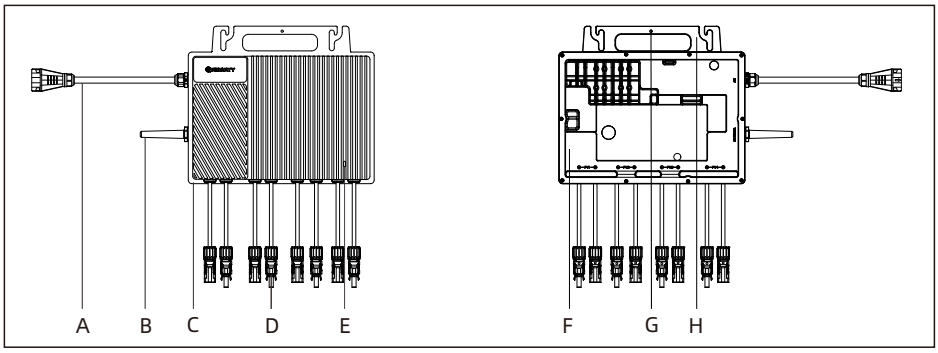
1. Overview

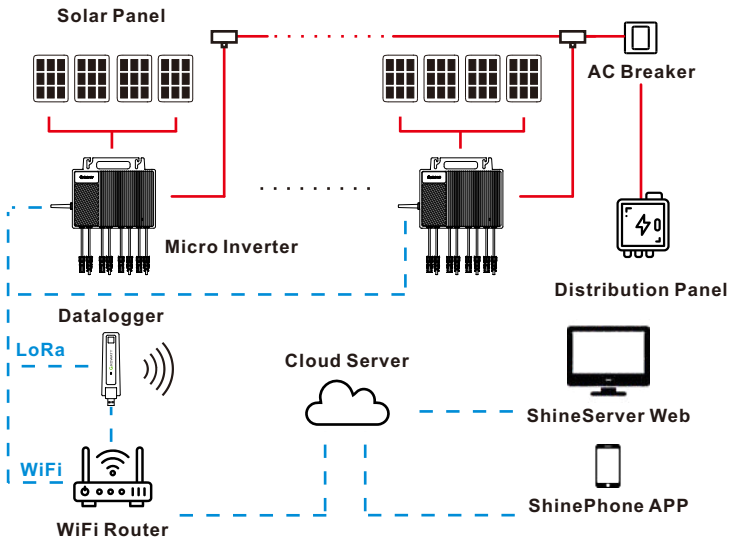
1.1 Microinverter Overview



Item	Description
A	AC cable
B	Antenna
C	Heat sink
D	PV terminal
E	LED
F	Back plate
G	Grounding hole
H	Handle

Note:
1. This document is intended for use as a quick installation guide. For details, please refer to the User Manual.
2. Growatt shall not be liable for any damage caused by improper operations.

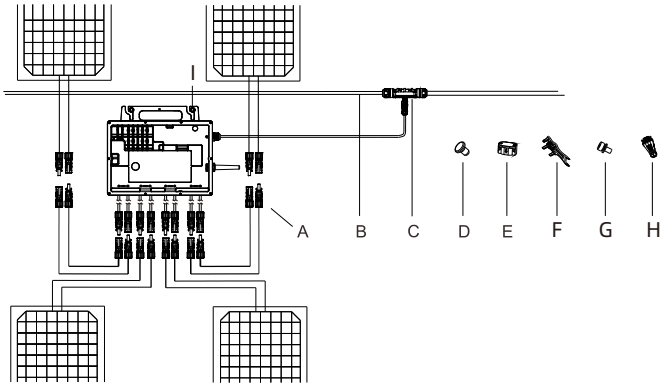
1.2 System Overview



1. The NEO series Microinverters support LoRa communication or communication via WiFi connection.
2. For remote monitoring, the Microinverter with integrated LoRa module should be connected to ShineWeLink.

