

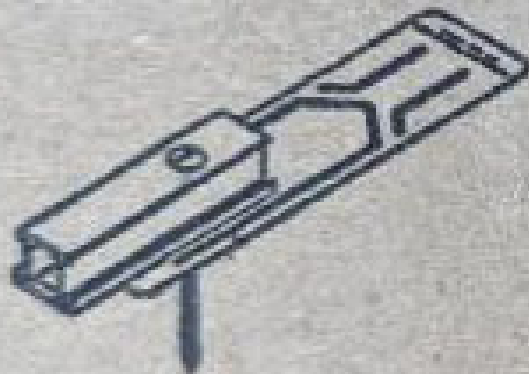
**FLASHKIT SFM SLIDER S**

004271D

FLASHKIT SFM SLIDER S COMP DRK

DARK Pack Size: 10

Factory Code: 5-1



WO/PO# 0045416-00 Manufacture date: 3/10/22-4/10/22

8 10039 36213 8



1. **Introduction**  
 The purpose of this experiment is to determine the relationship between the frequency of a wave and its wavelength. This is done by measuring the distance between two consecutive crests or troughs of a wave on a string.



DATE: \_\_\_\_\_  
 PAGE: \_\_\_\_\_

2. **Procedure**  
 The procedure involves setting up a wave on a string and measuring its frequency and wavelength. The frequency is measured by counting the number of waves that pass a fixed point in a given time interval. The wavelength is measured by measuring the distance between two consecutive crests or troughs of the wave.



3. **Conclusion**  
 The relationship between the frequency of a wave and its wavelength is that the frequency is inversely proportional to the wavelength. This is shown by the equation  $v = f\lambda$ , where  $v$  is the velocity of the wave,  $f$  is the frequency, and  $\lambda$  is the wavelength.

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Frequency (Hz)	Wavelength (m)	Velocity (m/s)
1.00	1.00	1.00
2.00	0.50	1.00
3.00	0.33	1.00
4.00	0.25	1.00
5.00	0.20	1.00

DATE: \_\_\_\_\_  
 PAGE: \_\_\_\_\_





**UNITAC SFM INFINITY RACKING**  
FOR ADJUSTING AND EXPANDING YOUR AS SYSTEMS  
FOR THE FUTURE











only used by users during installation. Start steps 1-11, remove them for devices over the power line.

**ATTENTION**

- Always wear safety glasses when working on electrical equipment.
- The IQ Combiner 4 is not to be used in conjunction with other IQ Combiners.
- The IQ Combiner 4 is not to be used in conjunction with other IQ Combiners.

On power up, LEDs can take up to 30 seconds to glow. While waiting, verify that the LEDs are glowing off the IQ Combiner before proceeding to the next step.

10/19

For IQ-8 Gateway  
Forming S



**IQ Combiner 4**  
Photovoltaic  
Combiner Box  
X2-IQ-AM1-240-4  
IEEE1547-2018 COMPLIANT



**Electrical ratings**

Voltage 240VAC, 60Hz  
DC Breakers 80A MAX (combined)  
DC Inputs 50A MAX (combined)  
Output 65A MAX, 90A MAX feeder GCPD  
Temperature 45°C MAX ambient  
For DC breakers, use only from IR series.

202323183186

P/N:

202323183186

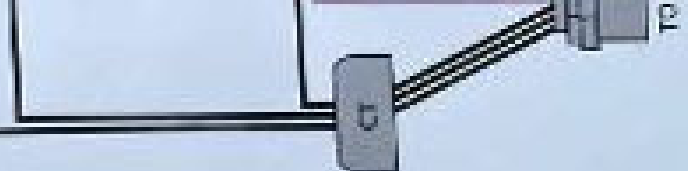
883-00363 16

Dedicated solar and DC Combiner Box - do not add loads.  
10 AWG or 16 AWG IQ Gateway Breaker not rated for backfeed

Connection	Wire size	Torque
DC Breaker (1, 2, 3, 4)	14-10 AWG	2.2 Nm (20 lb-in)
	8 AWG	2.8 Nm (25 lb-in)
	6-4 AWG	3.0 Nm (27 lb-in)
60A Circuit Breaker only	4-10 AWG	5.0 Nm (45 lb-in)
	14-10 AWG	2.25 Nm (20 lb-in)
IQ Gateway Breaker	Large screw	5.0 Nm (45 lb-in)
	Small screw	5.1 Nm (45 lb-in)
Neutral and ground	6 AWG	3.6 Nm (32 lb-in)
	8 AWG	2.6 Nm (23 lb-in)
	10-14 AWG	2.3 Nm (20 lb-in)
Main lug	10-4 AWG	5.0 Nm (45 lb-in)
	3-20 AWG	5.6 Nm (50 lb-in)

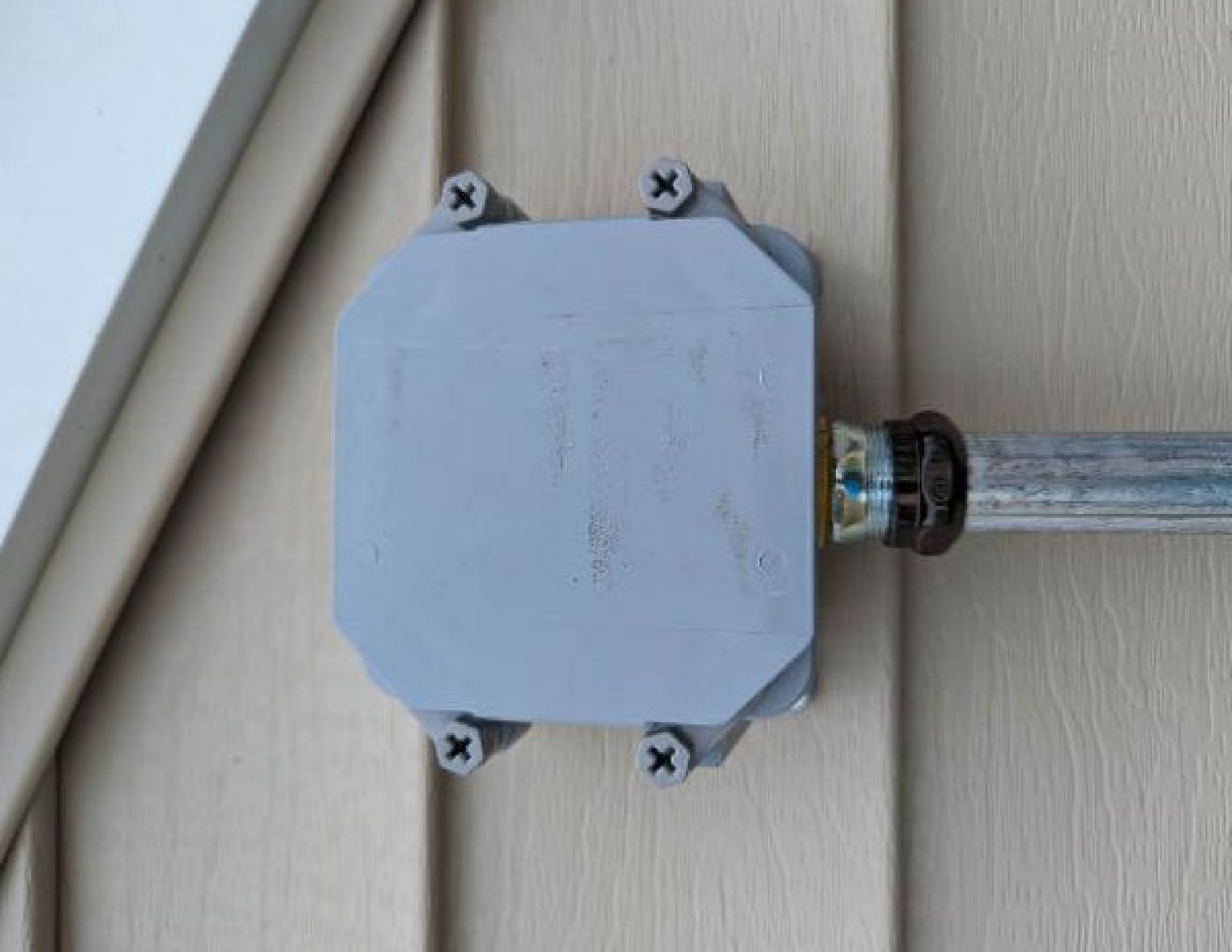
Copper conductors only, rated min. 75°C.  
Follow NFPA 70(NFPA 70) or CSA C22.1 part 1, and all local codes.  
For DC breakers larger than 30A, use wire insulated for 90°C based on 75°C ampacity.

