



Quick Installation Guide

Grid-tie Transformerless Solar Inverter

H2.5 / H3 / H3A / H4A / H5A_220 / H5A_221

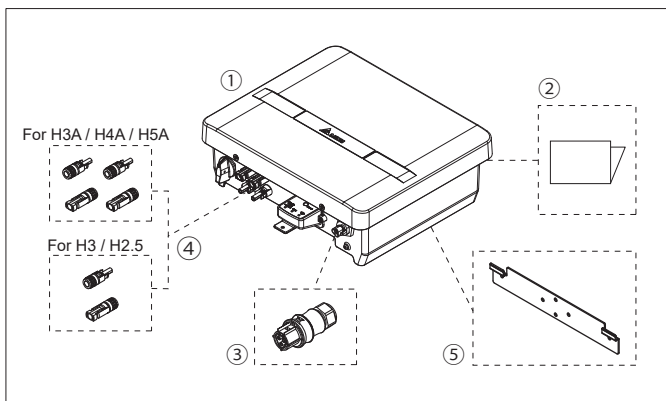
User manual / DC1_100 manual / APP download / APP guideline



Please scan QR-code for more instruction, specification and settings of DC1_100 or APP.

- https://mydeltasolar.deltaww.com/?p=product_manual

Descriptions of Parts and Components



| | Object | Qty | Description |
|---|--------------------------|---------|--|
| ① | PV Inverter | 1 | Solar inverter |
| ② | Quick Installation Guide | 1 | Important safety instructions and technical specifications should be followed during installation. |
| ③ | AC Plug | 1 | Connector for AC connection |
| ④ | DC Plug | 2 pairs | MC4 connector for DC connection for H3A / H4A / H5A |
| | | 1 pair | MC4 connector for DC connection for H2.5 / H3 |
| ⑤ | Wall-Mount Bracket | 1 | To mount the solar inverter securely on the wall. |

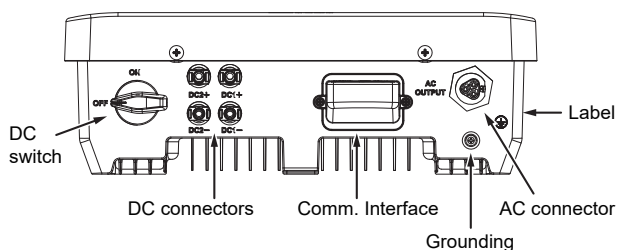
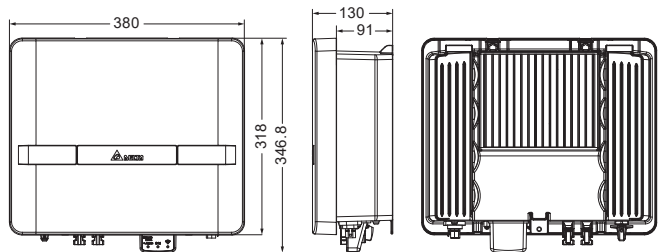
Caution



If there is any visible damage to the inverter/accessories or any damage to the packaging, please contact your inverter supplier before installation.

Dimensions and Function Introduction

unit: mm



Warning



Do not install the unit near or on flammable surfaces.
Mount the unit tightly on a solid/smooth surface.



When the photovoltaic array is exposed to light, it supplies a DC voltage to the Inverter, a shock hazard may exist due to output wires or exposed terminals.
To reduce the risk of shock during installation, cover the array with an opaque (dark) material and ensure that the Disconnect Device in the inverter is set to OFF before commencing any wiring.



Before commencing AC wiring, please ensure all AC circuit breakers are switched off.

Caution



During operation of electrical devices, certain parts are under dangerous voltage.
Inappropriate handling can lead to physical injury and material damage.
Always adhere to the installation regulations.
Installation may only be conducted by certified electricians.

