



The Power Behind Competitiveness

# Delta M88H

Transformerless Solar Inverter  
Grid-Tied, 3-Phase



## Product Features

- Transformerless Inverter
- Dual MPP Trackers
- Peak Efficiency up to 98.8%
- Connects up to 18 Strings
- Ergonomic Grip Design
- Ultra Compact Size
- Built-in Energy-logger
- IP65 Protection Level
- Built-in DC Switch
- Built-in PID off-set function

[www.deltaelectronicsindia.com](http://www.deltaelectronicsindia.com)



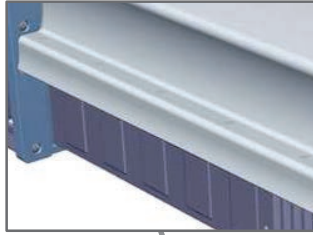
**DELTA**  
Smarter. Greener. Together.

# Delta M88H

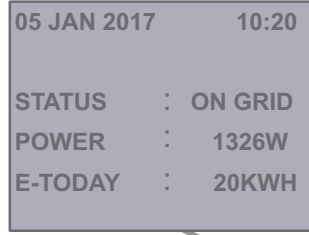
IP65



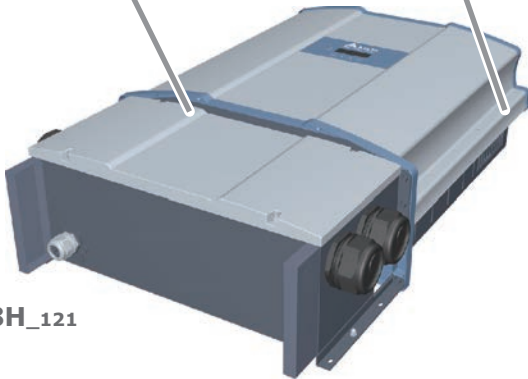
Ergonomic Grip Design



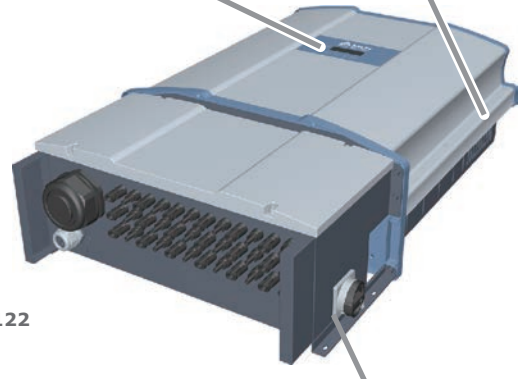
Digital Display



Swappable Fan Kit

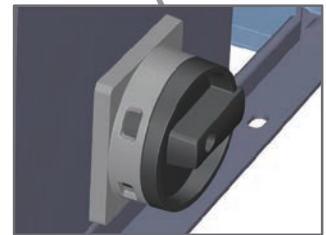
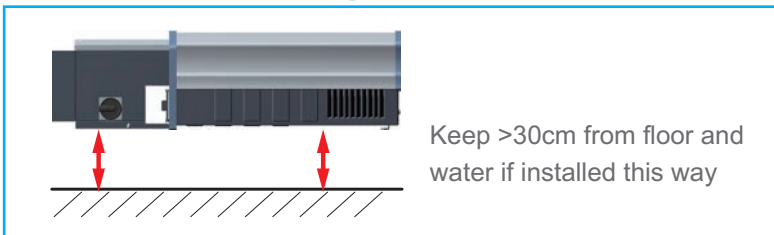