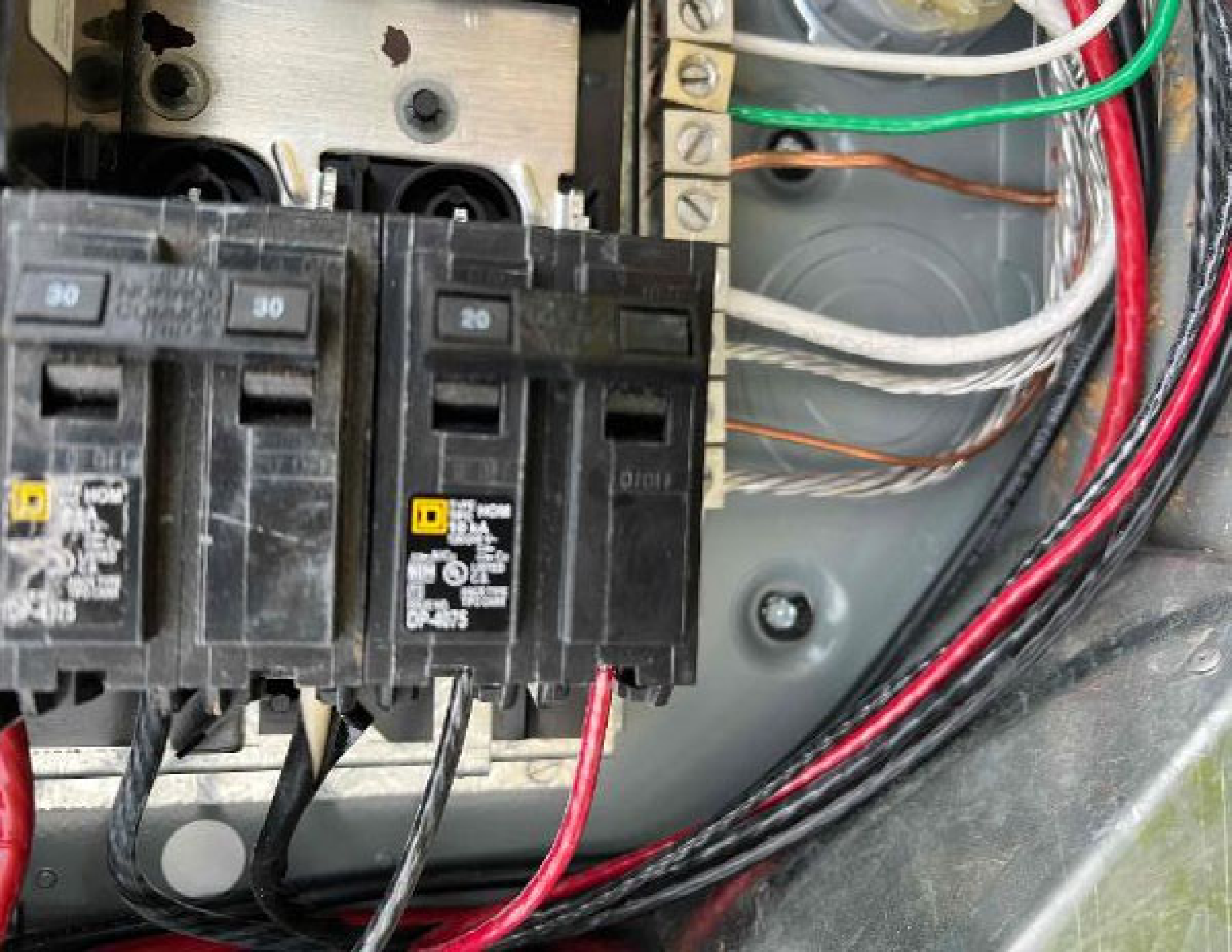
Designed in California and New Zealand  
Made in Mexico





Samuel  
Niyamuwae  
2510 Red Cedar  
Way  
Figueroa  
ave: Mithuen  
Ngunjar





30

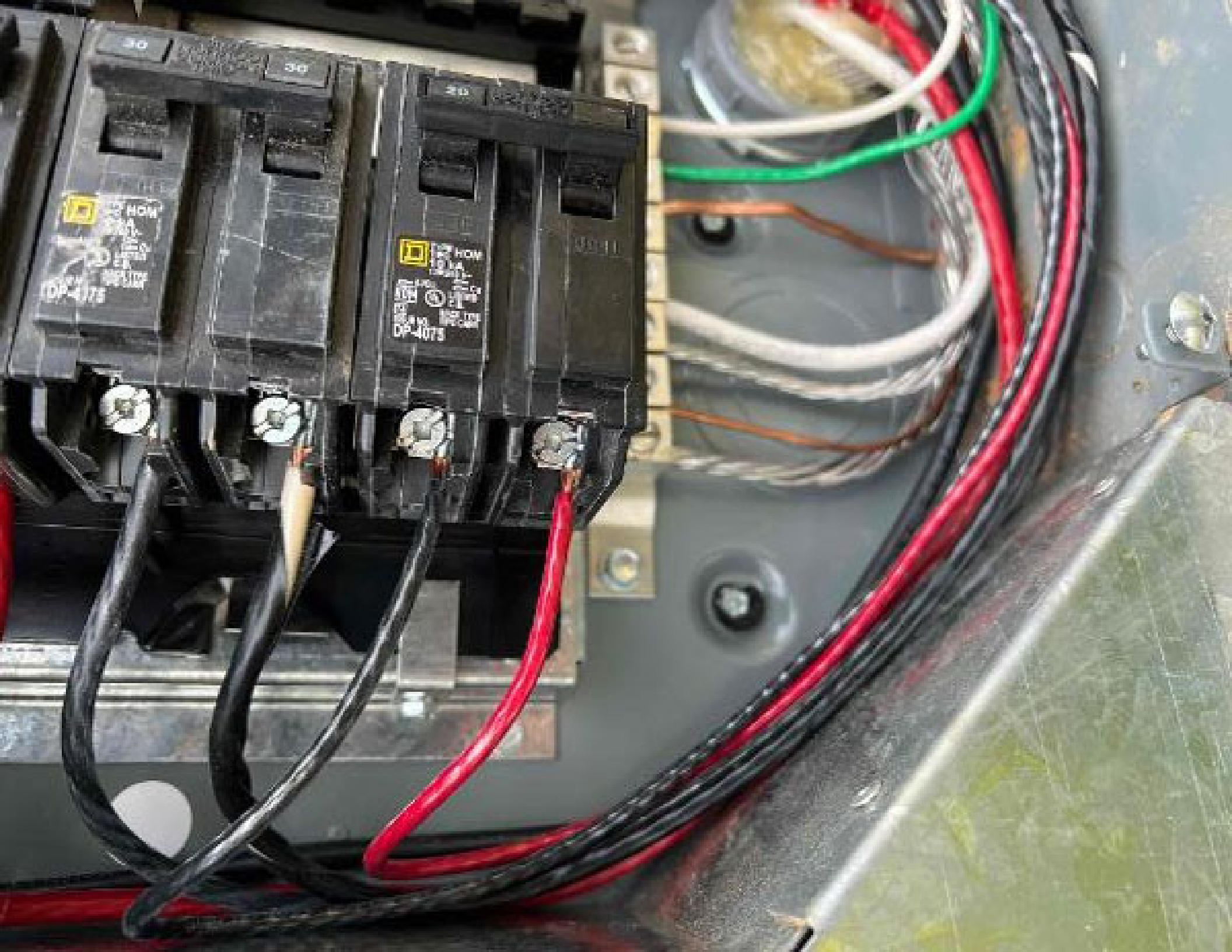
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HOMERUN  
100%  
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SHIELDING

