PTS90X21 Series

120V AC Power Distribution Panel

60A Main Breaker

Suitable for Use as Service Equipment

Small Cell, Pico, Micro, CRAN or Macro

INSTALLATION GUIDE

Compact 120V AC Power Distribution Load Center
60AMP Main Breaker
Single SPD (L-G) per Leg or Dual SPD (L-N) per Leg, (N-PE)

PTS90X21 - Maximum 6 UL489 Breaker Positions with Single SPD
PTS90X21 - Maximum 5 UL489 Breaker Positions with Dual SPD

Scan the QR code above to link to current document or click the link below:

PTS 90X21 Series Small Cell AC Power Distribution Load Centers Installation Guide

Table of Contents

1.0 Model Overview

The PTS90X21 Series of Small Cell AC Power Distribution Load Centers provides a custom factory fully assembled load center for Small Cell and CRAN deployments.

The PTS90X21 Series products are:
Suitable for Use as Service Equipment.
Conforms to UL Standard 67
Certified to: CSA Standard C22.2 #29

PTS90X21 – Small Cell AC Power Distribution Load Center

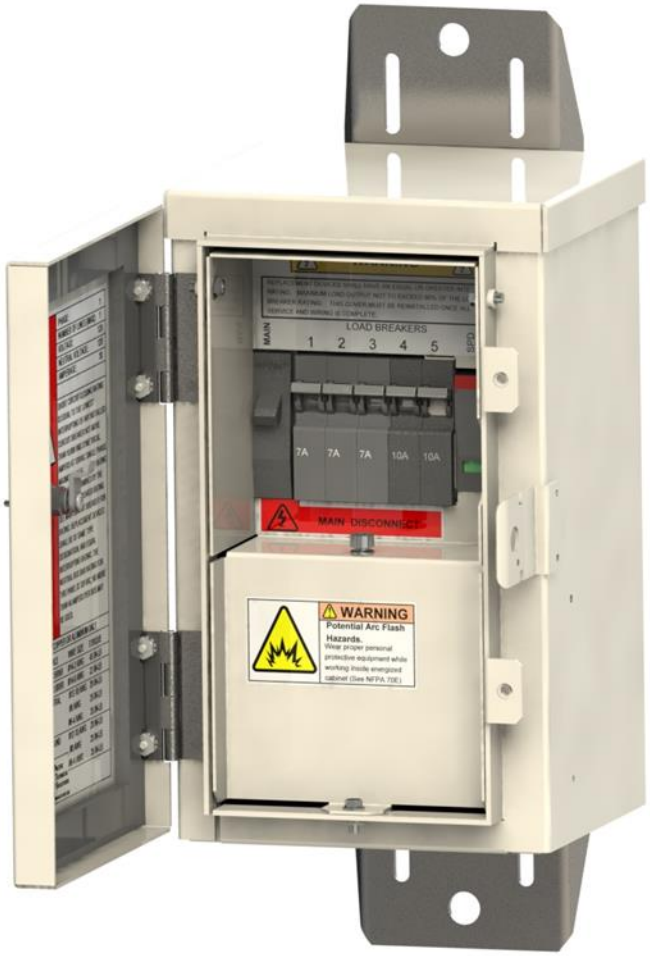
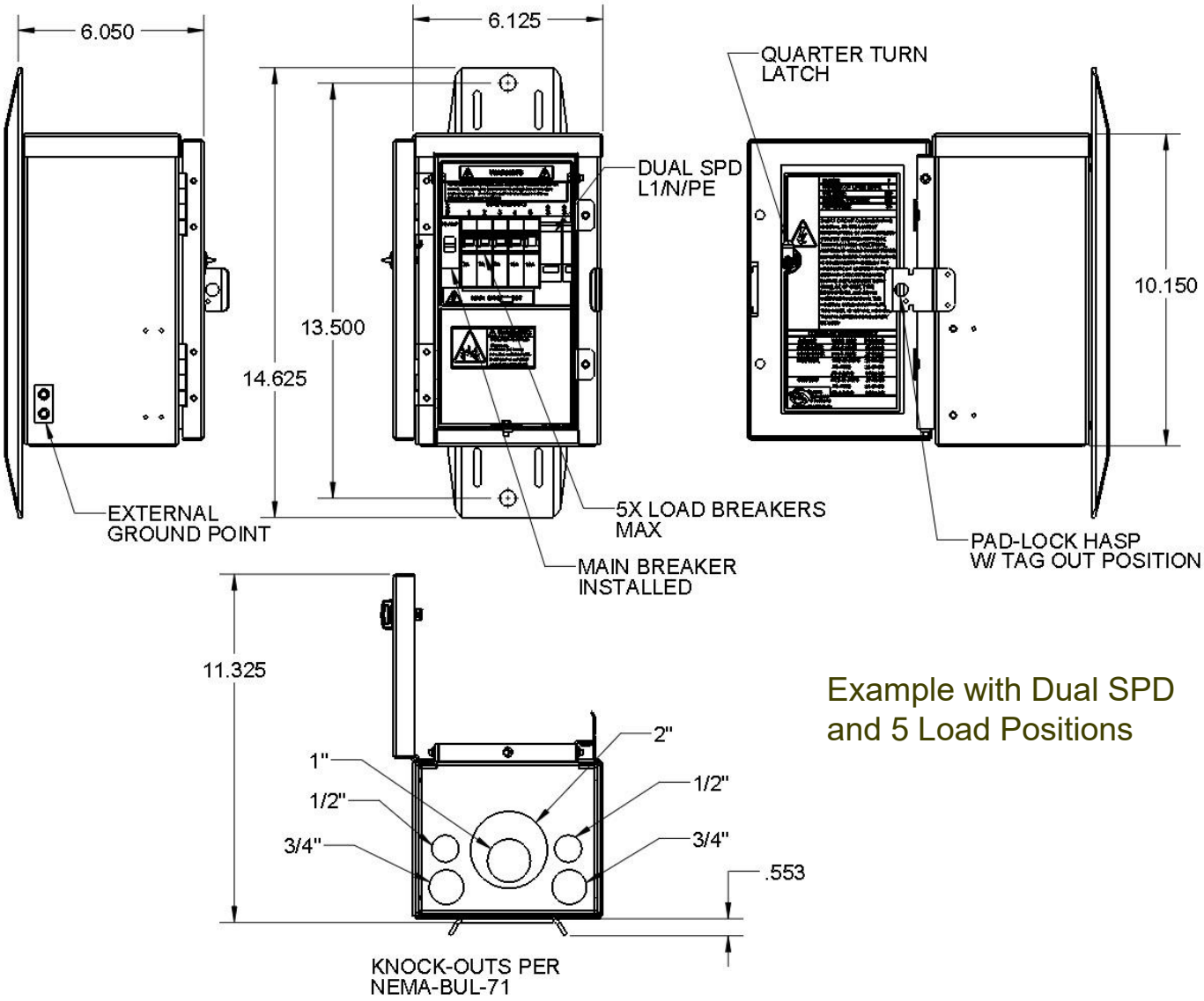