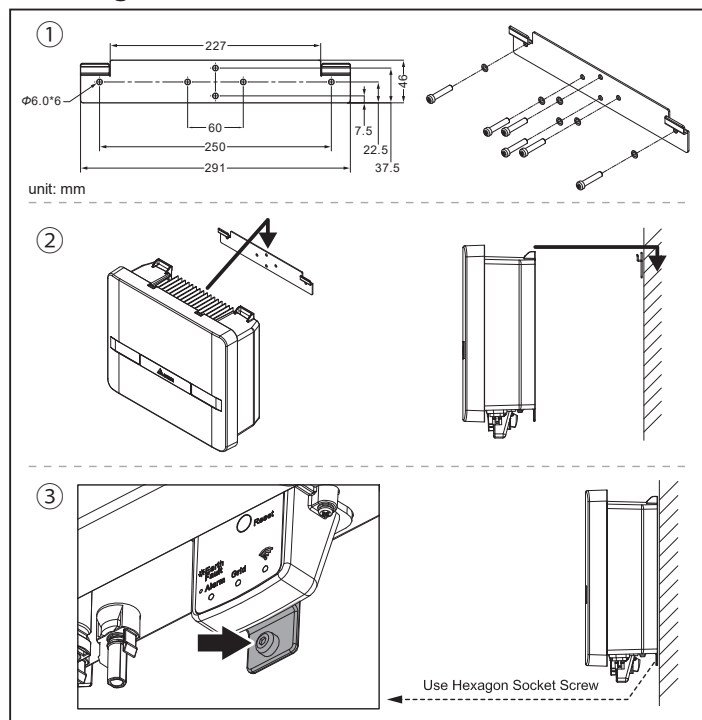


The maximum open circuit voltage of the PV Array must not exceed 500Vdc (H2.5) / 600Vdc (H3/ H3A/ H4A/ H5A) .



The product supports wireless communication.
- Install the product as far away as possible from devices that emit strong radio waves, such as civil band radio equipment.
- Do not install the product in metal box and make sure there is no metal barrier between the product and connecting devices to prevent the communication signal attenuation.
- When using Wi-Fi to connect the inverter, the connection signal strength is recommended to be at least -70 dBm to ensure good communication quality.

Mounting



LED and Button

| LED | Action | Status |
|-------|-------------------------------|---|
| Alarm | Flash:100ms On, 100ms Off | Insulation |
| | Steady on | Error or Fault. (see user manual - Chapter 9) |
| Grid | Flash:100ms On, 100ms Off | Default Country Setting |
| | Flash:1s On, 1s Off | Countdown |
| | Steady on | On grid |
| Wi-Fi | Flash:3s On, 3s Off | Connected to Wi-Fi router/DC1 |
| | Flash:3s Flash(100ms), 3s Off | Connected to both WiFi router/DC1 and mobile device |
| | Off | Not connected |
| | Steady on | Connected to mobile device |
| | Flash:100ms On, 100ms Off | Connected to mobile device and transferring data |
| | Flash:500ms On, 500ms Off | Reboot Wi-Fi (Press Button 3~10s) |
| | Flash:1s On, 1s Off | Reset password & Wi-Fi settings (Press Button 20~30s) |

| Reset Button | Wi-Fi LED Status | Description |
|--------------|---|---|
| Push 3s~10s | Wi-Fi LED flashing once every half a second | Reset Wi-Fi module |
| Push 10s~20s | No flash | No function |
| Push 20s~ | Wi-Fi LED flashing once every one seconds | Reset Wi-Fi module, and Wi-Fi password returns to the default: DELTASOL |