10/10



221511





LISTED

ENCLOSURE  
PANELBOARD  
ISSUE No. 0  
SQUARE D

061-190

0177

















# DIRECTORY / DIRECTORIO

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SQUARE D COMPANY  
90215-421-01

REPLACE OVERCURRENT PROTECTIVE DEVICES PER THE MANUFACTURER'S INSTRUCTIONS

REPLACE OVERCURRENT PROTECTIVE DEVICES PER THE MANUFACTURER'S INSTRUCTIONS

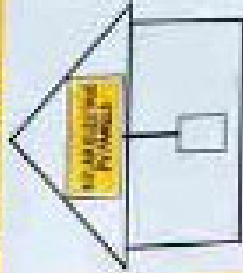
**⚠ WARNING**  
POWER SOURCE OUTPUT CONNECTION.  
DO NOT RELOCATE THIS OVERCURRENT DEVICE.

**⚠ DANGER / PELIGRO**  
FOR SAFETY, DISCONNECT THE OVERCURRENT PROTECTIVE DEVICES FROM THE MAINS SUPPLY BEFORE ANY MAINTENANCE WORK IS PERFORMED ON THE ELECTRICAL SYSTEM.  
1. Turn off the main power supply.  
2. Lock and tag the main power supply.  
3. Verify that the power is off by testing the conductors with a properly calibrated voltage tester.  
4. Only qualified personnel should perform maintenance on the electrical system.  
5. Do not touch the conductors or components of the electrical system until the power is restored.  
6. After maintenance is complete, remove the lock and tag, and restore the main power supply.  
7. Verify that the power is on and that the system is operating normally.  
8. Do not touch the conductors or components of the electrical system until the power is restored.  
9. Only qualified personnel should perform maintenance on the electrical system.  
10. Do not touch the conductors or components of the electrical system until the power is restored.  
11. Only qualified personnel should perform maintenance on the electrical system.  
12. Do not touch the conductors or components of the electrical system until the power is restored.



**SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN SWITCH TO THE 'OFF' POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY



**PHOTOVOLTAIC SYSTEM AC DISCONNECT**

RATED AC OUTPUT CURRENT  
NOMINAL OPERATING AC VOLTAGE

**WARNING**

DUAL POWER SUPPLY SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

**WARNING**

ELECTRIC SHOCK HAZARD TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

**WARNING**

WARNING: OPENING THIS RATED 150V AC ELECTRICAL PANEL MAY EXPOSE YOU TO LIVE ELECTRICAL PARTS. ALWAYS USE PROPER LOCKOUT/TAGOUT PROCEDURES AND WEAR YOUR PPE.

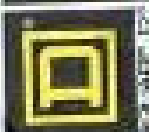
**EMERGENCY DISCONNECT**  
150V AC ELECTRICAL PANEL

SYSTEM DEP

PHOTOVOLTAIC SYSTEM  
AC DISCONNECT

RATED AC OUTPUT CURRENT  
NOMINAL OPERATING AC VOLTAGE

GENERAL DUTY  
SAFETY SWITCH  
INTERRUPTION OF  
SERVICES GENERAL  
30 A



**⚠ DANGER / PELIGRO**  
This device is a safety switch for use in photovoltaic systems. It is designed to interrupt the flow of current in the event of a fault or emergency. It is not intended for use as a circuit breaker or fuse. It is not to be used in applications where it is not specifically designed for use. It is not to be used in applications where it is not specifically designed for use. It is not to be used in applications where it is not specifically designed for use.