Figure 1: PTS90X21

PTS90X21 Outline Drawing



Example with Dual SPD and 5 Load Positions

Figure 2: Dimensional Drawings

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

1.1 Specifications

Electrical	
Operating Voltage	120VAC
Main Breaker	60Amp MAX
Distribution Breakers	Max of (6) UL489 Breakers 0-20Amp
Power Input Wire Size	#14 - #4 awg Cu - Al
Power Output Wire Size	#20 - #4 awg Cu - Al
Neutral and Ground Contacts	#14 - #4 awg Cu - Al
Rated Conditional Short	10kAIC
SPD, Dual MOV (L-N) & (N-G)	20Ka 8/20us Nominal
External Ground Connection	2-hole ¼-20 w/ 5/8” spacing

Physical	
Housing Material	Powder Coated Aluminum
Breaker Access	Thumb knob and lockable hasp
Wire Access, Internal	¼” hex head or #2 Phillip
Housing Dimensions (H x W x D)	(Excludes hasp and bracket)
PTS90X21	10.13 x 6.15 x 6.00
Unit Weight / Shippping Weight	
PTS90X21	10lbs / 12lbs
Mounting	Supplied Bracket

Environmental	
Operating Temperature	(-40°C) to (60°C)
Relative Humidity	95% Non-Condensing