M88H\_121



M88H\_122

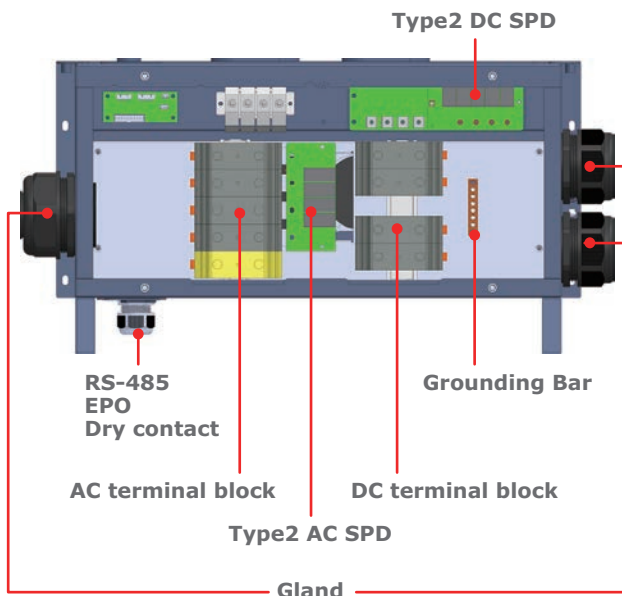
Landscape Installation



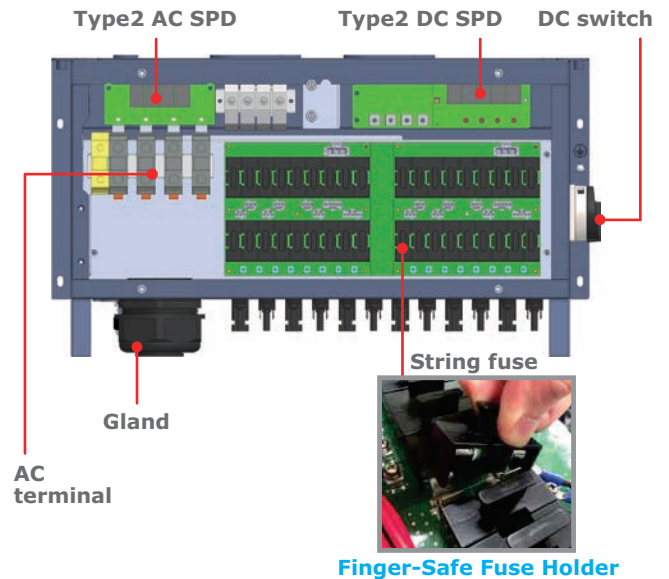
DC Switch

## Wiring Box Configurations

### ● M88H\_121 (Screw Terminal)



### ● M88H\_122 (Connectors & Fuses)



# Outstanding Performance

M88H have Excellent Efficiency Performance,  
Peak 98.8% and Euro 98.5%.



## Benefits with M88H

### Multi - Application:

Design for commercial & utility applications.

### All-in-One Design:

String fuses, surge protection devices, DC switches are integrated.

### Saving on Space Cost:

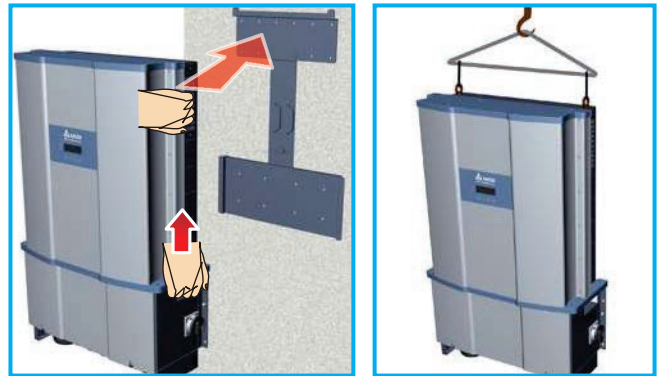
Can be mounted on the foothold of the PV panels, no house or container is required for inverter installation.

### 2 MPP Trackers:

2 MPP trackers provide more flexibility for PV arrays configuration and bumpy ground area to maximize yield.

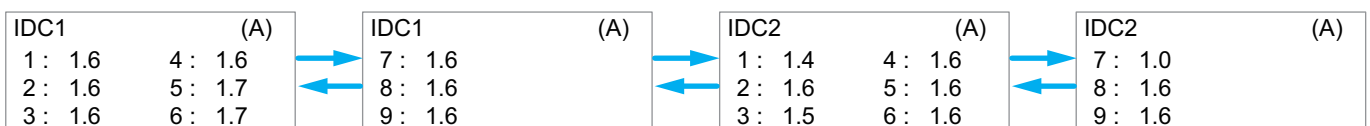
### Easy Installation:

Ergonomic grip design provides easy installation or removal by the installer. For additional flexibility, eye bolts are provided to allow for lifting using crane.



### String Monitoring Function:

The string monitoring function can precisely record real-time current value up to 18 strings via RS-485 interface (CF Model only).





# Delta RPI - Commercial Series

## Technical Data M88H

MODEL*	M88H	
Topology	Transformerless	
AC Voltage	400 VAC	480 VAC

### INPUT (DC)

Recommended Max. DC Power	90 kWp	110kWp
Max. Input Voltage	1100 V	
DC Voltage Range	200 - 1000 V	
Start-up Voltage	> 250 V	
Start-up Power	40W	
MPPT Voltage Range	200 - 1000 V	
MPPT Voltage Range, Full Power	500 - 800 V	600 - 800 V
Nominal DC Voltage	595 V	710 V
Max. Input Current per MPPT	70 A	
Total Input Current	140 A	
Maximum Short Circuit Current	180A / 90A per MPPT (ST / CF)	
No. of Independent MPPT	2	
Unbalanced MPPT loading	40 / 60	
Input Connection Type*	18 Pairs MC4 / Screw Terminals	
DC Disconnection Switch	Yes (1 x Integrated Mechanical DC Switch) (Only for CF Model)	