**⚠ WARNING**

**ELECTRIC SHOCK HAZARD**  
TERMINALS ON THE LINE AND  
LOAD SIDES MAY BE ENERGIZED  
IN THE OPEN POSITION

**⚠ WARNING**  
POWER TO THIS BUILDING IS ALSO  
SUPPLIED FROM MAIN DISTRIBUTION  
UTILITY DISCONNECT LOCATED

**RAPID SHUTDOWN  
SWITCH FOR  
SOLAR PV SYSTEM**





**PHOTOVOLTAIC SYSTEM**  
**⚠️ AC DISCONNECT ⚠️**

RATED AC OUTPUT CURRENT  
14.4A  
120V

RATED AC OUTPUT CURRENT  
14.4A  
120V

**⚠️ WARNING**

PHOTOVOLTAIC SYSTEM  
COMBINER PANEL

DO NOT ADD LOADS

**⚠️ WARNING**

ELECTRIC SHOCK HAZARD

TERMINALS ON THE LINE AND  
LOAD SIDES MAY BE ENERGIZED  
IN THE OPEN POSITION

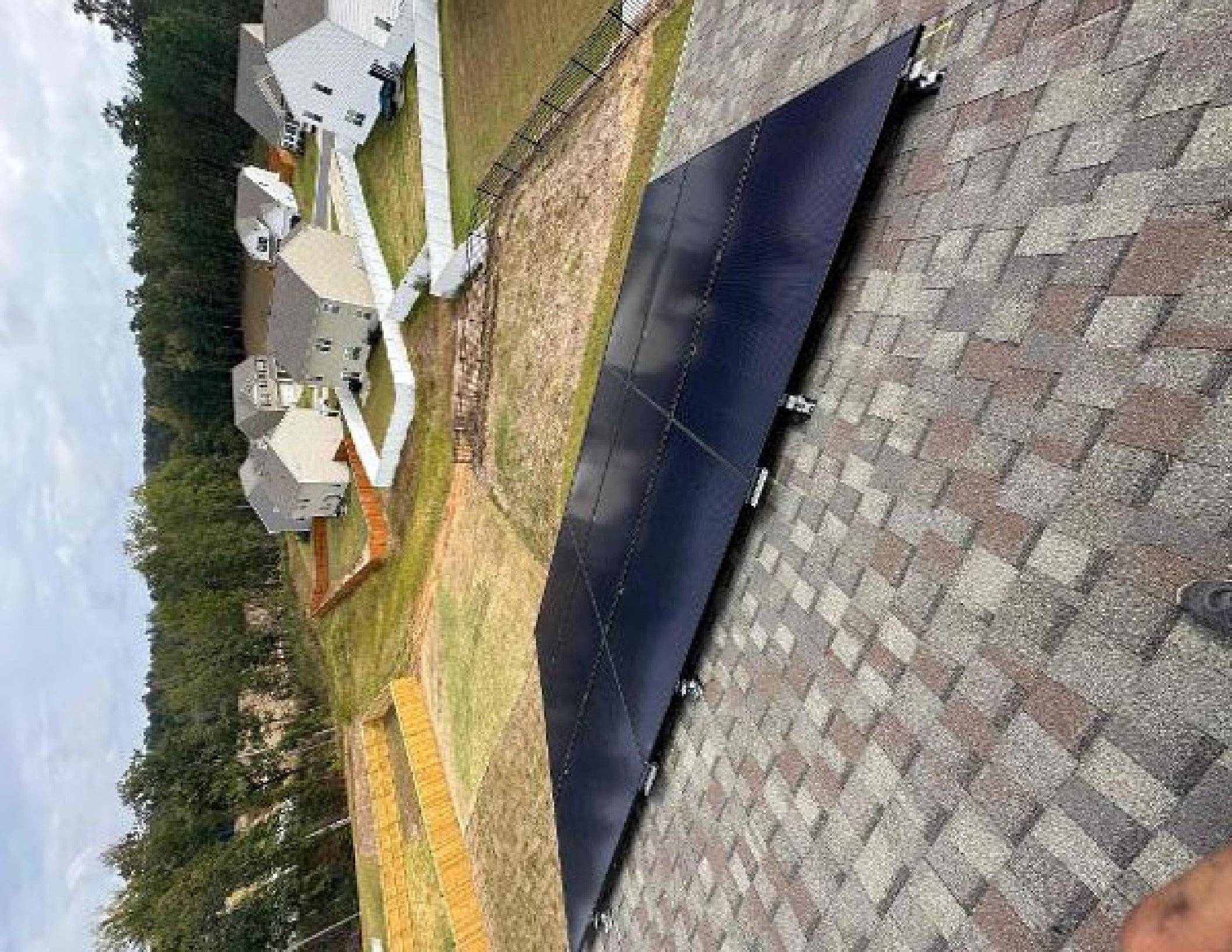
**⚠️ WARNING**

THIS EQUIPMENT FED BY MULTIPLE  
SOURCES. TOTAL RATINGS OF ALL  
OVERCURRENT DEVICES, EXCLUDING  
MAIN SUPPLY OVERCURRENT  
DEVICE, SHALL NOT EXCEED  
RATING OF BUSBAR.

**⚠️ WARNING**

READ THE WARNING LABELS ON ALL  
EQUIPMENT. THIS EQUIPMENT IS NOT  
DESIGNED TO BE USED AS A  
LIFELINE COMMUNICATIONS SYSTEM.  
DO NOT USE FOR LIFE-SAVING  
APPLICATIONS.







