

Brian woods  
444 Deer view, Seward, NE  
1 string 14 pnds



WARNING: HIGH VOLTAGE

Almko  
Model: ALM-1000-12V  
Power: 1000W  
Voltage: 12V  
Current: 83.3A  
CE  
RoHS



## PHOTOVOLTAIC MODULE

Modules assembled in the USA from solar cells made in Vietnam

### Solar Module Type : JKM395M-72HBL-V

Maximum Power(Pmax)	395W
Power Tolerance	±3%
Maximum Power Voltage (Vmp)	39.90V
Maximum Power Current(Imp)	9.90A
Open Circuit Voltage(Voc)	48.80V:±3%
Short Circuit Current(Isc)	10.54A:±4%
Maximum System Voltage	1500VDC
Maximum Series overcurrent protective device rating	20A
Operating Temperature	-40°C ~ +85°C
Protection Class	II
Module Fire Performance	Type 1(UL1703)/Class C(IEC61730)
Weight	22.5(kg)
Dimension	2008×1002×40(mm)
STC:	1000W/m <sup>2</sup> , AM1.5, 25°C
Current Sorting	11



System fire Class Rating: See installation Instructions for Installation

Requirements to Achieve a Specified System Fire Class Rating with this Product

The fire rating is Class C in Canada



### WARNING

ONLY qualified personnel should install or perform maintenance work on these modules

BE AWARE of dangerous high DC voltage when connecting modules

DO NOT damage or scratch the rear surface of the module

SEE module literature for appropriate mating connectors



### AVERTISSEMENT

SEUL les professionnels peuvent installer et maintenir les éléments

PRENDRE GARDE de la haute tension continue lorsque les éléments sont connectés

IL EST interdit d'endommager ou d'érafler l'envers des éléments

VOIR les infos modules pour les connecteurs de raccordement appropriés

For field connections, use 12 AWG wire insulated for a minimum of 90°C, rated for wet conditions and resistant to ultra violet radiation (where exposed)



Small white label on the ceiling.

**LINKO**  
POWER SOURCE: 120V AC  
POWER OUTPUT: 1500W  
INPUT: 120V AC  
OUTPUT: 120V AC  
CE  
RoHS  
RECYCLABLE

**Do Not Remove**  
QR Code  
RECYCLABLE  
FC  
StarEdge Technology Ltd  
Power Optimizer  
Advanced Technology  
Manufactured in China  
CAUTION  
WARNING  
AVERTISSEMENT











Do Not Remove



SolarEdge Technologies (UK) Ltd  
SolarEdge Technologies GmbH  
Werner-Strasse 10/12, Munich, Germany



SolarEdge Technologies Ltd  
Power Optimizer

SolarEdge Technologies GmbH  
Werner-Strasse 10/12  
Munich, Germany

**CAUTION**

HOT SURFACES TO REDUCE THE RISK OF BURNS DO NOT TOUCH. RISK OF ELECTRIC SHOCK. WHEN THE PHOTOVOLTAGIC ARRAY IS EXPOSED TO SUN, IT SUPPLIES A DC VOLTAGE TO EQUIPMENT. COVER PV MODULE WITH WET MATERIAL BEFORE CONNECTING OR DISCONNECTING THIS OPTIMIZER. IN THE EVENT OF A SHORT CIRCUIT OR WIRING FAULT, ZERO CURRENT IS SOURCED INTO DC ARRAY BY CONVERTER.

**WARNING**

ELECTRIC SHOCK HAZARD. THE DC CONDUCTORS OF THIS PHOTOVOLTAIC MODULE ARE UNGROUNDED AND MAY BE ENERGIZED.

**AVERTISSEMENT**

RISQUE DE CHOC ELECTRIQUE. QUAND LE CHAMP PHOTOVOLTAIQUE EST EXPOSE A LA LUMIERE, UNE TENSION CC EST FOURNIE A CET EQUIPEMENT. SURFACES CHAUDES. NE PAS TOUCHER. AFIN DE REDUIRE LES RISQUES DE BRULURES DE COURANT DE RETOUR INJECTE PAR LE CONVERTISSEUR EN CAS DE DEFAILLANCE DANS LE MODULE PV EST TOUJOURS NUL.