Specifications

| Model ^{*1} | | H2.5_210 H2.5_211 | H3_210 H3_211 | H3A_220 H3A_221 | H4A_220 H4A_221 | H5A_220 H5A_221 |
|--|-------|--|------------------|---------------------------------------|--------------------|------------------------------------|
| GENERAL | | | | | | |
| Enclosure | | Powder-coated aluminium | | | | |
| Operating temperature | | -25~60°C, full power up to 40°C | | | | |
| Operating Altitude | | 2000 m | | | | |
| Relative humidity | | 0% – 95% non-condensing. | | | | |
| Environmental category | | Outdoor, wet locations | | | | |
| Galvanic isolation | | No (TL Topology) | | | | |
| Safety class | | Class I metal enclosure with protective earth | | | | |
| Pollution degree | | Internal: II, External: III | | | | |
| Overvoltage category | | AC output: III, DC input: II | | | | |
| Flicker impedance | | Z = 0.4 + j 0.25 Ω (total impedance) | | | | |
| Three-phase combinations | | No | | | | |
| DC INPUT (Solar side) | | | | | | |
| Max. input voltage | | 500 Vdc | 600 Vdc | | | |
| Operating voltage range | | 30-500 Vdc | 30-550 Vdc | | | |
| MPP range (rated power) | | 240-470 Vdc | 290-500 Vdc | 180-500 Vdc | 240-500 Vdc | |
| Normal voltage | | 350 Vdc | | | | |
| MPP tracker | | 1 | | 2 | | |
| Maximum input current | | 11 A | | 11 Adc for each / 18 Adc for total | | 11Adc for each/ 22Adc for total |
| Max. short circuit current (per MPPT) | | 15 A | | | | |
| Max. inverter backfeed current to the array | | 0 A | | | | |
| Startup voltage | | 35 Vdc | | | | |
| Input connection | | MC4, 1 pair | | MC4, 2 pairs | | |
| AC OUTPUT (Grid side) | | | | | | |
| Nominal output power ^{*2} | | 2500 VA | 3000 VA | | 4000 VA | 5000 VA |
| Maximum power | | 2500 VA | 3000 VA | | 4000 VA | 5000 VA |
| Voltage | | 230Vac -20%~+22% | | | | |
| Nominal output current | | 10.9 A | 13 A | | 17.4 A | 22 A |
| Max. output current | | 13.9 A | 14.3 A | | 18.6 A | 24 A |
| Maximum output fault current | | 16 A | | | 20 A | 25 A |
| Maximum output over current protection | | 16 A | | | 20 A | 25 A |
| Current (inrush) (A, peak and duration) | | 30 A peak, 1 ms | | | | |
| Frequency | | 50/60 Hz | | | | |
| Total harmonic distortion ^{*3} | | <3% @Rated power | | | | |
| Power factor ^{*3} | | >0.99 @Rated power | | | | |
| Peak efficiency | | 97.5% | | | | 98.3% |
| EU efficiency | | 96.8% | | | | 98.0% |
| Output connection | | IP 67 single-phase | | | | |
| MECHANISM | | | | | | |
| Housing | | Die casting | | | | |
| Cooling | | Convection cooling | | | | |
| IP rating | | IP65 | | | | |
| External communication | | Wi-Fi | | | | |
| Weight | | 10 kg | | | 11 kg | 12 kg |
| Dimensions | | 380 × 318 × 130 mm | | | | |
| REGULATIONS & DIRECTIVES | | | | | | |
| Safety | | IEC 62109-1 / -2, CE compliance | | | | |
| Grid interface | | VDE AR-N 4105 / VDE 0126-1-1 / AS4777.2:2015 ^{*4-1} / G83-2 / G59-3 / EN50438 / VFR2014 / C10 / C11 / UTE C15-712-1 / IEC61683 / IEC61727 / IEC62116 / EN50549-1:2019 / ABNT NBR 16149 ^{*4-2} / ABNT NBR 16150 ^{*4-2} | | | | |
| Emission | | IEC 61000-6-4, IEC 61000-6-3 | | | | |
| Harmonics | | EN 61000-3-12 | | | | |
| Variations and flicker | | EN 61000-3-11 | | | | |
| Immunity | | EN 61000-6-2 | | | | |
| Immunity | ESD | IEC 61000-4-2 | | | | |
| | RS | IEC 61000-4-3 | | | | |
| | EFT | IEC 61000-4-4 | | | | |
| | Surge | IEC 61000-4-5 | | | | |
| | CS | IEC 61000-4-6 | | | | |
| | PFMF | IEC 61000-4-8 | | | | |
| ^{*1} : H2.5_210/ H3_210/ H3A_220/ H4A_220/ H5A_220/ H5A_222: The product is with DC switch H2.5_211/ H3_211/ H3A_221/ H4A_221/ H5A_221: The product is without DC switch ^{*2} : (a) H2.5: 2.49kVA max. for Australia (AU / NZ) (b) H3/ H3A: 2.99kVA max. for Australia (AU / NZ) (c) H5A: 4.99kVA max. for Australia (AU / NZ) (d) H5A: 4.6kVA max. for Germany (DE) (e) H4A/ H5A: 3.68kVA max. for Denmark (DK1 / DK2) ^{*3} : reactive power control disabled ^{*4-1} : not support AS4777.2:2015 Single-phase inverters used in three-phase combinations ^{*4-2} : Only H3_210/ H4A_220/ H5A_220 support | | | | | | |