Samuel  
Niyumwile  
2510 Red Cedar  
Way  
Fugnot  
exc: Britton  
Nguyen









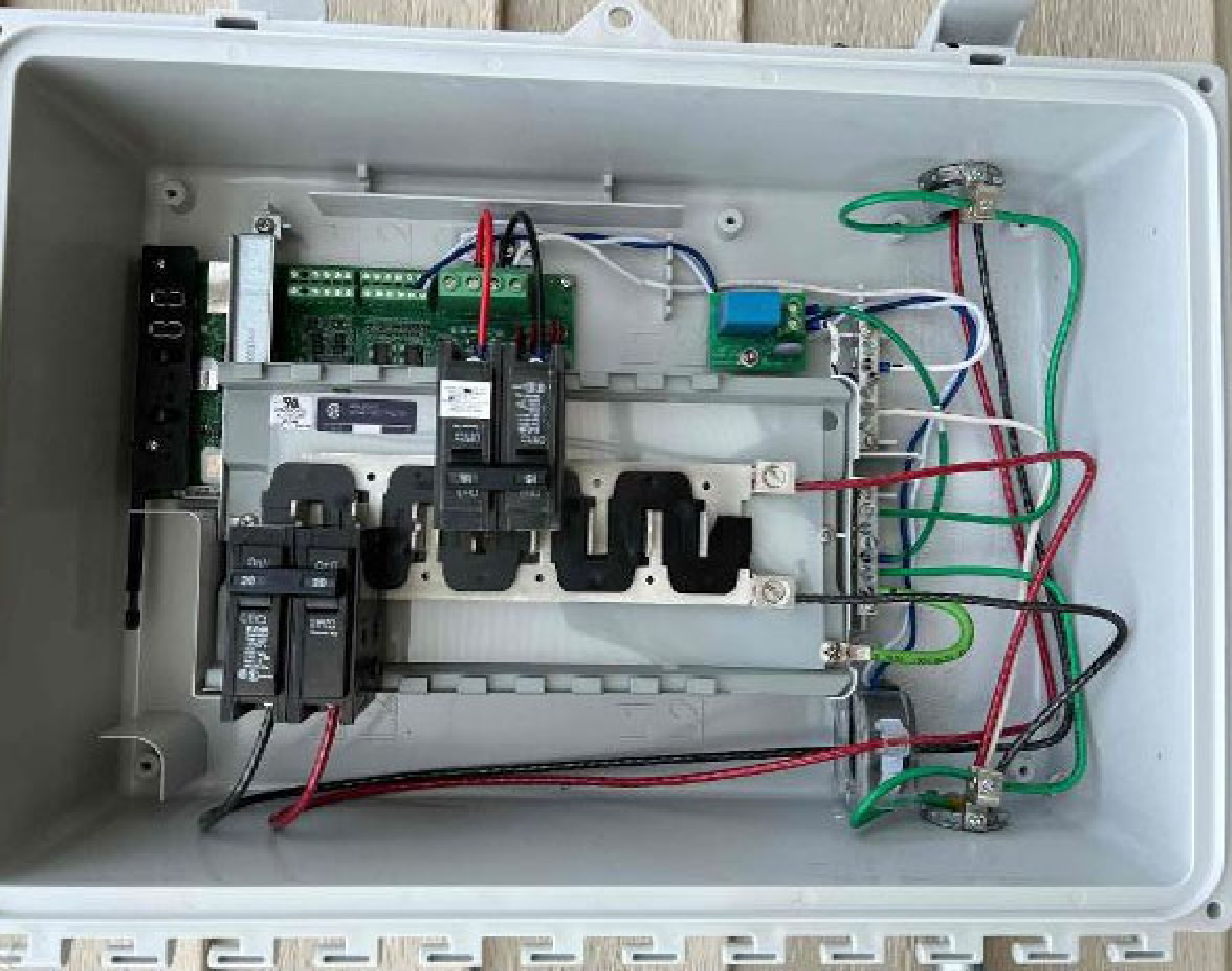


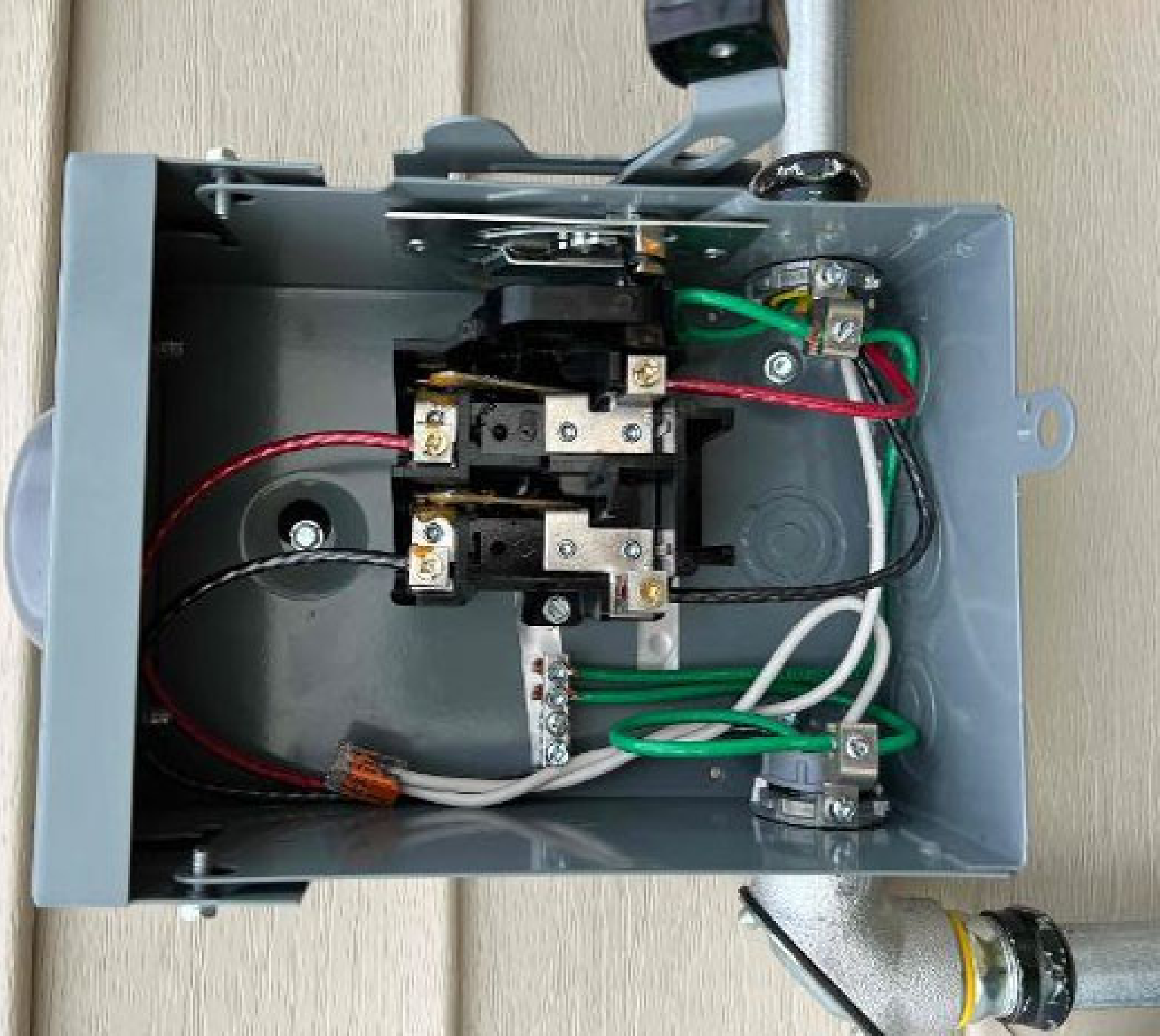












## IQ Gateway Connectivity

- Not connected to InPhase Cloud

Power production

Power

Production

Total

Cost

Total

Unit

FEEDBACK



### Scan completed

IQ Microinverters : 9/9

**DONE**

**CONNECT TO CLOUD**

Powerline Scan (Auto)

### Unsynced Items

Media

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Project

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### Sync Settings

Sync on Wifi only

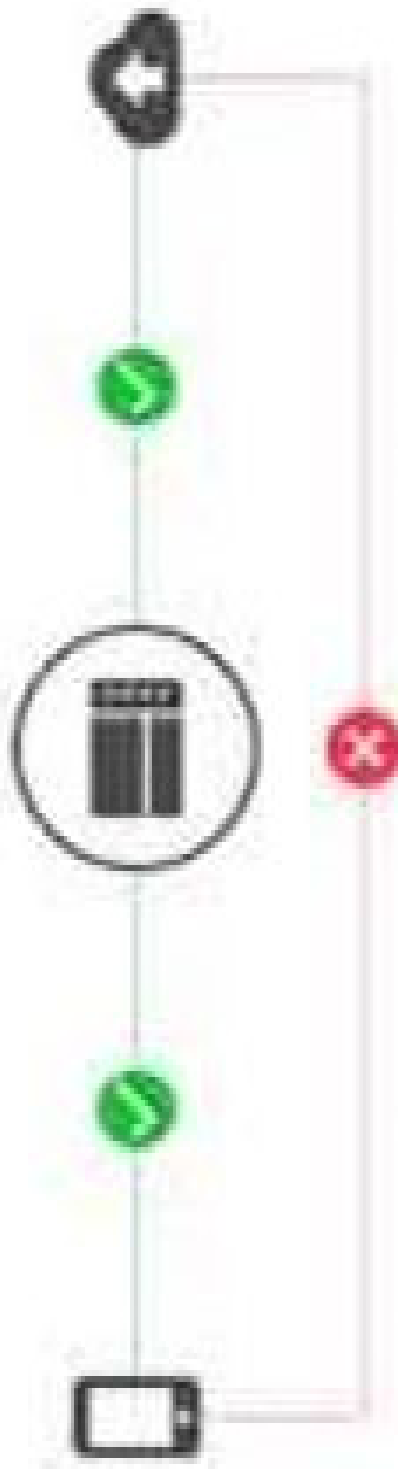
OFF

[Having trouble syncing?](#)



# Update IQ Gateway Software

IQ Gateway 202323193188



IQ Gateway successfully connected to Enphase Cloud and Installer Toolkit



IQ Gateway must be connected to the Enphase Cloud via both Cellular modem and Wi-Fi Ethernet for Enphase Energy System commissioning.

## IQ Gateway Connectivity Status



Wi-Fi

192.168.0.254

Connected >



Ethernet



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DE-ENERGIZE ALL OF THE  
BEFORE INSTALLING THE  
BEFORE WIRES  
CT LEAD WITH THE DEAD RISK OF  
BELOW THIS HAZARD AND RISK OF  
SAFETY HAZARD AND RISK OF  
EQUIPMENT DAMAGE IF  
INSTALLED WHILE  
CIRCUITS ARE ENERGIZED

ENVOY

**WARNING**  
DO NOT TOUCH THE  
ELECTRICAL CONTACTS  
WHILE THE UNIT IS  
ENERGIZED

**WARNING**  
RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER.  
DO NOT USE SERVICEABLE PARTS UNLESS  
FROM SERVICE TO QUALIFIED SERVICE PERSONNEL.  
WITH THE PHOTOVOLTAGE UNIT IS EXPOSED TO LIGHT  
IT SUPPLIES AN ELECTRIC SHOCK TO THE EQUIPMENT