NOTE:
1. If the WiFi signal is weak, please install a WiFi booster at a suitable place between the microinverter and the router.
2. Position the ShineWeLink next to the router, but maintain a minimum distance of 0.5m to avoid distortion resulting from the excessively strong signal.
3. Do not place the inverter, the router and Welink on the same vertical line to avoid affecting the signal strength.

1.3 Accessories



Item	Description
A	PV Extension Cable
B	AC Trunk Cable (AWG 12/10)
C	AC Trunk Connector
D	AC Trunk End Cap
E	AC Trunk Port Cap
F	AC Connector Unlock Tool
G	Grounding screw (M4*6)
H	Male AC Sub Connector
I	Mounting screw (M8*22)

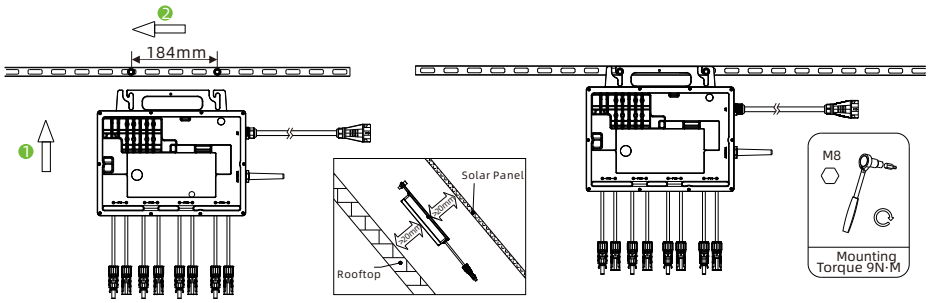
NOTE:
All accessories listed above are not included in the package and should be purchased separately.

2. Installation Procedures

NOTE:
1. The sequence can be changed based on your installation plan.
2. When crimping the the AC Trunk Cable, a hexagonal wire crimper must be used.
3. The Male AC Sub Connector can only be used in situations where the distance between the Microinverter and the grid connection point is less than 15 meters.

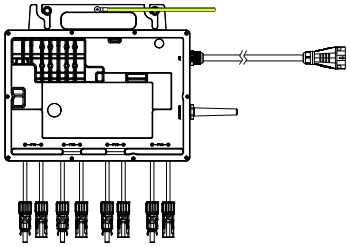
Step 1 Install the NEO Microinverter

a. Mount the NEO Microinverter to the rail using the mounting screws recommended by your module racking vendor.
b. Maintain a minimum of 20 mm clearance between the roof and the back plate of the Microinverter to ensure ventilation and heat dissipation. Do not install the Microinverter at the gap between the PV modules.



Step 2 Ground the system

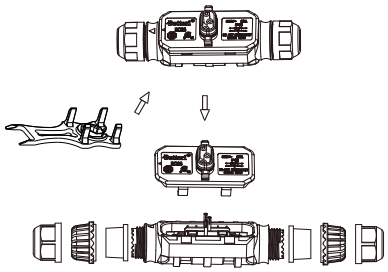
a. The AC cable has an embedded earth wire, which might be sufficient to ensure proper grounding.
b. In area with special grounding requirements, external grounding may be needed by grounding the screw hole on the handle.



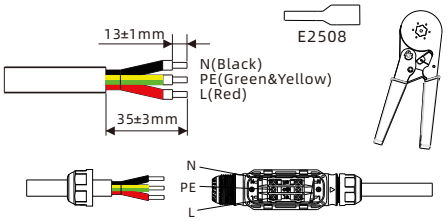
Step 3. Connect the AC cable

AC bus cable is used to connect the Microinverter to the distribution panel.
1. Use the AC Trunk Connector, which is applicable to the system with a single Microinverter or multiple Microinverters.

