

**6 MPP Trackers**  
Ideal for Large  
Commercial Rooftop  
PV Systems



## M50A

High-efficiency three-phase solar inverters. –  
The perfect choice for large commercial rooftop PV systems.

### Features

- 6 MPP trackers for easy handling of shaded areas and different module orientations
- Lightweight and IP66 housing for harsh environmental conditions
- Built-in mechanical DC disconnectors, AC and DC surge protection devices
- Large front door for easy and safe access to internal components
- No string fuses needed
- Reactive power compensation 24/7
- Data point collection for string monitoring and I-V curve creation
- Arc fault and reverse polarity protection, Anti-PID feature
- Flexible mounting on the wall or on the floor (optional)

# 55 kVA solar inverters

## Technical Data

INPUT (DC)	M50A
Max. input voltage	1100 V <sub>DC</sub> <sup>1)</sup>
Input voltage range	200 to 1000 V <sub>DC</sub>
MPP operating voltage range (full power)	390 to 900 V <sub>DC</sub>
Nominal voltage	600 V <sub>DC</sub>
Max. current	132 A total, 26 A per MPP tracker
Max. short-circuit current I <sub>sc</sub>	50 A per MPP tracker
Night time consumption	< 3.5 W <sup>2)</sup>
Max. number of MPP trackers	6
DC surge protection devices	Type 2 (EN 50539-11), replaceable, optional with combined Type 1+2

OUTPUT (AC)	M50A
Max. apparent power	55 kVA <sup>3)</sup>
Max. active power	55 kW <sup>3)4)</sup>
Nominal apparent power	50 kVA <sup>3)</sup>
AC voltage range	230/400V -20% / +30%; <sup>5)</sup> 3 Phase + PE (Δ) or 3 Phase + N + PE (Y)
Max. AC output current	80 A
Frequency range	50 / 60 Hz ± 5 Hz <sup>5)</sup>
Adjustment range power factor	0.8 cap to 0.8 ind
Total harmonic distortion (THD)	< 3% at nominal apparent power
AC Surge Protection Devices	Type 2 (EN 61463-11), replaceable, optional with combined Type 1+2

### GENERAL SPECIFICATION

Delta model name	M50A_260
Peak efficiency	98.7%
EU efficiency	98.3%
Overall operating temperature range	-25 to +60 °C
Operating temperature range without derating	-25 to +50 °C
Storage temperature range	-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
AC cable specification	
• Wire cross section	Cu: 16 to 60 mm <sup>2</sup> , Al: 25 to 60 mm <sup>2</sup>
• Cable diameter	21.9 to 44.7 mm
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 <sub>DC</sub> , 6 x Digital inputs
Communication	RS485, Sub-1G, Wi-Fi (optional)
Disconnectors	Mechanical
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	II
Configurable trip parameters	Yes
Insulation monitoring	Yes
Overload behavior	Current limitation, power limitation
Anti-islanding protection / Grid regulation	VFR 2019 (Enedis-PRO-RES_10E, Enedis-PRO-RES_64E), 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

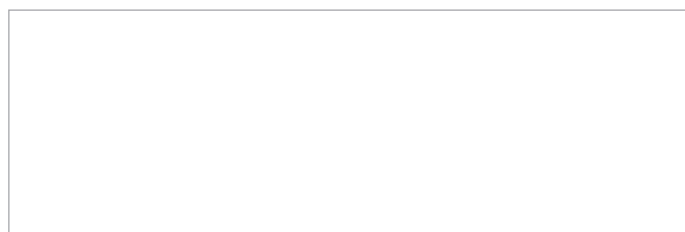
1) The maximum voltage withstand is 1100 V<sub>DC</sub>. The inverter starts to work when the PV voltage drops below 1000 V<sub>DC</sub>.

2) Night time consumption with standby communication

3) Cos Phi = 1 (VA = W)

4) At ambient temperatures ≤ 40 °C. The active power can be limited.

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



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