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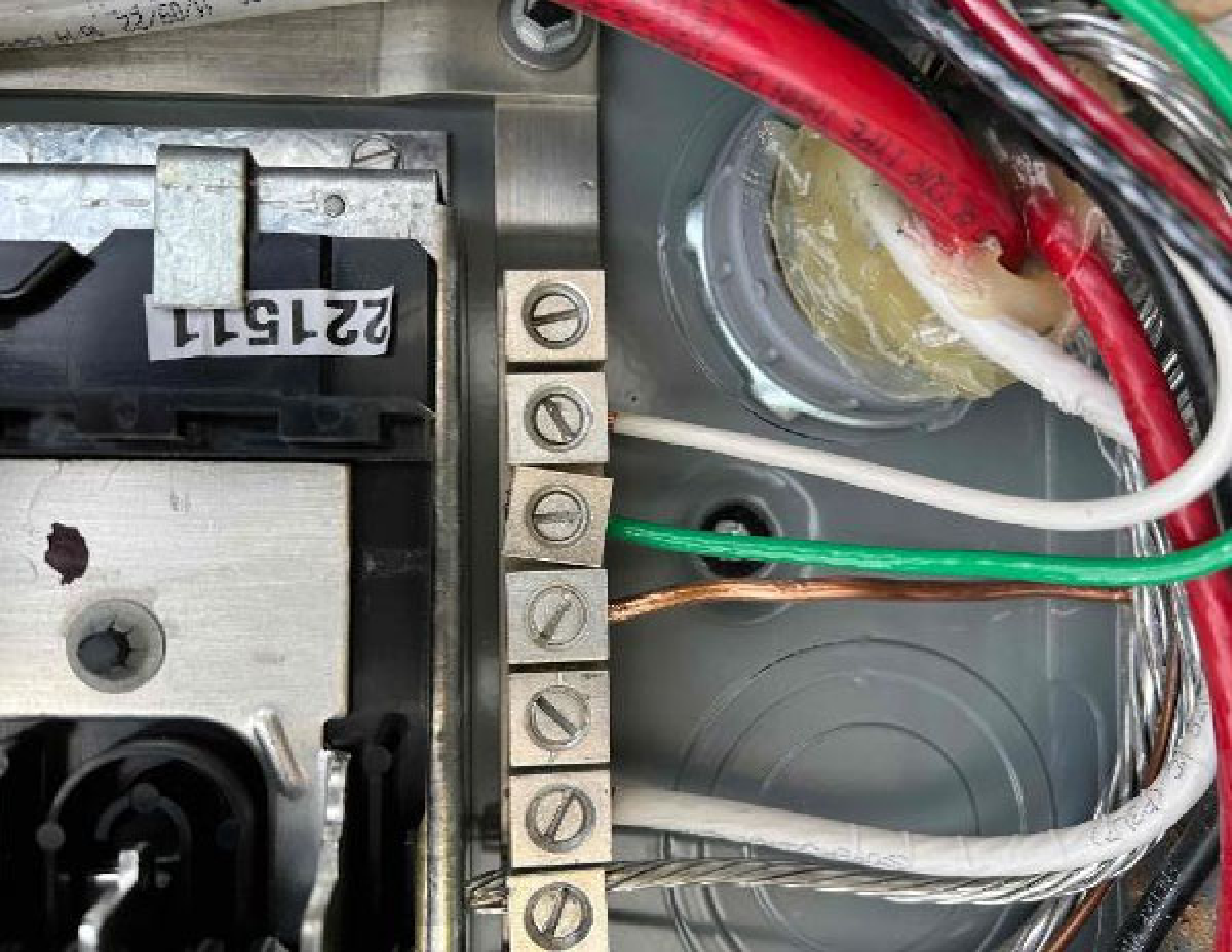


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1823709

221511

ADVERTENCIA  
WARNING

221511



ENCLOSURE  
PANEL  
LISTED ISSUE NO.  
SQUARE D



22



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LEFT  
NO. 1/00  
COMMON  
TRIP

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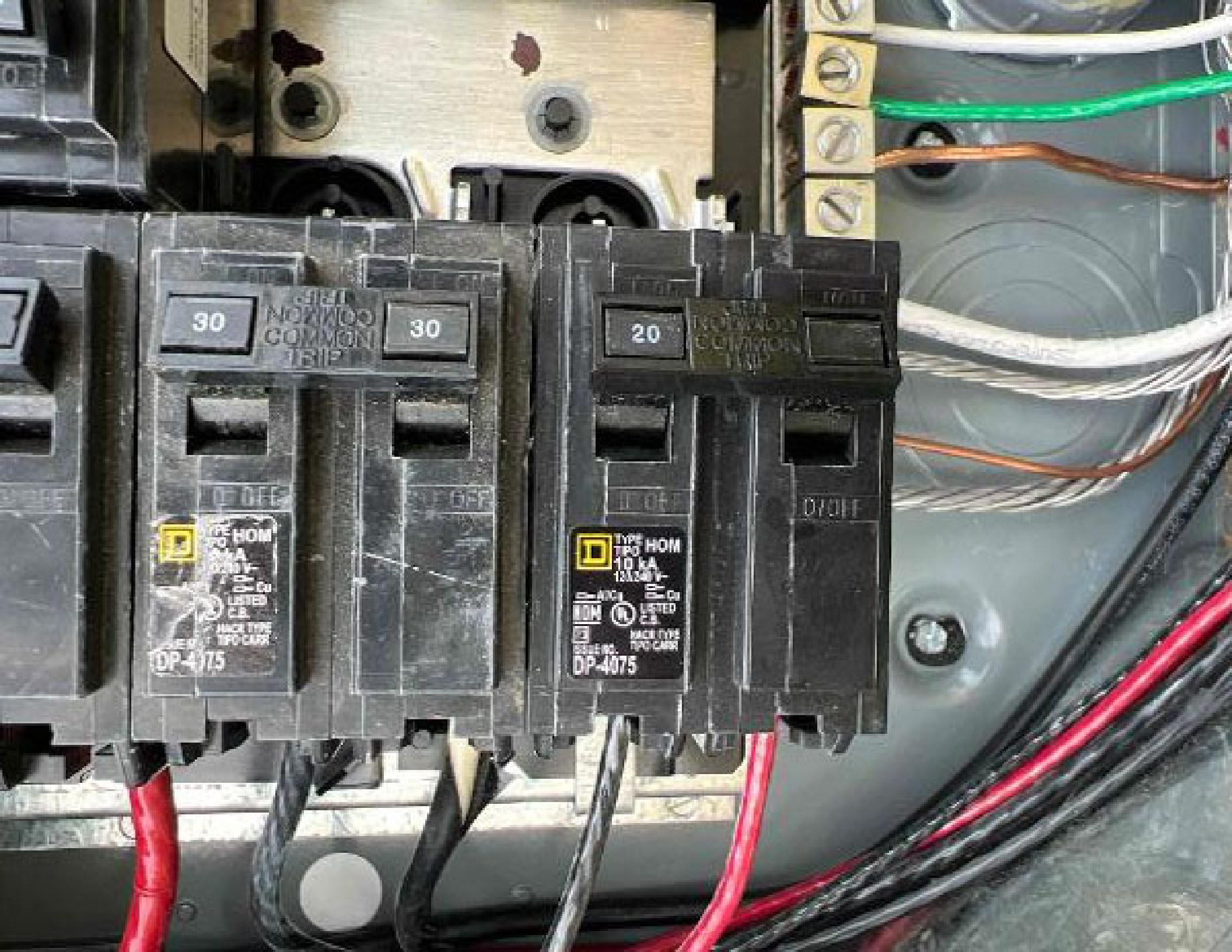
TYPE HOM  
30 A  
125 V  
100% Cu  
LISTED  
C.B.  
MAGNETIC  
TRIP  
DP-4075