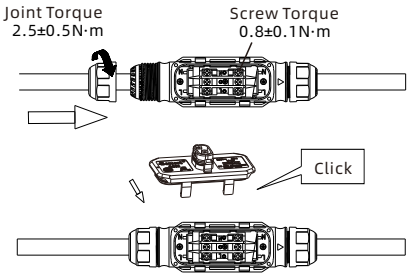
a. Insert the AC Trunk End cap and screw the cap back to port, then tighten the cap.



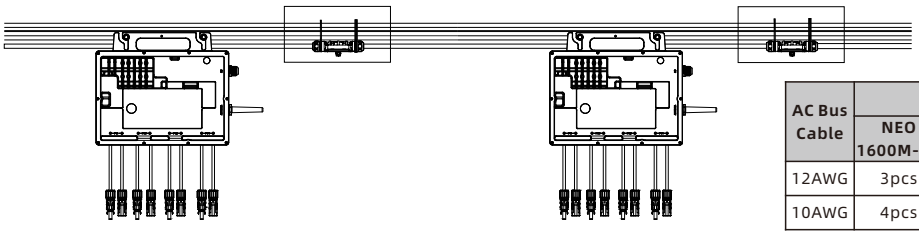
b. Crimp an EN6010 non-insulated cold-pressed terminal with each cable using a hexagonal wire crimper. Thread the cables through the cover and sealing plug. Connect the L, N and PE cables to the corresponding slots, and then tighten all screws. Re-install the upper cover, ensuring that you hear a "click" sound.



c. Tighten the screws, and install the cover back to the trunk connector.



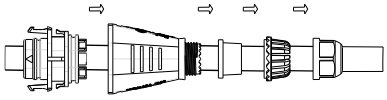
d. Attach the AC Bus Cable to the mounting rack and secure the AC Trunk Connector with tie wraps.



AC Bus Cable	Maximum number					
	NEO 1600M-X2	NEO 1800M-X2	NEO 2000M-X2	NEO 2250M-X2	NEO 2500M-X2	Max. current
12AWG	3pcs	3pcs	2pcs	2pcs	2pcs	25A
10AWG	4pcs	3pcs	3pcs	2pcs	2pcs	32A

2. Use the Male AC Sub Connector, which is applicable to the system with a single Microinverter.

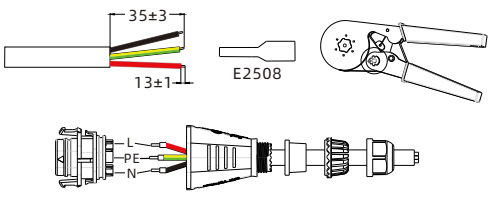
a. Prepare the male AC sub connector. Loosen the cover of the connector.



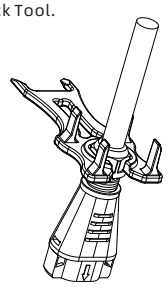
Cable suggestion length:

Cable	Max.cable length				
	NEO 1600M-X2	NEO 1800M-X2	NEO 2000M-X2	NEO 2250M-X2	NEO 2500M-X2
12AWG	35m	30m	25m	20m	20m
10AWG	20m	15m	15m	10m	10m

b. Strip each cable to a length of 13 mm and crimp the E2508 cord end terminal with the hexagonal wire crimper. Assign the L, N and PE cable to the corresponding slots, then tighten the screws and assemble the connector.



c. Fasten the nut with the AC Connector Unlock Tool.



⚠ WARNING:
Verify that the grid voltage is matching with the Microinverter rating.

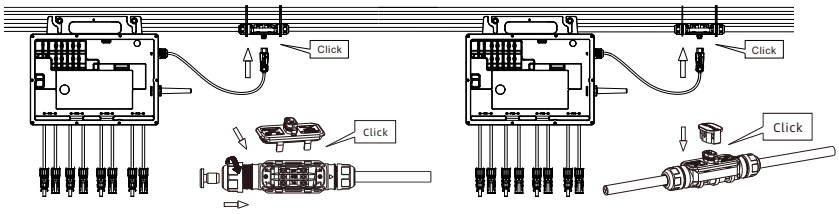
⚠ NOTE:
1. It is recommended to use AWG 12 or 10 cable for different applications.
2. It is recommended to use the AWG 14 cable when the Male AC Sub Connector is used.
3. Do not exceed the maximum number of Microinverters in each cable with respect to the maximum current of the AC bus cables.

