

Featuring:
6 MPP Trackers
Ideal for Commercial
Rooftop or Ground-
Mounted PV Systems



M50A

High efficiency 3-phase solar inverters for the EMEA market –
Perfect choice for large-scale solar PV systems, such as those
used in the commercial or utility sectors.

Features

- 6 MPP trackers for easy handling of shaded areas and different module orientations
- Lightweight and IP66 housing for harsh environmental conditions
- Built-in DC disconnectors, AC and DC surge arresters
- Integrated string monitoring function
- Large front door for easy access to internal components
- No string fuses required
- MyDeltaSolar App for quick commissioning via smartphone
- Optional Sub-1G wireless and Wi-Fi communications
- Reactive power compensation in night operation
- Flexible mounting on the wall or directly on the floor (optional)

Product Highlights

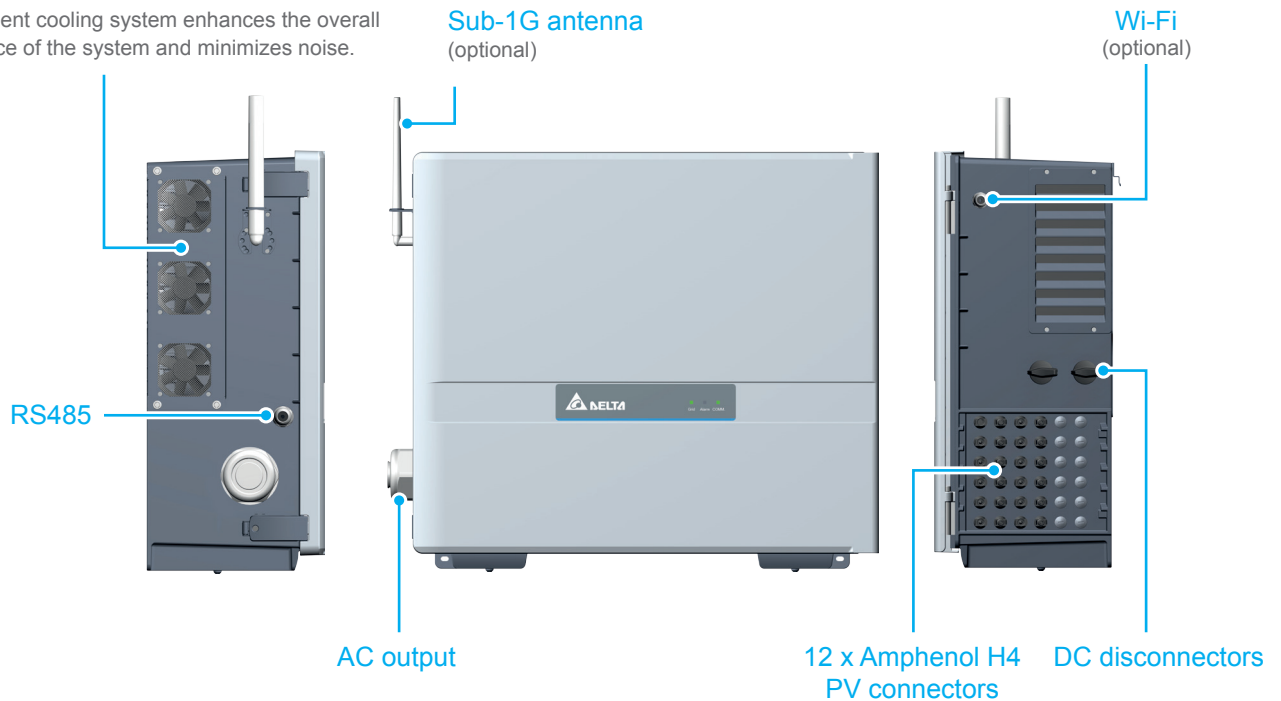
- The 6 MPP trackers provide the necessary flexibility in the alignment and arrangement of the module strings to minimize energy losses and maximize energy yields.
- The M50A achieves a peak efficiency of 98.7% (EU efficiency: 98.3%).



Product Overview

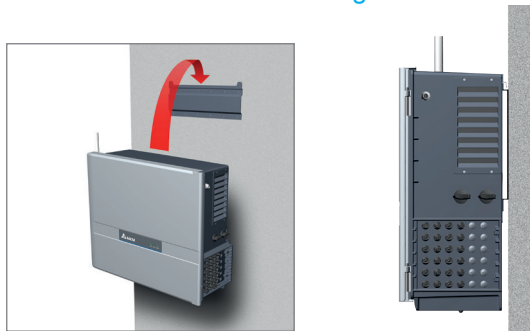
Replaceable fan module

The intelligent cooling system enhances the overall performance of the system and minimizes noise.