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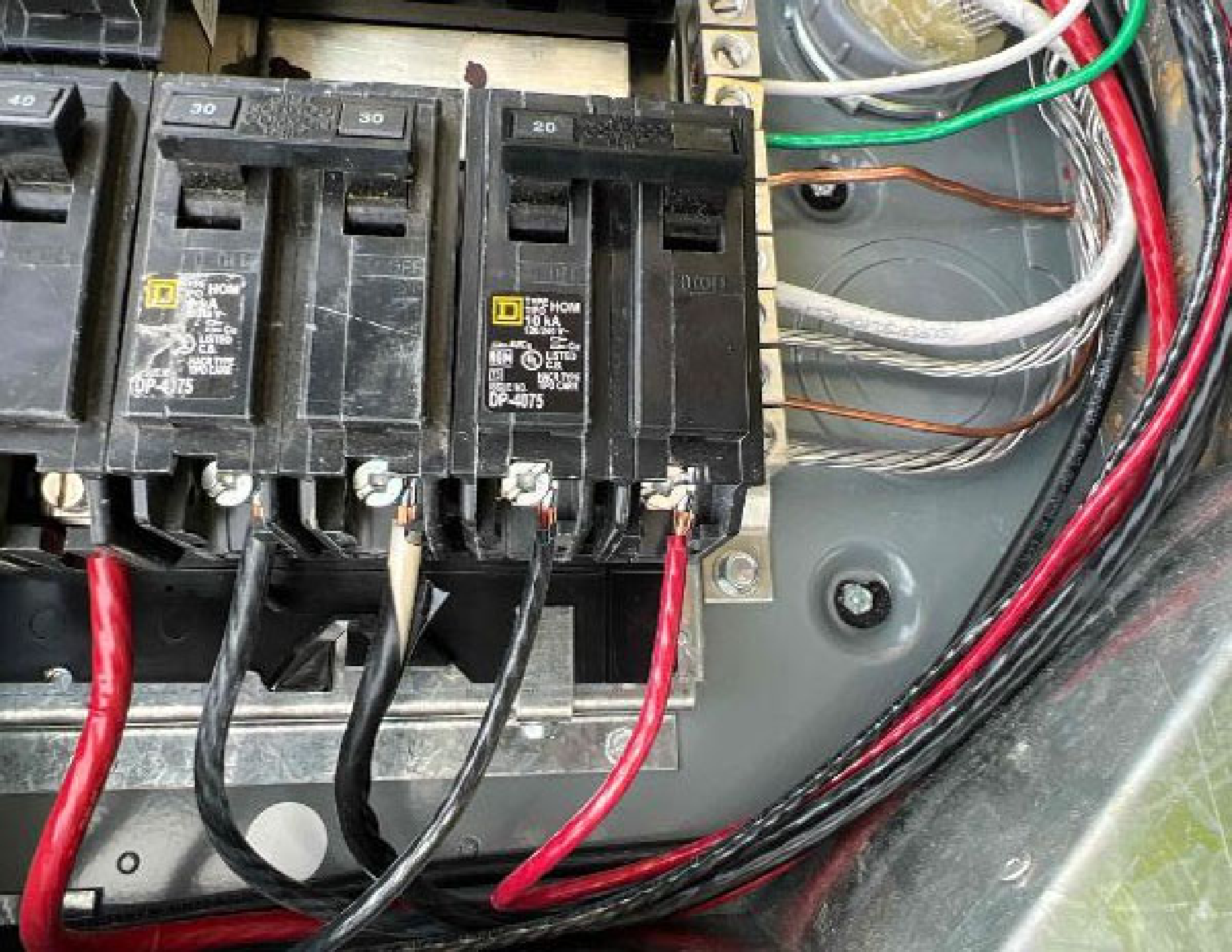
RIGHT  
NO. 1/00  
COMMON  
TRIP



TYPE HOM  
20 A  
125 V  
100% Cu  
LISTED  
C.B.  
MAGNETIC  
TRIP  
DP-4075















# LP TechShield®

RADIANT BARRIER

FOR MOST ROOF/CEILING INSTALLATIONS  
NO JOISTS REQUIRED AND NO  
EXTRA PRESSURE DOWN. CABLE  
CONDUITS SERVICE (800) 456-6889  
FOR MORE INFORMATION  
CONTACT US AT (800) 456-6889







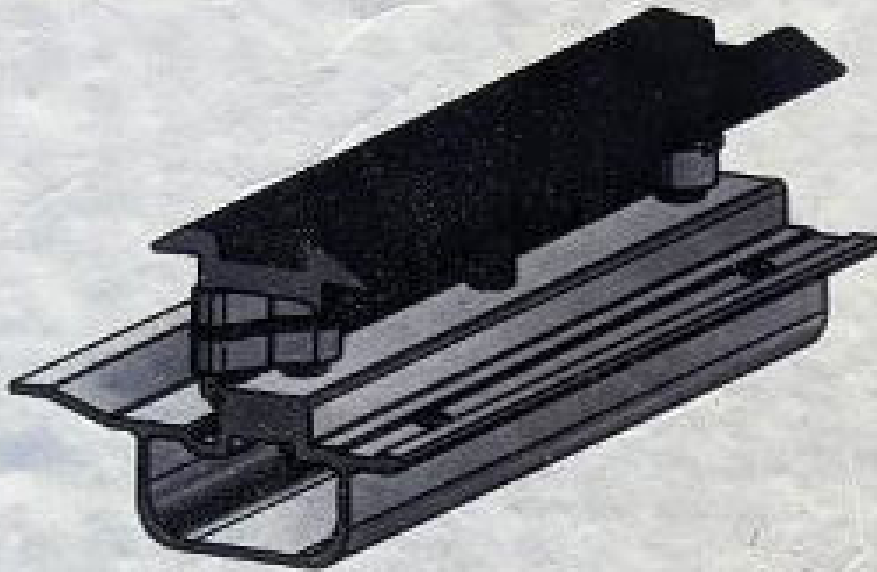




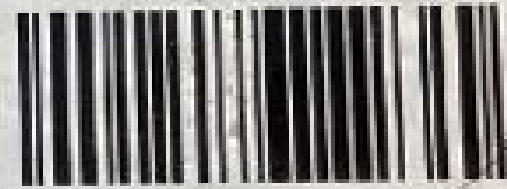


# 30MM SPLICE 6.5" SFM

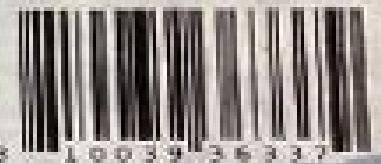
 **UNIRAC**<sup>®</sup>  
com  
BETTER SOLAR STARTS HERE