Photovoltaic Power Source

solar edge HD wave

DC DISCONNECT



PHOTOVOLTAIC POWER SOURCE

**E-T-N**

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

**RAPID SHUTDOWN  
SWITCH FOR  
SOLAR PV SYSTEM**

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

**AC DISCONNECT  
PHOTOVOLTAIC SYSTEM  
POWER SOURCE**

REMARKS:  
RATED OUTPUT CURRENT: 15 A  
RATED OPENING AC VOLTAGE: 600 VOLT



CAUTION: SOLAR ELECTRIC  
SYSTEM CONNECTED

**WARNING**  
DUAL POWER SUPPLY  
ISOLATE UTILITY AND  
PV SYSTEM  
BEFORE SERVICE



CAUTION: SOLAR ELECTRIC  
SYSTEM CONNECTED

**RAPID SHUTDOWN  
SWITCH FOR  
SOLAR PV SYSTEM**

**WARNING**  
DUAL POWER SUPPLY  
ISOLATE UTILITY AND  
PV SYSTEM  
BEFORE SERVICE

CENTRAL EMC





solar**edge**

 HD wave

P I O

**DC DISCONNECT**

ON

OFF



solar**edge**







**⚠ DANGER**  
 MODIFICATIONS, REPAIRS, AND OVERLOADS ARE PROHIBITED.  
 ALL WORK MUST BE DONE BY A QUALIFIED ELECTRICIAN.

**⚠ PELIGRO**  
 MODIFICACIONES, REPARACIONES Y SOBRECARGAS SON PROHIBIDAS.  
 TODA LA OBRERA DEBE SER REALIZADA POR UN ELECTRICIANO CALIFICADO.

**⚠ DANGER**  
 DO NOT OPERATE THIS SWITCH WITHOUT THE COVER IN PLACE.  
 NEVER OPERATE THIS SWITCH WITH COVER OPEN.  
 DO NOT OPERATE THIS SWITCH WITH COVER OPEN.  
 NEVER OPERATE THIS SWITCH WITH COVER OPEN.  
 NEVER OPERATE THIS SWITCH WITH COVER OPEN.

**DG222NRB**

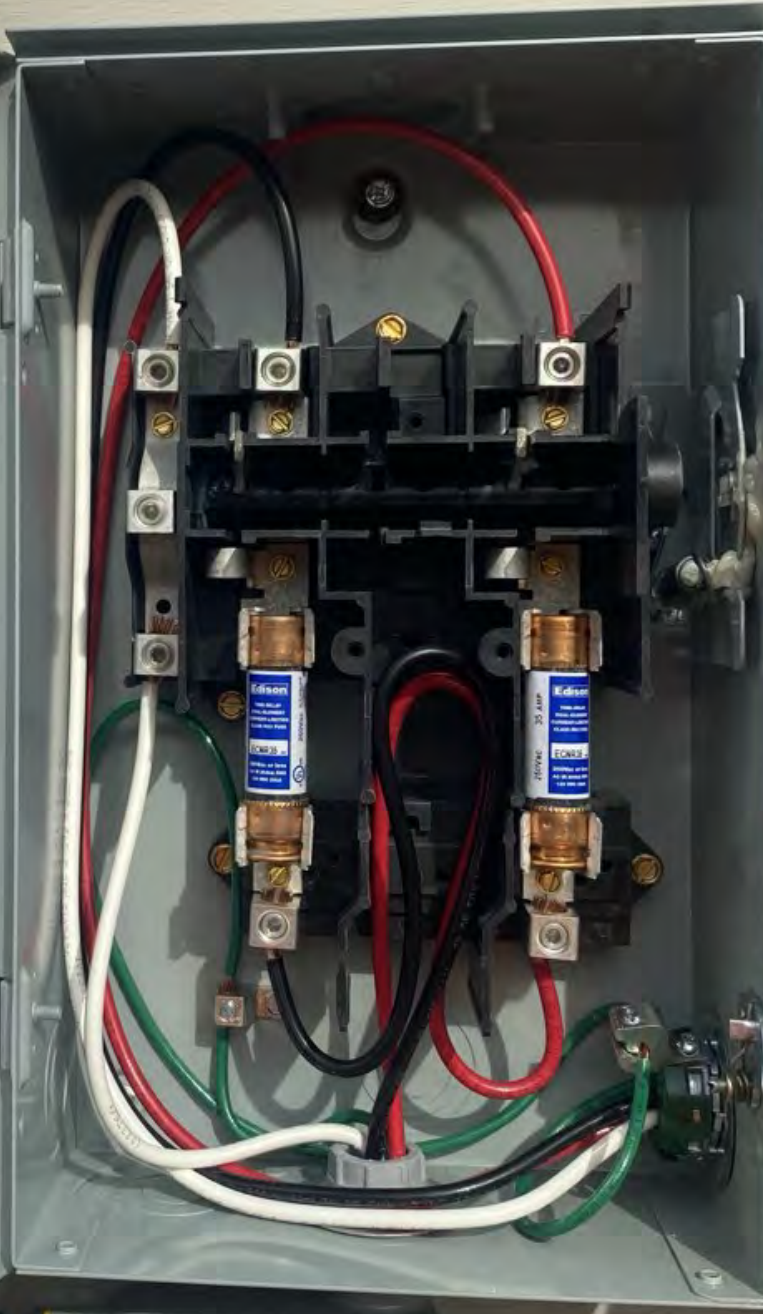
Series 8  
 GENERAL DUTY SAFETY SWITCH  
 Type 30 Infrared - Resistor  
 TERMINALS SUITABLE FOR AL-CU WIRE  
 INTERRUPTOR DE SEGURIDAD TIPO 30 INFRAROJO  
 BORNES ADECUADOS PARA CONDUCTORES DE AL-CU  
 INTERRUPTOR DE SEGURIDAD A INFRAROJO  
 BORNES CONVIENTAN POUR CONDUCTEURS AL-CU  
 60 Ampere 120/240, 240, 127/220 V ~ 60Hz 50/60, 50/60 Hz