### OUTPUT (AC)

Rated Output Power	66 kVA	80 kVA
Maximum Output Power <sup>4/5</sup>	73 kVA	88 kVA
Rated Output Current	96 A	
Max. Output Current	106 A	
Inrush Current	40A / 100µs	
Nominal AC Voltage	3 Ph, 400 V	3 Ph, 480 V
AC Voltage Range	400 V ± 30 % (280~520)	480 V ± 20 % (384~576)
Nominal Frequency	50 / 60 Hz	
Frequency Range	± 5 Hz	
Power Factor at Rated Power	Unity	
Reactive Power (Adjustable)	0.8 lagging ~ 0.8 leading	
Harmonics	<3% at Rated Power	
DC Injection	<0.5% at Rated Output Current	
No. of Conductors	4 (3P3W + PE) / 5 (3P4W + PE)	
Output Connection Type	AC Wire Terminals	
AC Terminals	5 x AC wire Terminals, Bimetallic Wire Support (Copper or Aluminum) CF Model: 35-95 mm <sup>2</sup> / ST Model: 50-120 mm <sup>2</sup>	

### EFFICIENCY

Maximum Efficiency	98.8%
Euro Efficiency	98.5%

### PROTECTION

String Fuse Protection (String Fuses - 18 Nos. for Both +Ve & -Ve Strings)	Yes (Only for CF Model)
DC Disconnection Switch	Yes (Only for CF Model)
Ground Fault Monitoring / Grid Monitoring	Yes
DC Reverse Polarity Protection	Yes
DC Over Voltage / Current limitation Protection	Yes
AC Short Circuit Protection	Yes
AC Over Voltage / Current limitation Protection	Yes
DC / AC Side Surge Protection - Inbuilt	SPD, Type II
PID Offset Function Availability	Yes <sup>1</sup>

### GENERAL DATA

Dimension (H/W/D)	962 x 615 x 275 mm
Weight (kg)	84 kg
Operating Temperature Range	-25°C– 60°C (-25°C– 50°C @ full power)
Relative Humidity	0~100%, non-condensing
Operating Elevation	<3000 m
Degree of Protection	IP65
Noise level (Typical)	70 dB @ 1 m
Self Consumption at Night	< 3 W

### MODEL

	M88H_121	M88H_122
Variants	Screw Terminals (ST)	MC4 Connectors & Fuses (CF)
Model No.	M88H_121	M88H_122
DC Disconnect Switch	Not Available	Available
DC Fuse (Both Positive & Negative)	Not Available	Available
DC SPD	Available	Available
AC SPD	Available	Available
DC Connection Type	Terminal Block	MC4
AC Connection Type	Terminal Block	Terminal Block
DC Cable Size	50-120 mm <sup>2</sup>	4/6 mm <sup>2</sup>
AC Cable Size	50-120 mm <sup>2</sup>	35-95 mm <sup>2</sup>
String Monitoring	Not Available	Available

### CERTIFICATION

Anti-islanding Protection / Grid Regulation	VDE-AR-N 4105; IEC 61727, IEC 62116
EMC	EN 61000; IEC 61000
Safety	IEC/EN 62109-2:2011
Efficiency	IEC 61683:1999; EN 50530 (As Per MNRE and SECI Requirement)
Environmental Testing	IEC 60068-2-1; IEC 60068-2-2; IEC 60068-2-14
	IEC 60068-2-30; IEC 60068- 2-6; IEC 60068-2-21;
	IEC 60068-2-27; IEC 60068-2-75; IEC 60068-2-78
Ingress Protection	IEC 60529 Edition 2.1 2001-02

### COMMUNICATION

Communication Port	RS 485
Display	20 x 4 LCD
Built-in Energy Data Logger	Yes
Emergency Power Off (EPO)	Yes, 1 No.
Dry Contact Relay	Yes, 2 Nos.
Digital Inputs	Yes, 6 Nos.

### WARRANTY

Standard Warranty Years	5
-------------------------	---

### Notes

- PV Module grounding (Positive / Negative) is not allowed
- Parallel Operation of Inverters is possible for large Power Plants
- For Cos phi = 1 (VA=W); 73 kVa is Possible with: DC Input Voltage 595V; Symmetrical Loading; Ambient Temperature <34°C
- Refer to Delta's Standard Warranty Terms and Conditions for more details.

For Any Sales / Application Engineering Support, Please Contact:

GO SOLAR SOLUTIONS

TEL: +91 80486 05527, +91 22 2788 2610

[www.gosolar.co.in](http://www.gosolar.co.in) | email: [sales@gosolar.co.in](mailto:sales@gosolar.co.in)