1.2 Breaker Specifications

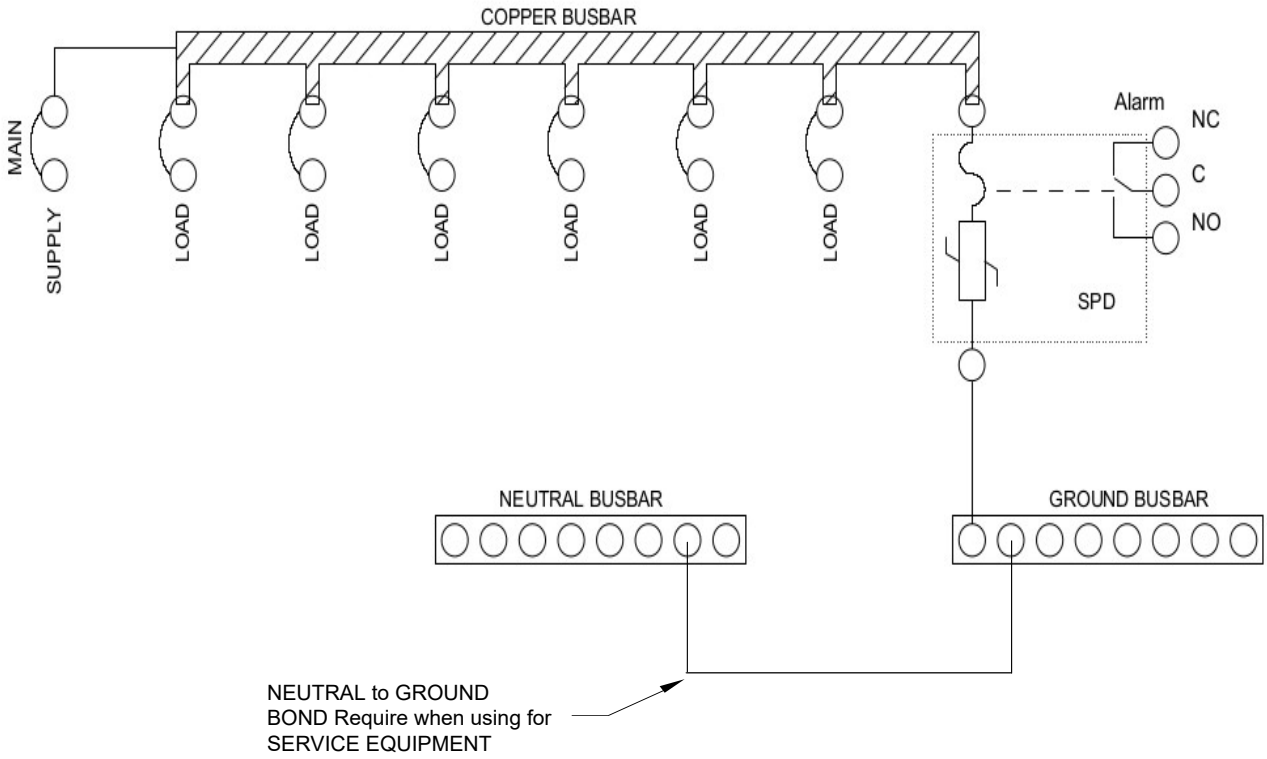
Breaker Specifications		
PTS P/N	Description	
PT-KM1N-07A	UL489A DIN rail Breaker, 07 AMP	
PT-KM1N-10A	UL489A DIN rail Breaker, 10 AMP	
PT-KM1N-12A	UL489A DIN rail Breaker, 12 AMP	
PT-KM1N-16A	UL489A DIN rail Breaker, 16 AMP	

Torque Recommendations	
Main QOU Breaker	42-47 in-lbs
Load Breaker	17-22 in-lbs
Surge Protection	17-22 in-lbs
Neutral Block and Bar	24-27 in-lbs
Ground Bar	24-27 in-lbs