**Eaton**

Wiring Diagram: Line 1, Line 2, Line 3, Line 4, Line 5, Line 6, Line 7, Line 8, Line 9, Line 10, Line 11, Line 12.

60 Ampere Ratings	KVA (Calculation de puissance)	Resques "Maximum"	
1 Phase 1 Wire	2 Phase 2 Wire	2 Phase 3 Wire	3 Phase 3 Wire
120 / 240 V ~	3.6 (1.5 x 2.4)	7.2 (3.0 x 2.4)	10.8 (4.5 x 2.4)
120 / 240 V ~	1.8 (0.75 x 2.4)	3.6 (1.5 x 2.4)	5.4 (2.25 x 2.4)
120 / 240 V ~	0.9 (0.375 x 2.4)	1.8 (0.75 x 2.4)	2.7 (1.125 x 2.4)

Notes: For grounded 3 Phase systems... The starting current of motors of more than the standard horsepower rating... Continuous load current not to exceed 85% of the rating... **CAUTION**: Do not use in wet or damp locations... **WARNING**: Do not use in hazardous locations... **Wiring**: 18 AWG, 2.1 x 0.25 mm AL-CU... **Dimensions**: 180 mm (7.1") H, 110 mm (4.3") W, 45 mm (1.8") D.



WARNING: This equipment is not to be used for any other purpose than that intended by the manufacturer. The user must read and understand the instructions before using the equipment. Failure to do so may result in personal injury or property damage.

**PELIGRO**  
Peligro de choque eléctrico. Evite tocar los conductores eléctricos.  
Evite tocar los conductores eléctricos cuando el equipo esté encendido o cuando se esté trabajando en él.  
No toque los conductores eléctricos cuando se estén realizando trabajos de mantenimiento o reparación.

**DANGER**  
Electrical Shock Hazard. Avoid touching electrical conductors.  
Avoid touching electrical conductors when the equipment is energized or when working on it.  
Do not touch electrical conductors when performing maintenance or repair work.

**EATON**

WIRE  
CONDUCTORES DE AL-CU

CONDICIONES	Regulaciones	Interpretaciones
1. Fase	3 Phase, 3 Wire	2 Phase, 3 Wire
2. Voltaje	240V	240V
3. Frecuencia	50/60 Hz	50/60 Hz
4. Temperatura ambiente	40°C (104°F)	40°C (104°F)

**UL LISTED**  
EQUIPO LISTADO PARA SER UTILIZADO EN SISTEMAS DE ALIMENTACIÓN DE ENERGÍA ELÉCTRICA.  
NUM-3674

LINE

SNAP-IN 2ND

SNAP-IN 2ND

REINSTALL AFTER WIRING  
REINSTALE DESPUÉS DEL CABLEADO  
REINSTALLER APRÈS L'INSTALLATION ÉLECTRIQUE  
INSTALL 1ST

**Edison**  
25 AMP  
250V

**Edison**  
25 AMP  
250V

El fabricante no se responsabiliza por daños personales o materiales causados por el uso indebido de este equipo.  
Este equipo debe ser instalado y utilizado de acuerdo con las instrucciones de instalación y operación.  
El usuario debe leer y comprender las instrucciones de instalación y operación antes de utilizar el equipo.  
El fabricante no se responsabiliza por daños personales o materiales causados por el uso indebido de este equipo.  
Este equipo debe ser instalado y utilizado de acuerdo con las instrucciones de instalación y operación.  
El usuario debe leer y comprender las instrucciones de instalación y operación antes de utilizar el equipo.



