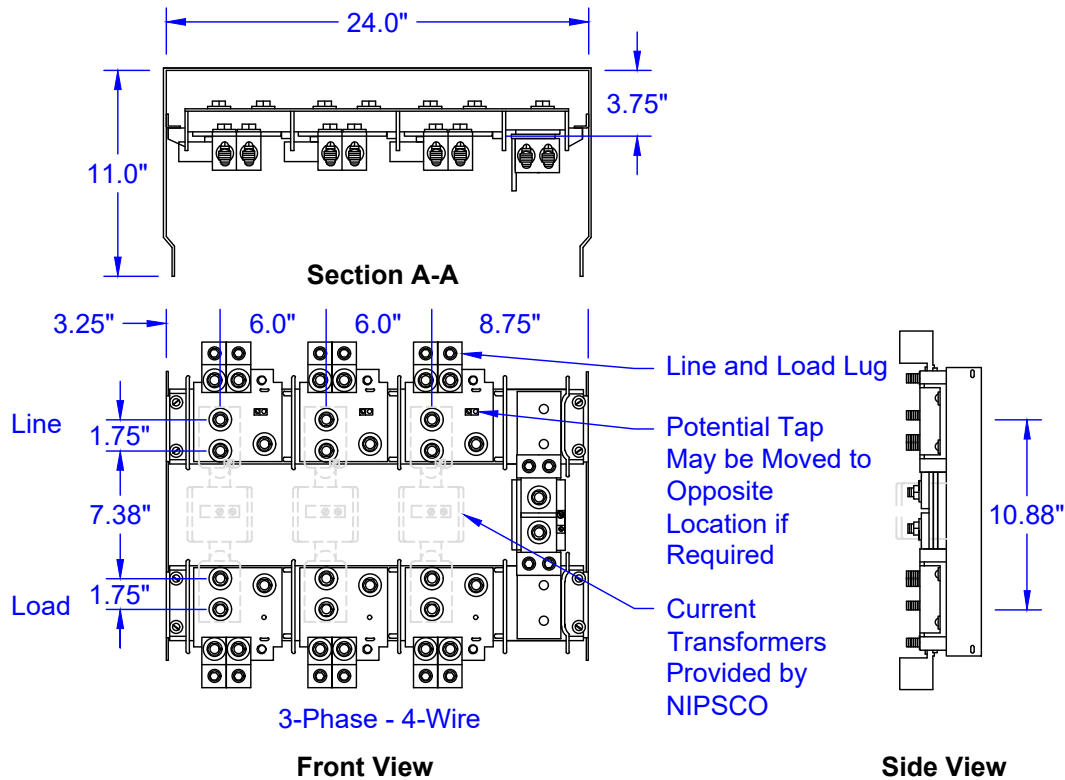
- 1.1. Cabinets shall meet all requirements of the above-referenced specifications, where applicable, unless otherwise noted below.
- 1.2. All current carrying parts shall be designed on the basis of 1,000 amperes per square inch capacity for copper and 700 amperes per square inch for aluminum.
- 1.3. All dimensions shown are minimum.
- 1.4. Spacing between opposite polarity live parts and between live parts and ground, when mounted on the same surface, not over 600 volts, shall be a minimum of two inches and one inch, respectively.
- 1.5. Cabinets shall be marked by manufacturer with voltage, current rating, number of phases for which they are designed, and manufacturer's name or trademark so as to be visible after installation, without disturbing interior parts or wiring.
- 1.6. For use on 3-phase 3-wire 480-volt delta or 3-phase 4-wire 480Y/277 volt service; 800 amperes maximum.