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

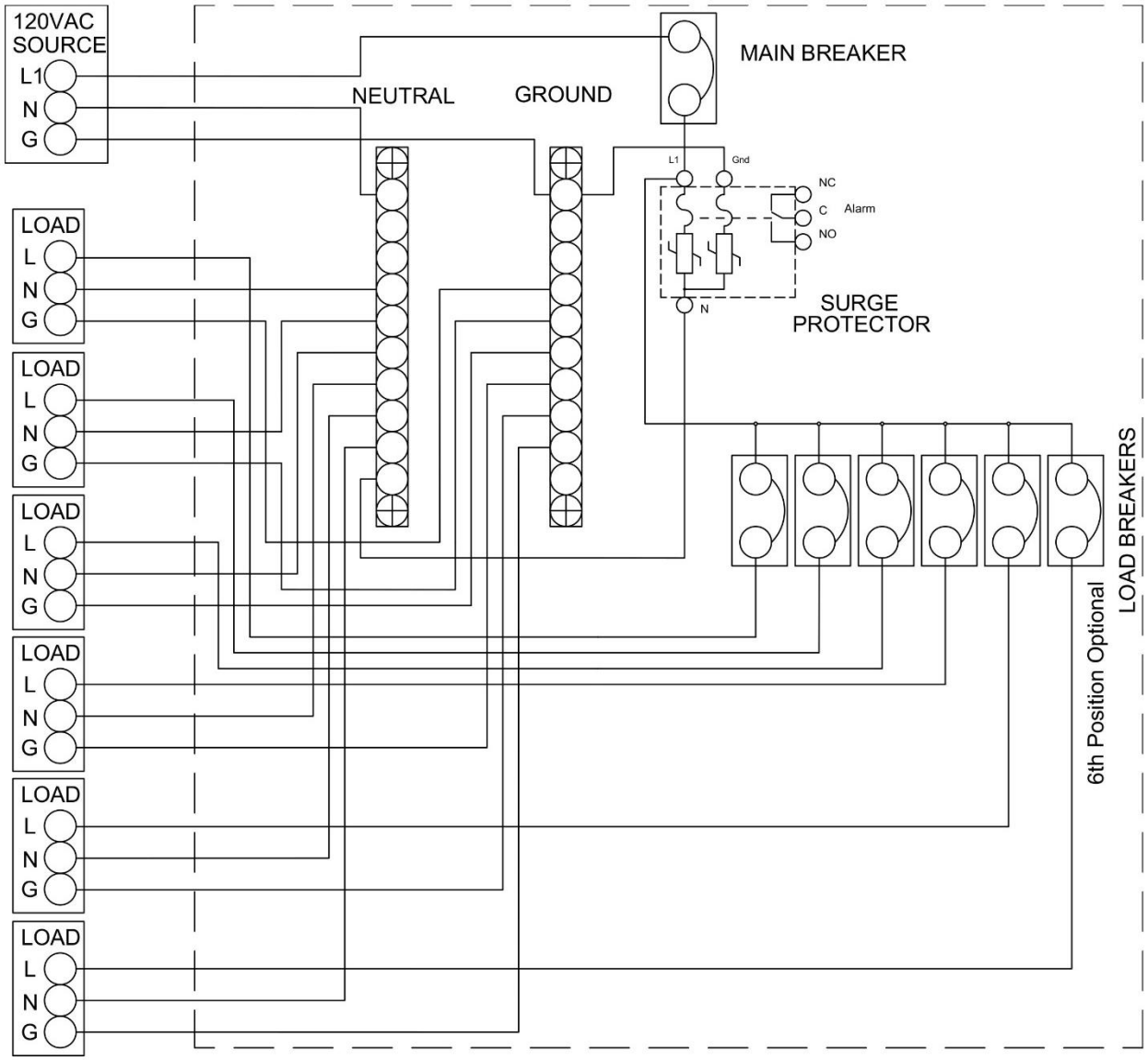
1.3 Wiring Diagrams

PTS90X21 Wiring Diagram



Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

PTS90X21 Cabling Diagram



Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

1.4 Application

The PTS90X21 is a compact AC Load Centers designed for Small Cell and CRAN Deployments where distribution of AC power is required.

The PTS90X21 Series of compact AC Load Centers can also be used for AC Power Distribution applications where limited space exists, excluding the ability to use a larger load center.

The PTS90X21 Series of compact AC Load Centers is Suitable for Use as Service Equipment, or as a sub-tending branch panel when modernizing or expanding existing sites.

2.0 Features

The PTS90X21 Series of Small Cell AC Load Centers packaged as a custom configuration, ready for install in new and expansion environments.