**GENERAL DUTY SAFETY SWITCH**  
 Interrupteur de sécurité à usage général  
 Interruptor de seguridad de servicio general

60 A, 240 V~, 60 Hz

Complete ratings inside  
 Valeurs nominales complètes à l'intérieur  
 Información completa de capacidades en el interior

Further instructions inside  
 Autres instructions à l'intérieur  
 Instrucciones adicionales en el interior

Made in U.S.A. / Fabriqué aux É.-U. / Hecho en E.U.A.

**PHOTOVOLTAIC RAPID SHUTDOWN SYSTEM**

**StarEdge Connection Unit**

Max DC Voltage (PV/Battery)  
 Max DC Current (PV)  
 Max Continuous DC Current (Battery)  
 Max AC Voltage  
 AC Single Phase Frequency  
 Max AC Current (Grid)

For more details refer to the installation guide  
 Please marketing notice see WWW.SOLARBOARD.COM/CONSUMER

DCD-1911-US-P30-F-1  
 PN: 1319230AAA-0A  
 SN: 1319230AAA-0A  
 Made in Vietnam

**StarEdge Connection Unit**

Max AC Current (Smart EV Charger)  
 Max Continuous Output Power (Smart EV Charger)  
 Ambient Temperature  
 Enclosure Rating

For more details refer to the installation guide  
 Please marketing notice see WWW.SOLARBOARD.COM/CONSUMER

DCD-1911-US-P30-F-1  
 PN: 1319230AAA-0A  
 SN: 1319230AAA-0A  
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 Enclosure Rating

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 Please marketing notice see WWW.SOLARBOARD.COM/CONSUMER

DCD-1911-US-P30-F-1  
 PN: 1319230AAA-0A  
 SN: 1319230AAA-0A  
 Made in Vietnam

**EATON®**

General Duty Safety Switch  
 Interrupteur de sécurité à usage général  
 Interruptor de seguridad de servicio general

60 A, 240 V~, 60 Hz

Complete ratings inside  
 Valeurs nominales complètes à l'intérieur  
 Información completa de capacidades en el interior

Further instructions inside  
 Autres instructions à l'intérieur  
 Instrucciones adicionales en el interior

Made in U.S.A. / Fabriqué aux É.-U. / Hecho en E.U.A.



**⚠ DANGER**  
 HAZARDOUS VOLTAGE. WILL CAUSE SEVERE INJURY OR DEATH.

• Never operate unless with cover open.  
 • Turn OFF cover ahead of switch before doing any work inside.  
 • Replace all parts. Close cover before turning power ON.

**TENSION DANGEREUSE. PEUT CAUSER DES BLESSURES GRAVES OU LA MORT.**

• Ne jamais manipuler l'interrupteur lorsque la couverture est ouverte.  
 • Couper l'alimentation en amont de l'interrupteur avant toute intervention. Remplacer les pièces. Fermer la couverture avant de remettre sous tension.

**⚠ PELIGRO**  
 VOLTAJE PELIGROSO. PUEDE CAUSAR HERIDAS SEVERAS O LA MUERTE.

• Nunca opere el interruptor con la cubierta abierta.  
 • Desconecte la alimentación del interruptor antes de trabajar dentro del mismo. Reemplazar todas las partes. Cerrar la cubierta antes de energizar el interruptor.