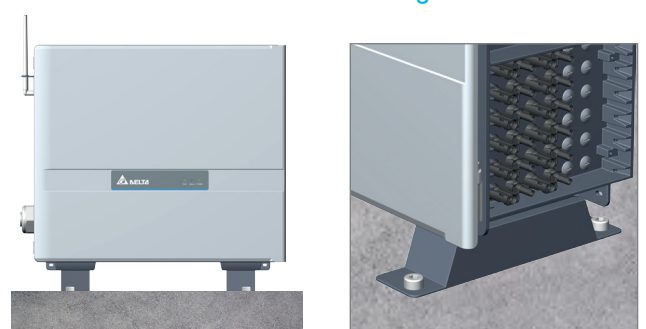


Flexible Mounting

Wall mounting



Ground mounting



Innovative Housing Design

With protection degree IP66, the M50A can be used in harsh environments. Thanks to the large, easy-to-open front door, it also offers good access to internal components. And with its surprisingly low weight, it can be handled easily at the installation site.



55 kVA solar inverters

Technical data

INPUT (DC)	M50A
Max. input voltage	1100 V _{DC}
Input voltage range	200 to 1000 V _{DC}
MPP operating voltage range (full power)	385 to 900 V _{DC}
Nominal voltage	600 V _{DC}
Max. current	132 A total, 26 A per MPP tracker
Night time consumption	< 2 W ¹⁾
Max. number of MPP trackers	6 (string fuses not needed)
DC Surge Protection Devices	Type 2, replaceable (EN 50539-11), optional with combined Type 1+2

OUTPUT (AC)	
Max. apparent power	55 kVA ²⁾
Nominal apparent power	50 kVA ²⁾
AC voltage range	230/400V -20% / +30% Y or Δ; ³⁾ 3 Phase + PE (Δ) or 3 Phase + N + PE (Y)
Max. AC output current	80 A
Nominal frequency	50 / 60 Hz
Frequency range	50 / 60 Hz ± 5 Hz ³⁾
Power factor adjustable	0.8 cap to 0.8 ind
Total harmonic distortion (THD)	< 3% at nominal apparent power
AC Surge Protection Devices	Type 2, replaceable (EN 61463-11), optional with combined Type 1+2

GENERAL SPECIFICATION

Delta model name	M50A_260
Peak efficiency	98.7%
EU efficiency	98.3%
Operating temperature	-25 to +60 °C
Operating temperature without derating	-25 to +50 °C
Storage temperature	-25 to +60 °C
Relative humidity	0 to 100%, non-condensing
Max. operating altitude	4000 m (above sea level)
Standard guarantee	5 years (guarantee extension is possible)
Topology	Without transformer

MECHANICAL DESIGN

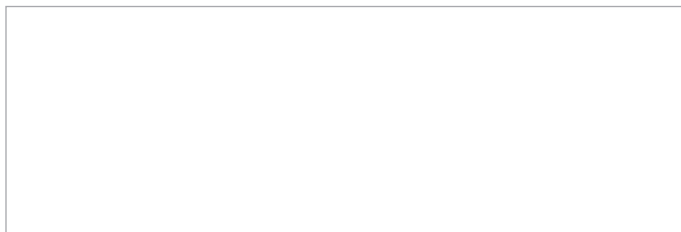
Dimensions (W x H x D)	736 × 624 × 278 mm
Weight	64 kg
Cooling	Replaceable fan module
AC connection type	Screw terminals
DC connection type	12 pairs of Amphenol H4 PV connectors
Communication interfaces	2 x RS485, 2 x Dry contacts, 1 x EPO, 1 x 12 V _{DC} , 6 x Digital inputs
Communication	RS485, Sub-1G, Wi-Fi (optional)
Disconnectors	2 x integrated mechanical DC disconnectors
Status display	3 LED: On Grid, Communication, Alarm
Data visualization	via Gateway
Mounting options	Wall mounting, Ground mounting (optional)

SAFETY / STANDARDS	M50A
Protection degree	IP66
Safety class	I
Configurable trip parameters	Yes
Insulation monitoring	Yes
Overload behavior	Current limitation, power limitation
Anti-islanding protection / Grid regulation	VFR 2019 C10/11, VDE 0124-100, VDE-AR-N 4105, VDE-AR-N 4110, EN 50549-1/-2
EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-11, EN 61000-3-12
Safety	IEC 62109-1 / -2, CE compliance

1) Night time consumption with standby communication

2) Cos Phi = 1 (VA = W)

3) AC voltage and frequency range will be programmed according to the individual country requirements.



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