2.1 Main Breaker

The PTS90X21 Systems can support main breaker ampacity up to 60Amps.

2.2 Distribution Breakers

The PTS90X21 Systems support upto (6) UL489 Breakers rated from 0-20 Amps.

2.3 Optional Single-SPD or Dual–SPD Protection

The PTS90X21 Systems can support either Single SPD (L-G) or Dual SPD (L-N) & (N-G) modules.

2.4 Suitable for Use as Service Equipment

The PTS90X21 is Suitable for Use as Service Equipment when bonding the Neutral and Ground and following code requirements.

3.0 Inspecting and Unpacking of PTS90X21 Series Load Centers

3.0.1 Inspect the packaging for obvious signs of rough handling and/or external damage.
3.0.2 Review Installation Guide.
3.0.3 Remove from plastic packaging.

4.0 Mounting

The PTS90X21 Systems are certified for outdoor installations This section provides installations guidelines to insure the appropriate requirements are met.

4.1 Mounting Bracket

4.1.1 A mounting bracket is included and pre-installed with the enclosure and can be used as a template, or the mounting bracket detail on page 4 can be used, if preferred.

4.1.2 If mounting bracket is removed, a lock-tite like adhesive should be applied to the screws when replacing.

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

4.2 Mounting enclosure to Pole, Stanchion or Round Surfaces

4.2.1 Customer is responsible to identify suitable location for mounting
4.2.2 Install Pole Straps and tighten per specifications -or -
4.2.3 Mark and drill anchors locations using template provided.
4.2.4 Wood Poles should be Lag Bolted or Through Bolted
4.2.5 Fiberglass or Metal pole shall be strap mounted.
4.2.6 Torque to mounting hardware specifications.

Figure 3: Mounting Configuration for enclosure on a Pole, Stanchion or Round Surface

4.3 Mounting enclosure on flat surfaces

4.3.1 Customer is responsible to identify suitable location for mounting.

4.3.2 Mark and drill anchors or clips to secure enclosure to surface.

4.3.3 Torque to mounting hardware specifications.

Figure 4: Mounting Configuration for enclosure on flat surfaces

5.1 Removing Dead Front Access Plate

5.1.1 Locate Dead Front Access Plate set screw and remove

5.1.2 Set aside for reuse.

5.1.3 Review Equipment Ground Connection Points

5.1.4 Review Neutral Connection points

5.2 Wiring Ground Connections

5.2.1 Ensure enclosure is grounded as per NEC and Local Jurisdictions Code requirements.

5.2.2 If Using for Service Equipment, bond the neutral to the ground bus bar and follow NEC and Local Jurisdictions Code requirements.

5.2.3 Tighten connections as per manufacturers specifications.

Figure 5: Mounting Location of External Enclosure Ground Connection

5.3 Wiring Service and Load Connections

5.3.1 Wiring to be done in accordance with NEC and Local Jurisdictions Code.

5.3.2 Wire the Service Ground to the internal ground bar

5.3.3 Wire the Service Neutral to Neutral bar connection according to use and Local Jurisdictional Code.

5.3.4 If wiring for Service Entrance, ensure that the provided bond strap is connected between the internal ground bar and neutral bar, and label accordingly.