3042083



**solar edge** SE6000H - US  
**Grid Support Utility Interactive  
Non - Isolated Photovoltaic Inverter**

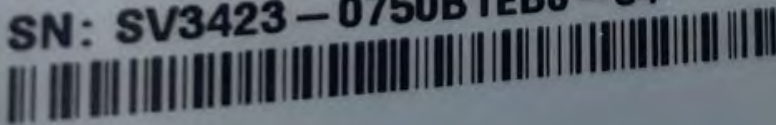
Operating Voltage Range 270 - 480Vdc  
Max Input Current 16.5A<sub>dc</sub>  
Max Continuous Output Power 5000W<sub>ac</sub> @ 208V 6000W<sub>ac</sub> @ 240V  
Voltage Min - Nom - Max 183 - 208 - 228V<sub>ac</sub>  
183 - 208 - 228V<sub>ac</sub>  
211 - 240 - 264V<sub>ac</sub>  
Max Continuous Output Current 24A<sub>ac</sub> @ 208V 25A<sub>ac</sub> @ 240V  
Max Output Fault Current 72A<sub>ac</sub>  
Max Utility Backfeed Current 0A<sub>ac</sub>  
Frequency Min - Nom - Max 59.3 - 60.0 - 60.5Hz  
Output Power Factor +/- 0.85 - 1  
Max Ambient Temperature 60 C  
Enclosure IP65 / Type 3R  
With integrated ground fault protection per NEC 690.35 (C)  
Type 1 Photovoltaic Arc - Fault Circuit - Protection

WI - FI Password: Dc1t3TRJ  
Activation: PXIT B/83 Q5JS 7MJM kBd5 8BII 6aM =

WIFI MAC:  
84:D6:C5:80:E4:0F  
ZigBee MAC:



