



# Quick Installation Guide

## Grid-tie Transformerless Solar Inverter

Model name: H5A\_222

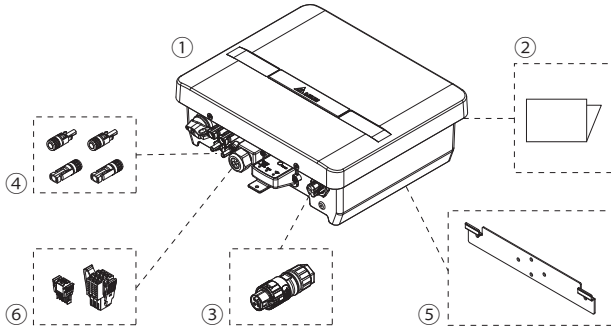
User manual / DC1\_100 manual / APP download / APP guideline



Please scan QR-code for more instruction, specification and settings of DC1\_100 or APP.

- [https://mydeltasolar.deltaww.com/?p=product\\_manual](https://mydeltasolar.deltaww.com/?p=product_manual)

## Descriptions of Parts and Components



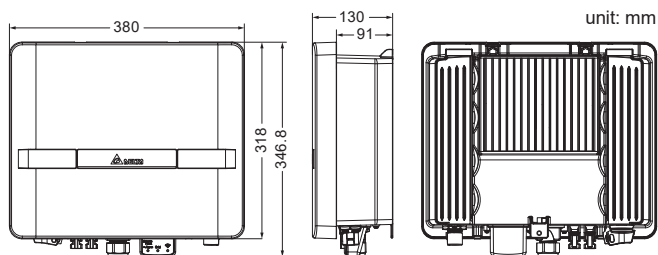
	Object	Qty	Description
①	PV Inverter	1	Solar inverter
②	Quick Installation Guide	1	Important safety instructions and technical specifications should be followed during installation.
③	AC Plug	1	Connector for AC connection
④	DC Plug	2 pairs	H4 connector for DC connection
⑤	Wall-Mount Bracket	1	To mount the solar inverter securely on the wall.
⑥	Digital input connector Dry contact connector	2	Digital input connector and dry contact connector for function port.

### Caution

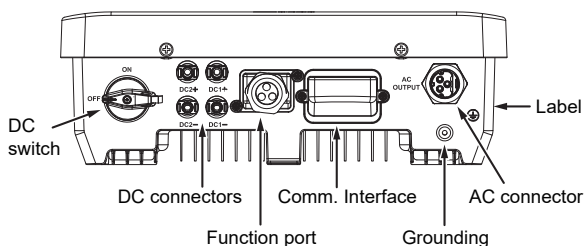


If there is any visible damage to the inverter/accessories or any damage to the packaging, please contact your inverter supplier before installation.

## 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.

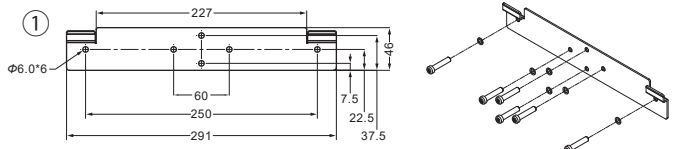


The maximum open circuit voltage of the PV Array must not exceed 600Vdc.

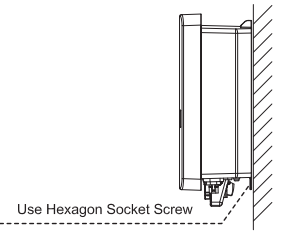
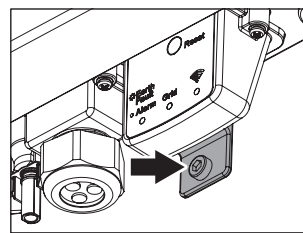
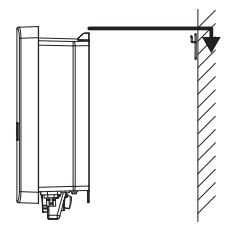
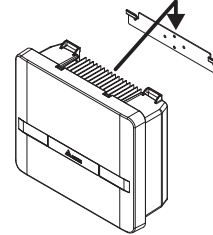


The product supports wireless communication.  
- Install the product as far away as possible from devices that emit strong radio waves, such as civil band radio equipment.  
- Do not install the product in metal box and make sure there is no metal barrier between the product and connecting devices to 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