**253010U**



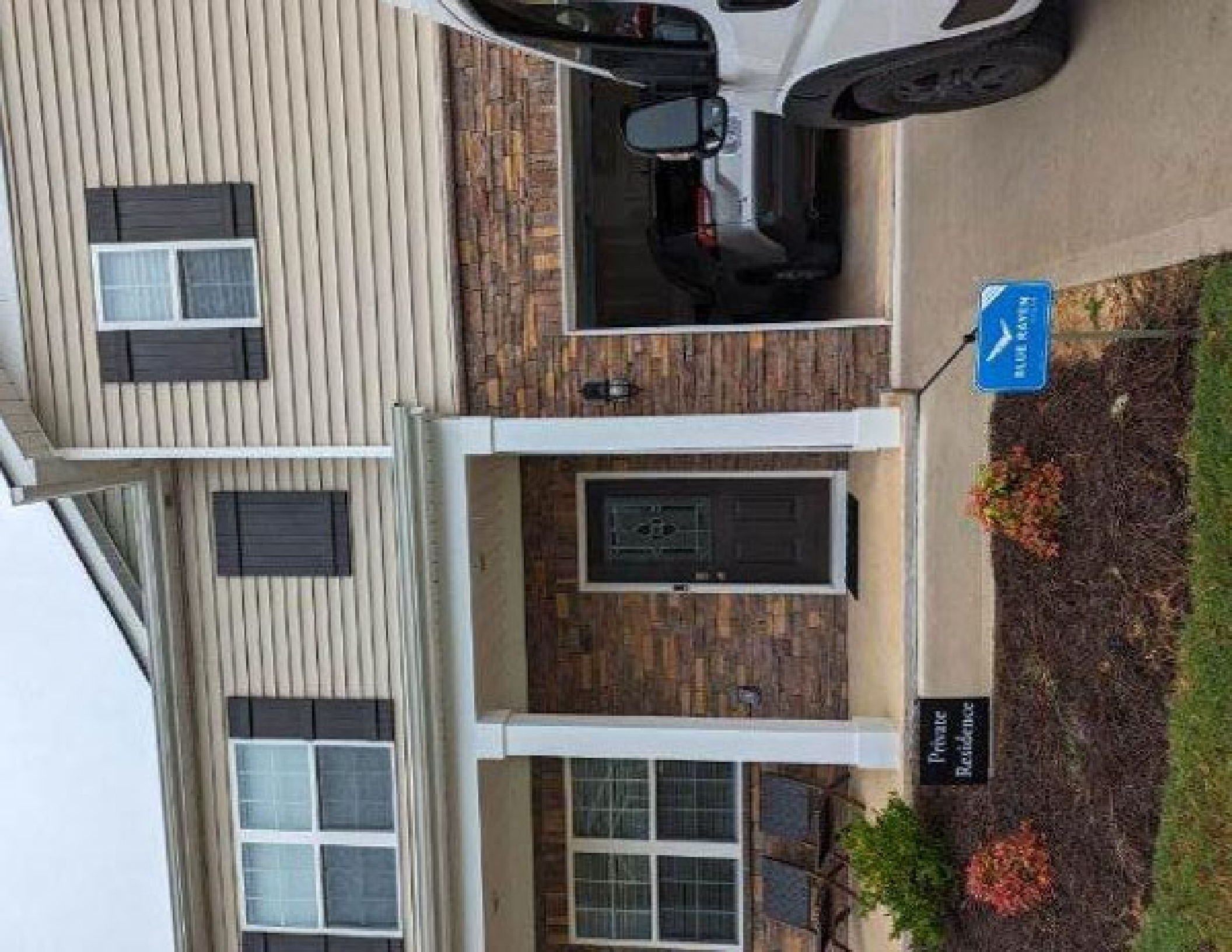
PACKAGE QTY: 10 EA  
WO/PO#: 0046348-01  
MANUFACTURE DATE: 06/2023  
FACTORY CODE: 026A



California Proposition 65  WARNING: Cancer &  
Reproductive Harm [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

[unirac.com/patents](http://unirac.com/patents)

6 10039 36337 9



Private  
Residence





 ENPHASE.

# IQ7X

Get 24/7 Cloud Support | Info-Active Inverter for  
Rooftop | See all product information, refer to  
<http://iq7x.enphase.com/enq/enq/qa/enq/qa/alarms>

Power factor: Range: 0.99  
DC input range: 20 - 140V  
Max. input power: 700W  
Max. open circuit voltage: 150V  
AC output voltage: 208/240V  
AC output current: 10/11.5A  
AC output frequency: 60Hz  
AC output power: continuous: 700W  
Operating temperature: -40°C to +60°C  
Open protection: 150A Type 2  
Protection: surge (UL1741), lightning (UL1741)  
UL1741 SA Compliance | Assembled in Mexico



This device complies with part 15 of the FCC  
Rules. Operation is subject to the following two  
conditions: (1) This device may not cause  
harmful interference; (2) This device must  
accept any interference received, including  
that which may cause undesired operation.

CAUTION: RISK OF SERIOUS INJURY OR DEATH  
IF CONTACTED WITH ELECTRICAL SYSTEMS  
REPAIRS. ALWAYS DEENERGIZE AND LOCK-OUT  
SERVICES TO QUALIFIED SERVICE PERSONNEL.

**WARNING: ELECTRIC SHOCK HAZARD.**  
DC CONDUCTIONS OF THIS INVERTER CABLE SYSTEM ARE  
INSULATED AND MUST BE UNPLUGGED, AC HARDC  
VOLTAGE SOURCES TERMINATE INSIDE THIS EQUIPMENT  
TO CONNECT BOTH BEFORE SERVICING. PERSONS MUST  
ALWAYS SHUT OFF AC VOLTAGE TO THIS EQUIPMENT  
WHEN EXPOSED TO LIGHT, HOT SURFACES, TO THE EDGE  
THE RISK OF BURNS - DO NOT TOUCH.

**ATTENTION: LOCAL PUBLIC UTILITIES  
OR CONDUCTIONS OF DEER SYSTEMS PHOTOVOLTAIC  
REPAIRS BELIEVE A LA TIRE ET TRAVAILLEZ EN SÉCURITÉ  
REPARATIONS DE SOURCES DE TENSION ALÉATOIRE DE SORT  
CONNECTEZ-VOUS À LA TIRE AVANT DE COMMENCER LES TRAVAUX  
AVANT DE COMMENCER LES TRAVAUX, LES CÂBLES DE COURANT  
CONTIENNENT DES TENSIONS QUE LE CHAMP  
MAGNÉTIQUE EST FORCÉ À LA TIRE. ÉVITEZ DE  
TOUCHER DES PARTIES TOUCHER.**





REC Alpha Pure-R Series  
 REC420A Pure-R  
 Serial Number: FBB-7005390235

Power Output (Pmax) 420 W  
 Watt Class Sorting 0/+10 W  
 Power Production Tolerance +/- 3%  
 Rated Voltage (Vmpp) 50.0 V  
 Rated Current (Impp) 8.40 A  
 Open Circuit Voltage (Voc) (+/- 3%) 59.4 V  
 Short Circuit Current (Isc) (+/- 3%) 8.89 A  
 Maximum System Voltage (Vsys) 1000 V  
 Maximum Series Fuse (DC) (UL) 25 A  
 Maximum Series Fuse (DC) (IEC) 25 A

Design Load -4668 / -2666 Pa<sup>2</sup>  
 Maximum Test Load -7000 / -4000 Pa<sup>2</sup>  
 (Values at STC: 1000 W/m<sup>2</sup> AM 1.5, 25°C, 60% RH)

CE UK  
 DE  
 Manufactured: 18-08-2023



Warning electrical hazard. This module produces electricity when exposed to light.  
 CAUTION - DO NOT DISCONNECT UNDER LOAD  
 Avertissement: Risque de choc électrique. Ce module génère de l'électricité lorsqu'il est exposé à la lumière.  
 ATTENTION - NE PAS DECONNECTER SOUS TENSION

For field connections, use max. 6 mm<sup>2</sup> (AWG) UL PV wire insulated for a max. of 600V.  
 Made in Singapore by REC SOLAR PTE LTD  
 20 TUAS SOUTH AVENUE 14, SINGAPORE 630112, SINGAPORE  
 Europe Contact: REC Solar - EMMA DEHN  
 E-mail: 716.81581@rec.com.sg, 181 +65 (0)6 442-3888  
 For other regions see: www.rec.com.sg/contact











FLASHKIT SFM TRIM S

004201D



FLASHKIT SFM TRIM S COMP DARK

Pack Size: 10

Factory Code: 5-1



WOPC# 0045416-00 Manufacture date: 2/10/22-3/10/22

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