**2. CABINET:**

**2.1. Configurations:**



**Figure 2.1-1**



**Figure 2.1-2**

- 2.2. Material: Minimum 0.10" aluminum or 14-gauge steel with enamel finish
- 2.3. Front door or cover shall be hinged on the right (looking from the front of the cabinet) and equipped with sealing device that ensures one padlock seal will effectively prevent door or cover from opening.
- 2.4. Each line and load lug provided will accept one 600 KCM-#4 or two 350 KCM-1/0 copper or aluminum conductors. Two lugs are provided per phase as shown in **Section 2.1**, line and load. One additional lug can be added without modification.
- 2.5. Each line and load neutral lug provided will accept two 600 KCM-#4 or four 350 KCM-1/0 copper or aluminum conductors.
- 2.6. CT and lug landing pads and neutral are rated 800 amps.
- 2.7. Current transformers are provided by NIPSCO.
- 2.8. **Connections:**
  - 2.8.1. Line connections shall be made on top connection plate.
  - 2.8.2. Load connections shall be made on bottom connection plate.
- 2.9. **Current Transformer (CT) Primary Connection Plate:**
  - 2.9.1. Material: 1/4" x 3" x 4" copper or aluminum
  - 2.9.2. Drilled and tapped for current transformer, cable lug, and by-pass jumper bolts.
  - 2.9.3. Drawing shows six plates for mounting three 600 bolt class current transformers. When only two current transformers are required, omit neutral and provide center phase link.
- 2.10. **Neutral Connection Plate:**
  - 2.10.1. Material: Copper or aluminum
  - 2.10.2. Drilled and tapped for cable lug bolts, #10-24 potential tap screw, and mounting bolts.

**2.11. Mounting Bolts:**

**2.11.1. For CT's:**

2.11.1.1. Material: Steel, zinc-plated, 1/2" - 13 thread × 2-1/2" long with flat washer and hex head nut

2.11.1.2. Eight required for two CT's / 12 required for three CT's

**2.11.2. For Terminal Lug:**

2.11.2.1. Material: Steel, zinc-plated, 1/2" - 13 thread × 2-1/2" long with flat washer and hex head nut

2.11.2.2. Eight required for two CT's / 12 required for three CT's

**2.11.3. For Two-Hole Terminal Lug on Neutral Plate:**

2.11.3.1. Material: Steel, zinc-plated, 1/2" - 13 thread × 3" long with flat washer and hex head nut

2.11.3.2. Two required

**2.11.4. For Insulator Bus:**

2.11.4.1. Material: Steel, zinc-plated, 1/4" - 20 × 1-1/2" with washer and hex head nut

2.11.4.2. Eight Required

**2.11.5. For Potential Tap in Neutral Plate:**

2.11.5.1. Material: Steel, zinc-plated, #10 - 24 × 1/2" with washer

2.11.5.2. One required

**2.12. Lugs:**

2.12.1. Two hole cable terminal lug furnished for two 500 KCM or larger copper conductors per phase.

2.12.2. Material: Copper

2.12.3. Six required for two CT's / eight required for three CT's

**2.13. Knockouts / Hubs:**

2.13.1. Size and location by customer when required.

**2.14. Voltage Transformer Bracket:**

2.14.1. Material: Steel or aluminum

**2.15. Voltage Transformer Gutter:**

2.15.1. Gutter shall be of same material and thickness as main cabinet.

2.15.2. Gutter cover shall be adequately secured by screws and shall be sealable.

2.15.3. Conduit connections shall not be made on gutter assembly.

**3. OUTDOOR CABINET:**

3.1. Door or front cover shall be rain-tight; top shall be protected with rain shield.

3.2. NIPSCO requires vendor specific vent kit be purchased and installed per vendor specification on cabinets intended for outdoor use.

3.3. All conduit shall enter cabinet through sides, bottom, or rain-tight top hub.

3.4. All hardware shall be rust resistant.

**4. APPROVED MANUFACTURERS:**

Manufacturer	Phases	Wires	Number of		Catalog Number
			PT's	CT's	Indoor / Outdoor
Erickson Electrical Equip. Co. 475 Bonnie Ln. Elk Grove Village, Illinois	3	3	2	2	CT83-C (Note 1)
	3	4	3	3	CT84-C (Note 1)
Milbank Manufacturing Co. 4801 Deramus Kansas City, Missouri 64141	3	3	2	2	NIPM-863
	3	4	3	3	NIPM-864

Note-1: For outdoor cabinets, Erickson cabinets require purchase and installation of a vent kit. Milbank cabinets do not require additional vent kit.

**Table 4**