Step 4. Complete the AC Connection

1. Connecting multiple Microinverters

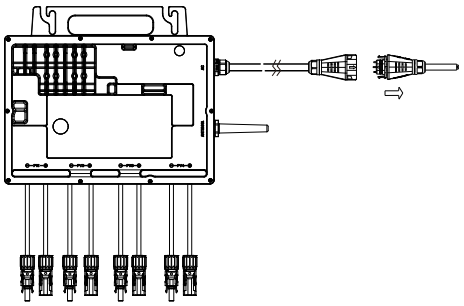
Connect the AC Cable to the AC Trunk Connector. Make sure to hear the "click" sound as proof of a robust connection.
Connect the AC Bus Cable to the distribution box, and wire it to the local grid network.

- Please plug the AC Trunk Port Cap in any vacant AC trunk port to prevent it from water and dust.
- Please insert the AC Trunk End Cap to the connector at the end of the AC Bus Cable to avoid water or dust penetration.



2. Connecting a single Microinverter

Connect the female connector of the AC Branch Cable to the Male AC Sub Connector. Ensure that you hear the "Click" sound which indicates a reliable connection.



Step 5. Create an Installation Map (Optional)

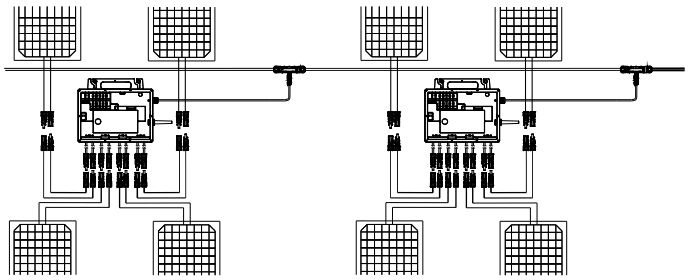
a. Peel the removable serial number label from each Microinverter.

b. Affix the serial number label to the respective location on the installation map.

Step 6. Connect PV Modules

a. Mount the PV modules above the Microinverter.

b. Connect the DC cables of PV modules to the DC input of the Microinverter.



⚠ WARNING:

1. Ensure that the Microinverter and all DC and AC connectors are not exposed to direct sunlight, rain and snow.
2. Adhere to local standards when designing and installing cables.
3. The DC connectors and the DC input terminals on the Microinverter must be of the same brand.
4. The Max. open circuit voltage must not exceed the Max. input voltage of the Microinverter.

⚠ NOTE:

1. If the DC cable is too short for installation, use the PV extension cable to connect PV modules to the Microinverter, otherwise the PV terminals will be damaged. The total length of the PV cable must not exceed 5m.
2. Do not connect the positive and negative DC cables into two different input channels.

Step 7. Energize the system

a. Turn on the AC breaker of the branch circuit.
b. Turn on the main AC breaker.
c. Upon the completion of electrical connections, the system will start generating power in about two minutes.

3. Datalogger Configuration

1. Download the APP
Method 1: Scan the QR code.
Method 2: Search for ShinePhone in Apple Store or Google Play.

Note: We recommend updating to the latest version when it is available.

2. Configure the datalogger
You can scan the QR code below to download the ShineWeLink Configuration Guide or WiFi Configuration Guide and obtain details about procedure to configure the datalogger.

