SAVE THESE INSTRUCTIONS – This manual contains important instructions for the Three Phase Inverter that shall be followed during installation and maintenance.
### Legend

<table>
<thead>
<tr>
<th><strong>NOTE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>This symbol denotes information intended to assist the user in making optimum use of the product.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>CAUTION!</strong></th>
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<tr>
<td>Denotes a hazard. It calls attention to a procedure that, if not correctly performed or adhered to, could result in damage or destruction of the product. Do not proceed beyond a caution sign until the indicated conditions are fully understood and met.</td>
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<tr>
<th><strong>Torque value</strong></th>
</tr>
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<tbody>
<tr>
<td>LEDs</td>
</tr>
</tbody>
</table>

| 1. Turn ON/OFF/P Switch to OFF (0) |
| 2. Turn Safety Switch to OFF |
| 3. Open cover screws |

<table>
<thead>
<tr>
<th>Inverter ON/OFF/P Switch: 0=OFF; 1=ON; P=Pairing/Program</th>
</tr>
</thead>
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<tr>
<th>Turn ON/OFF the main circuit board AC switch, and wait 5 minutes</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th>Safety Switch (on optional DC Safety Unit)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Fasten screws in described order</th>
</tr>
</thead>
</table>

<table>
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<tr>
<th><strong>NOTE</strong> + symbol</th>
</tr>
</thead>
</table>

| **MAN-01-00694-1.0** | 1 |
Step 1

Installing the Power Optimizers

Verify string design with Designer

M6 (1/4") or M8 (5/16") stainless steel 9.5 N*m / 7 lb*ft

10 mm / 0.4"
25 mm / 1" (P860, M1600)

10 mm / 0.4"
25 mm / 1" (P860, M1600)

12.7 mm / 0.5"

10 mm / 0.4"
25 mm / 1" (P860, M1600)

10 mm / 0.4"
25 mm / 1" (P860, M1600)
Step 1

Complete site registration and physical layout in the monitoring platform

Scan stickers using Mapper
Input from module

Output to string

2:1 series connection

Use a dual input optimizer (P800p) for parallel connection of two PVs. Use a branch cable to connect two PVs to a single input optimizer.

Extension cables (4mm² / 1.6") between optimizers are allowed between rows and around obstacles.
Check string polarity and measure each string’s voltage to verify 1±0.1V per optimizer

Example: 8 optimizers = ~8V
Step 2

Installing the Inverter

***

20 cm / 8” where annual average high temperature is above 25°C / 77°F
Step 2

2.1 CAUTION! Do not drill this hole in DC Safety Unit with fuses board inside

2.2 Use 3/4" or 1" Unibit drill to create holes for AC and DC conduits

2.3 4.0 N*m / 2.9 lb.*ft.

2.4 CAUTION! Do not block Airflow
Step 3

Connecting the PV Array

DC safety unit with multiple string connections

1. Connecting the PV Array
2. DC safety unit with multiple string connections
3. For inverters up to SE25K ≤ 300 m (For SE25K and above: ≤ 700 m)

When using a stranded wire, use of ferrule is at the installer discretion.

6-12 AWG

0.7” 18 mm

For inverters up to SE25K ≤ 300m (For SE25K and above: ≤ 700m)
Step 3

DC safety unit with single string connection

To add additional strings in parallel, use external combiner box or branch cable

For inverters up to SE25K ≤ 300 m (For SE25K and above: ≤ 700 m)

When using a stranded wire, use of ferrule is at the installer discretion
Step 4: Connecting to the AC Grid

1. Connect the inverter to the AC grid with wires of size 6 - 10 AWG. The recommended wire size is 0.4 - 0.43" (10 - 11 mm).

2. Connect the Neutral (N) wire first. Use ferrule or other appropriate connectors at the installer discretion.

3. Overcurrent protection for the AC output must be provided by others, as stated in the manual for guidance.

The inverter can either support 4 wire + PE or 3 wire + PE connection.

When using a stranded wire, use of ferrule is at the installer discretion.
## Setting up Communication

### Built-in:
1. Ethernet p. 12
2. RS485 p. 14

### Optional

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td><img src="image" alt="Wireless Gateway" /></td>
</tr>
<tr>
<td><img src="image" alt="Cellular Plug-in" /></td>
</tr>
</tbody>
</table>

- **Wireless Gateway**
- **Cellular Plug-in**
Step 5

Scan QR code for troubleshooting

Scan QR code for communication options
Step 6

Creating an Ethernet (LAN) Connection

1. LAN Router
2. OFF
3. OFF
4. 4 ft.*lb
### Step 6

**T568B**

1. **White/Orange**
2. **Orange**
3. **White/Green**
4. **Blue**
5. **White/Blue**
6. **Green**
7. **White/Brown**
8. **Brown**

**T568A**

1. **White/Green**
2. **Green**
3. **White/Orange**
4. **Blue**
5. **White/Blue**
6. **Orange**
7. **White/Brown**
8. **Brown**

<table>
<thead>
<tr>
<th>RJ45 Pin #</th>
<th>Wire Color&lt;sup&gt;¹&lt;/sup&gt;</th>
<th>10Base-T Signal</th>
<th>100Base-TX Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>White/Orange</td>
<td>White/Green</td>
<td>Transmit+</td>
</tr>
<tr>
<td>2</td>
<td>Orange</td>
<td>Green</td>
<td>Transmit-</td>
</tr>
<tr>
<td>3</td>
<td>White/Green</td>
<td>White/Orange</td>
<td>Receive+</td>
</tr>
<tr>
<td>4</td>
<td>Blue</td>
<td>Blue</td>
<td>Reserved</td>
</tr>
<tr>
<td>5</td>
<td>White/Blue</td>
<td>White/Blue</td>
<td>Reserved</td>
</tr>
<tr>
<td>6</td>
<td>Green</td>
<td>Orange</td>
<td>Receive-</td>
</tr>
<tr>
<td>7</td>
<td>White/Brown</td>
<td>White/Brown</td>
<td>Reserved</td>
</tr>
<tr>
<td>8</td>
<td>Brown</td>
<td>Brown</td>
<td>Reserved</td>
</tr>
</tbody>
</table>

<sup>¹</sup> The inverter connection does not support RX/TX polarity change. Supporting crossover Ethernet cables depends on the switch capabilities.
Creating an RS485 Bus Connection

**Step 7**

**1.** Follow leaders (Max. 31)

**2.** Leader

**3.** Followers (Max. 31)

Min. 3-wire shielded twisted pair (a 4-wire cable may be used). Wire cross-section: 0.2-1 mm²

< 1km / 3300 ft.
Move SW1 switch to ON (up) to terminate first and last inverters on RS485 bus
First time SetApp Installation

1. Open SetApp and follow the instructions
2. Log-in with your monitoring Username and password
Activating

Step 9

1. Scan inverter QR code; for RS485 bus, scan master first

2. Follow the SetApp instructions

3. SetApp creates a Wi-Fi connection with the inverter
Step 10: Commissioning

1. Set Country and Language
2. Set communication to the monitoring platform and to the other inverters
3. Set all other parameters
4. From the Commissioning menu, select Pairing to pair the optimizers with the inverter
Step 11

Viewing System Status

SetApp Status screen

Inverter
SN 07318000C

Status

Power
XX kW

Voltage
XXX Vac

Frequency
XX Hz

Optimizers Connected
P_OK
30 of 30

Communication
S_OK
Ethernet

Status
Production

Switch
ON

Cos Phi
1.00

Limit
No Limit

Country
USA1

Voltage
XX Vdc

Temperature
XX F

Fan
OK

Monitoring platform

Main LEDs Indications