PN: SE6000H - USSNBBL14  
SN: SV3423 - 0750B1EB6 - 54



**KLEIN TOOLS**

CL110

OFF

2/20A ~

200/  
400A ~

V $\overline{\text{---}}$

V $\sim$

OFF

2000 Counts  
400A AC Digital Clamp Meter

13.7 V

RANGE MAX

CAT III 600V  
COM  $\Delta$  V $\Omega$

600V  
400A

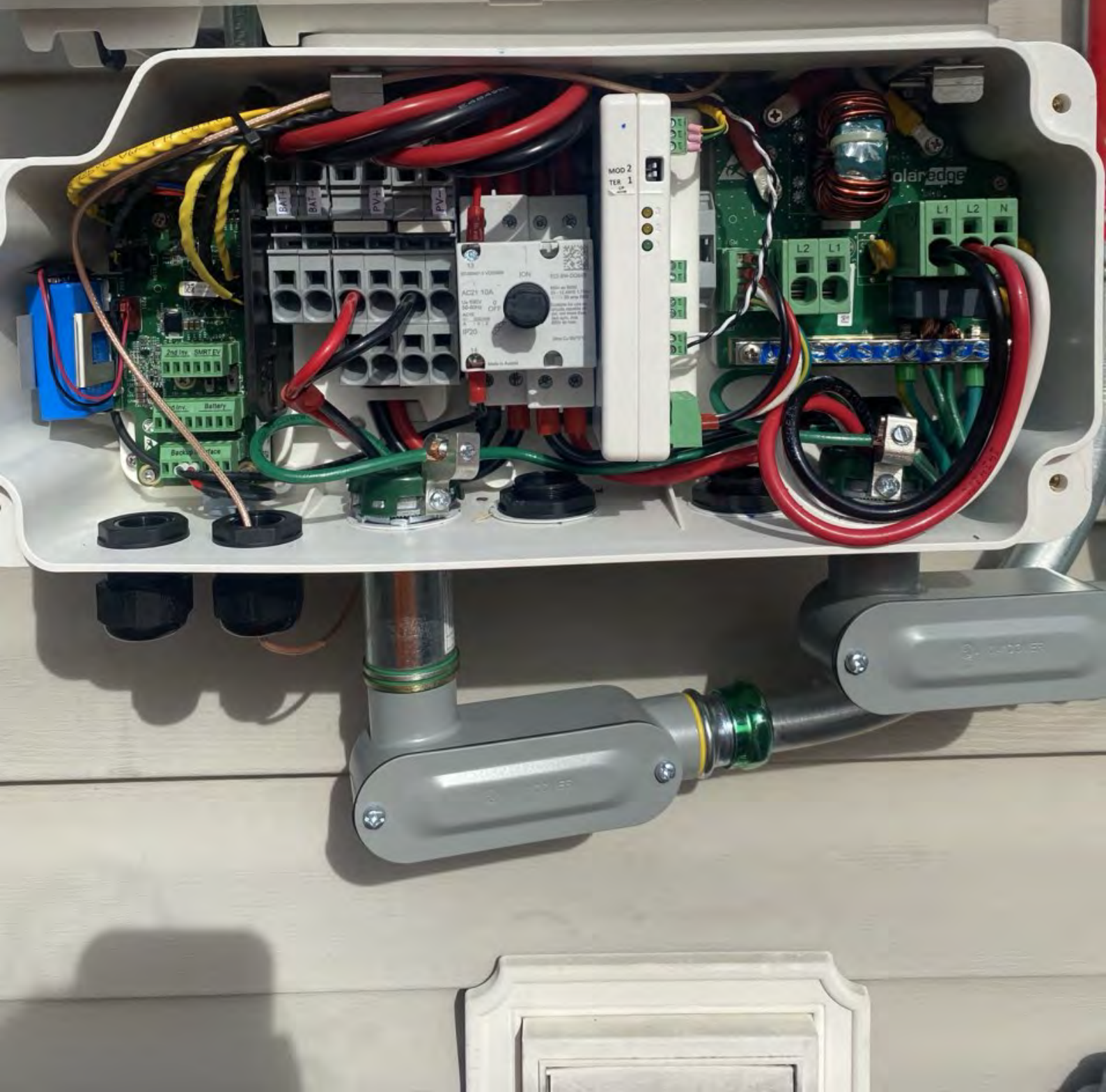
MOD 2  
TER 1

AC21 10A  
10A  
IP20



solar<sup>edge</sup>

HD wave



**EATON**

General Duty Safety Switch  
Interrupteur de sécurité à usage général  
Interruptor de seguridad de servicio general  
60 A, 240 V~, 60 Hz

Complete ratings inside  
Valeurs nominales complètes à l'intérieur  
Información completa de capacidades en el interior

Further instructions inside  
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Instrucciones adicionales en el interior

Made in U.S.A. / Fabriqué aux É.-U. / Hecho en E.U.A.

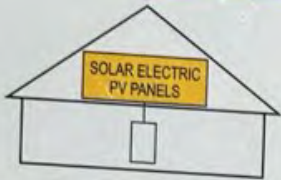
**⚠ DANGER**  
HAZARDOUS VOLTAGE WILL CAUSE SEVERE INJURY OR DEATH.  
• Never operate inside with cover open.  
• Turn OFF power ahead of switch before doing any work inside. Lockout and tagout. Close cover before turning power ON.

**TENSION DANGEREUSE. PEUT CAUSER DES BLESSURES GRAVES OU LA MORT.**  
• Ne jamais ouvrir l'interrupteur lorsque le couvercle est ouvert.  
• Couper l'alimentation en amont de l'interrupteur avant toute intervention. Régler les verrous. Fermer le couvercle avant de remettre sous tension.

**⚠ PELIGRO**  
VOLTAGE PELIGROSO. PUEDE CAUSAR HERIDAS SEVERAS O LA MUERTE.  
• Nunca opere el interruptor con la cubierta abierta.  
• Desconectar la alimentación del interruptor antes de cualquier trabajo de mantenimiento. Bloquear y etiquetar la cubierta antes de energizar el interruptor.

30-43080

**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

**RAPID SHUTDOWN  
SWITCH FOR  
SOLAR PV SYSTEM**

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

**AC DISCONNECT**  
PHOTOVOLTAIC SYSTEM  
POWER SOURCE

RATED AC  
OUTPUT CURRENT **25** AMPS

NOMINAL OPERATING  
AC VOLTAGE **240** VOLTS

PHOTOVOLTAIC POWER SOURCE



ON

OFF

**CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED**

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

GRIDSTREAM RF  
80074180

655-09

TYPE FOCUS AXRe-SD  
FORM 25 CL200 240V 3W 60Hz TA=30 kWh 7.2

**CENTRAL EMC**

159 384 946  
Landis + Gyr

PHOTOVOLTAIC  
SYSTEM kWh METER

**CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED**

**RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

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

**CAUTION**  
SOLAR POINT OF CONNECTION

PELM

PELM

**CAUTION: SOLAR ELECTRIC SYSTEM CONNECTED**

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

GRIDSTREAM RF  
90974560

TEST 88.88.88 VARS  
Vrms  
kWd  
240

Type **FOCUS AXRe-S0**  
FORM 25 CL200 240V 3W 60Hz TA=30 Kh 7.2

**CENTRAL EMC**

159 384 946  
934  
0220  
Landis+Gyr

PHOTOVOLTAIC  
SYSTEM kWh METER

P.V  
SOLAR  
P.V  
SOLAR

35  
35

**SOLAR PV BREAKER**  
BREAKER IS BACKFED  
DO NOT RELOCATE

200 OFF  
TRIP

30  
30

RELM

RELM



159 284 946  
London City