【ShinePhone APP】

【ShineWeLink Configuration Guide】

【NEO WiFi Quick Configuration Guide】

4. Technical Data

Specifications \ Model	NEO 1600M-X2	NEO 1800M-X2	NEO 2000M-X2	NEO 2250M-X2	NEO 2500M-X2
Input data (DC)					
MPP voltage range	16-55V (able to generate power)				
Max. input current	18A (per MPP tracker)				
Max. short-circuit current	20A (per MPP tracker)				
Output data (AC)					
AC nominal power	1600W	1800W	2000W	2250W	2500W
Max. AC apparent power	1600VA	1800VA	2000VA	2250VA	2500VA
Nominal AC voltage*	220a.c.V/230a.c.V/240a.c.V				
AC grid frequency	50Hz/60Hz				
Maximum output current	7.27a.c.A	8.18a.c.A	9.09a.c.A	10.23a.c.A	11.36a.c.A
Power factor (@nominal power)	0.8 leading ... 0.8 lagging				
General data					
Dimensions (W/H/D)	396mm×270mm×45mm				
Weight	5.1kg				
Operating temperature range	-40 °C ... +65°C				

Specifications \ Model	NEO 1600M-X2	NEO 1800M-X2	NEO 2000M-X2	NEO 2250M-X2	NEO 2500M-X2
Protection degree	IP67 (NEMA 6)				
Wireless parameters (2.4GHz WiFi)					
Wireless standard	802.11 b/g/n				
Wireless frequency	2412-2472MHz				
Maximum output power	+20dBm				
Encryption scheme	AES				
Wireless parameters (LoRa)					
Wireless frequency	868 MHz (EU) / 915 MHz				
Maximum output power	14dBm (EU) / 17dBm				
Certificates and approvals					
Grid regulation	N4105; EN 50549-1/10; UNE 217002,NTS Type A;C10,C11; G98; CEI 0-21;TOR;NC RfG IEEE1547; ORDINANCE NO.140				
Safety	CE(EMC;LVD;RED); UL1741;IEC/EN62109-1, IEC/EN62109-2; IEC/EN 62920, IEC/EN 61000-6-1/-2/-3/-4; IEC/EN 61000-3-2/-3				
Communication	Incorporates product approved by Anatel under number 09146-24-10174				
Place of production	Made in China				

All specifications are subject to change without notice.
*** The AC Voltage and Frequency Range may vary depending on specific country grid standard.**

5. Safety



Danger to life due to lethal voltages!
High voltages which may cause electric shocks are present in the conductive parts of the microinverter. Prior to performing any operations on the microinverter, disconnect the device from all power sources.



Danger to life due to fire or explosion
- Do not install or use in potentially flammable and explosive atmospheres.
- Do not allow terminator to come in contact with open flame.



Risk of burns due to hot enclosure parts
- The microinverter generates heat when it is in operation. Do not touch the enclosure of the device; otherwise, it might result in burns.
- The microinverter should be protected against accidental contact.



Electromagnetic Radiation
- Never install the microinverter near electronic sensitive devices, such as the radio, the telephone and the television.
- Keep a safe distance of at least 20 cm from the microinverter at all times. Growatt assumes no responsibility for compliance to EMC regulations for the entire system.



Do not throw away
Do not dispose of faulty microinverters or accessories together with household waste. Please comply with the disposal regulations for electronic waste which apply at the installation site.



Do not disassemble the microinverter by yourself
- Do not disassemble the microinverter by yourself to avoid device damage.
- If you encounter any issue about the microinverter that cannot be solved, please contact Growatt supplier.

6. Declaration of conformity

This product complies with the following regulations and requirements:
- Electromagnetic Compatibility Directive:2014/30/EU (EMC)
- Radio equipment instruction:2014/53/EU(RED)
- Electrical Equipment (Safety) Regulations 2016:2014/35/EU(LVD)
- Restriction of Hazardous Substances Directive: 2011/65/EU(EU) and 2015/863 (RoHS)

You can download the Declaration of Conformity at
https://en.growatt.com/upload/file/EU_Conformity_Declaration_NEO_1600_2500M_X2.pdf.

7. Service and Contact

Find contact info for worldwide after-sales service at https://en.growatt.com/support/contact.

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