unit: mm



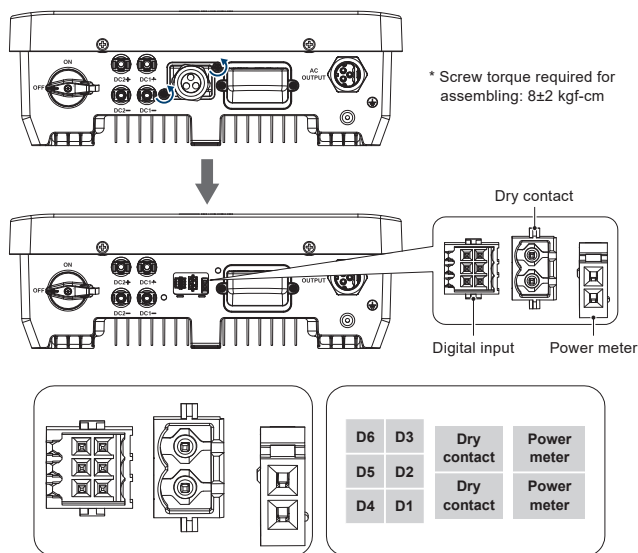
Use Hexagon Socket Screw

## LED and Button

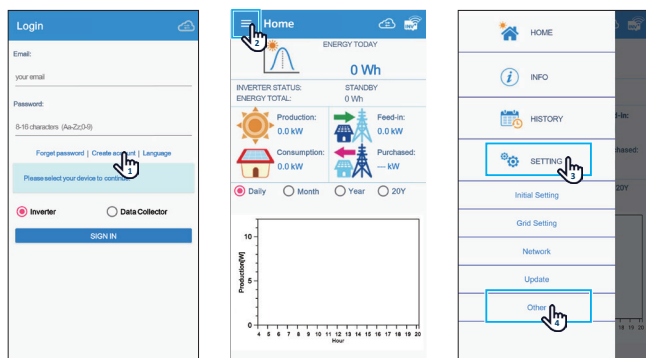
LED	Action	Status
Alarm	Flash:100ms On, 100ms Off	Insulation
	Steady on	Error or Fault. (see user manual - Chapter 9)
Grid	Flash:100ms On, 100ms Off	Default Country Setting
	Flash:1s On, 1s Off	Countdown
	Steady on	On grid
Wi-Fi	Flash:3s On, 3s Off	Connected to Wi-Fi router/DC1
	Flash:3s Flash(100ms), 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

## Function Port

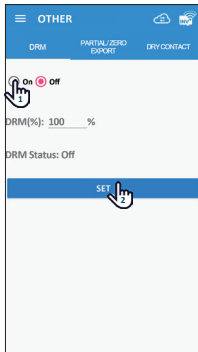


### Starting up the inverter function

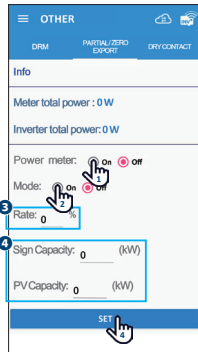


1. Follow the APP guideline to create an account and connect to the inverter.
2. Click
3. Click "SETTING"
4. Click "Other"
5. Enter password (please contact us)

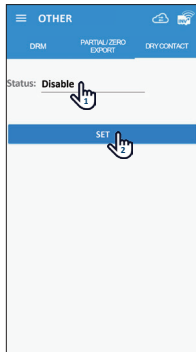
#### ■ DRM (Digital input)



#### ■ PARTIAL/ZERO EXPORT



#### ■ DRY CONTACT



#### ■ DRM (Digital input)

1. Click [On] to turn on the function.
2. Click [SET]
3. Follow below table to set the specific power limit value, you can check the percentage by DRM(%) on the APP.

Short pins	Inverter behavior (AU)
D6 & D1	DRM 0 - Disconnect from grid
D6 & D2	DRM 8 - Power de-rating to 100%
D6 & D3	DRM 7 - Power de-rating to 75%
D6 & D4	DRM 6 - Power de-rating to 50%
D6 & D5	DRM 5 - Power de-rating to 0%

#### ■ PARTIAL/ZERO EXPORT

The function has to be used with current sensor (optional part).

1. Click [On] to turn on the power meter function.
2. Click [On] to turn on the partial/zero export function.
3. Set the Rate% base on power company or local regulation.
4. Set the Sign capacity & PV capacity, the inverter will use the lower value as the power limit reference, and then click [SET].

#### ■ DRY CONTACT

1. The types of alert are "On grid, Insulation, Alarm, Error and Fault", select to trigger.
2. Click [SET]
3. When the Inverter triggers the selected alarm, the inverter will close dry contact relay to trigger external device.

## Specifications

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	Non-isolated (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	$Z = 0.4 + j 0.25 \Omega$ (total impedance)
Three-phase combinations	No
DC INPUT (Solar side)	
Max. input voltage	600 Vdc
Operating voltage range	30-550 Vdc
MPP range (rated power)	240-500 Vdc
Normal voltage	350 Vdc
MPP tracker	2
Maximum input current	11 Adc for each / 22 Adc 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	H4, 2 pairs
DC Switch parameters (Solar side)	
Insulation voltage (Ui)	1200 V
Rated impulse withstand voltage(Uimp)	8 kV
Suitability for isolation	Isolating device
Rated operational current	600 V / 30 A
PV utilization category	DC-PV2
Rated thermal current uninterrupted duty (Iu)	50 A
Rated short-time withstand current (1s) (Icw)	700 A
Rated short-circuit making capacity (Icm)	1 kA
Rated conditional short-circuit current (Isc)	5 kA
AC OUTPUT (Grid side)	
Nominal output power <sup>1</sup>	5000 VA
Maximum power	5000 VA
Voltage	220/230 Vac -20%~+22%
Nominal output current	22 A <sup>2</sup>
Max. output current	23 A
Maximum output fault current	25 A
Maximum output over current protection	25 A
Current (inrush) (A, peak and duration)	30 A peak, 1 ms
Frequency	50/60 Hz
Total harmonic distortion <sup>3</sup>	<3% @Rated power
Power factor <sup>3</sup>	>0.99 @Rated power
Peak efficiency	97.5%
EU efficiency	96.8%
Output connection	IP 67 single-phase
Active anti-islanding method	Reactive power variation
MECHANISM	
Housing	Die casting
Cooling	Convection cooling
IP rating	IP65
External communication	Wi-Fi
Weight	12 kg
Dimensions	380 × 318 × 130 mm
1: (a) 4.99kVA max. for Australia, New Zealand (AU / NZ) (b) 4.6kVA max. for Germany (DE) 2: 21.7A nom. for Australia, New Zealand (AU / NZ) 3: reactive power control disabled 4: not support AS4777.2:2015 Single-phase inverters used in three-phase combinations 5: Information of regulations and directives please refer to user manual.	