5.3.5 Wire the Service Feed to the right side (service side) of the Main Breaker (s)

5.3.6 Land Equipment ground to ground bar

5.3.7 Land Equipment Neutral to Neutral bar

5.3.8 Land Load feeds to the right side (load side) of load breaker(s)

5.3.9 Ensure connections are properly seated in set screw capture ring openings prior to tightening per specifications.

5.3.10 Tighter per breaker and bar specifications

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

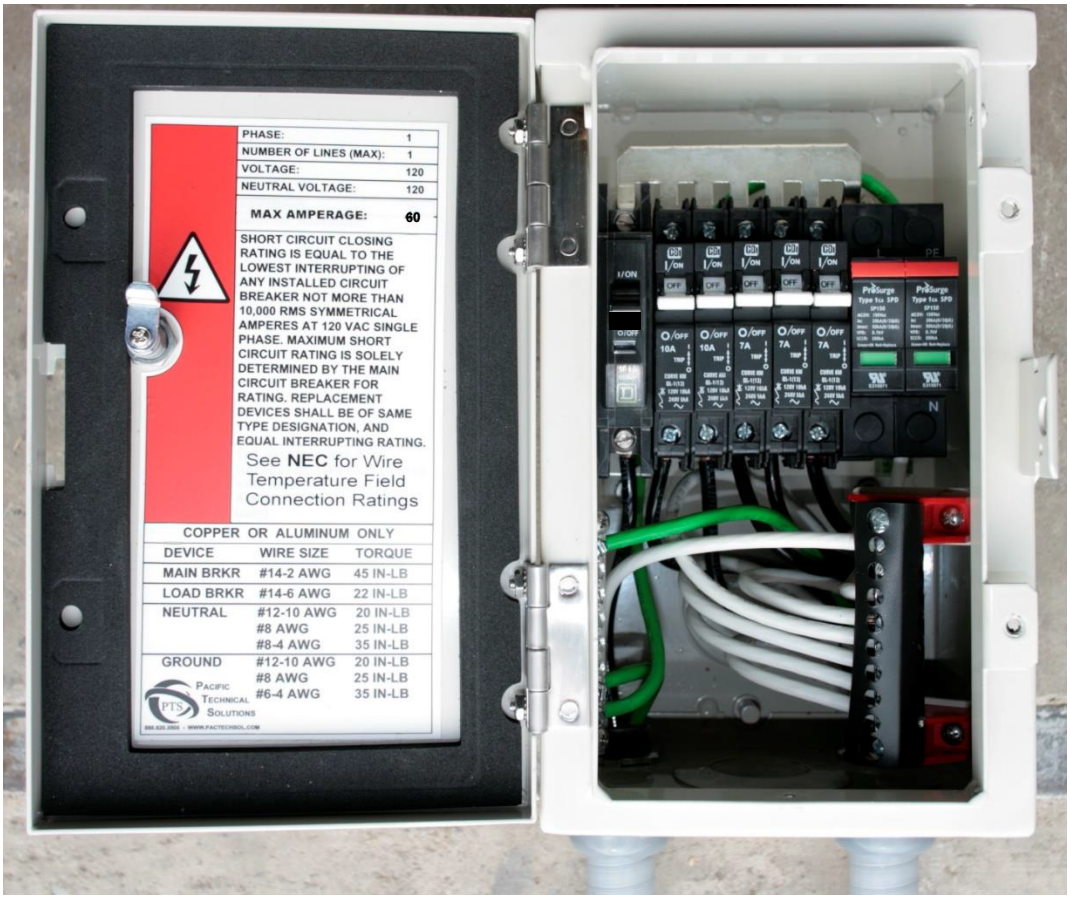


Figure 6: Standard Wiring Practice Example

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

5.4 Re-Intalling the Dead Front Access Plate

5.4.1 Reinstall the Dead Front Access Plate and ensure that it is seated correctly.

5.4.2 Reinstall the Dead Front Access Plate set screw and tighten.

5.4.3 Check to ensure all breakers are sitting square in the dead plate opening

5.4.4 Check to ensure all blank breaker positions are covered

Figure 7: Dead Front Re-Installed

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

5.5 Labeling the Breakers

5.5.1 If installed as Service Equipment, apply the "SERVICE DISCONNECT" label at the primary breaker positions

5.5.2 If installed as Branch Equipment, apply the "MAIN DISCONNECT" label at the primary breaker positions

5.5.3 Label Load Breakers accordingly

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

6.0 Installation Review

Inspect the installation, verifying that all is in accordance with this document, NEC, and local Codes.

Caution: Installation shall be completed per all NEC and Local Codes. Do not install PTS90X21 Systems before reading and understanding all specifications and installation guides provided. Installation should be performed by a qualified installer.

7.0 Document and Revision Control

Author	Tom Cooleen
Date	06/05/2018
File Location	www.pactechsol.com
Revision Control	
Issue Number	08
Date	07/13/2018
Description	PTS90X21Series Installation Guide
Prime Contact 1	
Name	
UID	
Phone	
Department / Responsibility	
Prime Contact 2	
Name	
UID	
Phone	
Department / Responsibility	
Prime Contact 3	
Name	
UID	
Phone	
Department / Responsibility	