

M50A Flex

High-efficiency three-phase solar inverters for large commercial rooftop and ground-mounted PV systems.

200 V↑

Wide input voltage range (200 to 1000 V)

- Lightweight with IP66 housing for harsh environmental conditions
- 6 MPP trackers for more flexibility when designing the PV system
- No string fuses required

98.7%

Peak efficiency

- Anti-PID, arc detection, noise reduction feature
- Wall or ground mounting (optional)
- Optional AC and DC surge protection devices type 1+2

55 kVA solar inverters

Input (DC)	M50A Flex
Max. input power (per MPP tracker/total)	11.7 kW/58.0 kW
Max. input voltage	1000 V_{DC} [1]
Operating voltage range	200 to 1000 V_{DC}
MPP voltage range with max. power	390 to 900 V_{DC} [2]
Nominal voltage	600 V_{DC}
Max. current (per MPP tracker/total)	26 A/132 A
Max. short-circuit current I_{SC}	50 A per MPP tracker
Max. number of MPP trackers	6
Max. number of module strings per MPP tracker	2
DC surge protection devices	Type 2 (EN 61463-11), replaceable, combined Type 1+2 retrofittable

Output (AC)	M50A Flex
Max. apparent power [3]	55 kVA [4]
Max. active power [3]	55 kW [5]
Nominal apparent power [3]	50 kVA
Voltage range [6]	230/400 V -20%/+30%, 3 phases + PE (△), 3 phases + N + PE (Y)
Max. current	83 A
Frequency range [6]	50/60 Hz ± 5 Hz
Adjustment range of power factor	0.8 cap to 0.8 ind
Total harmonic distortion (THD)	< 3% at nominal apparent power
Consumption in night mode [7]	< 3 W
AC surge protection devices	Type 2 (EN 61463-11), replaceable

General Specifications	M50A Flex
Delta model name	M50A_260
Peak efficiency	98.7%
Efficiency EU	98.3%
Operating temperature range	-25 to +60°C
Temperature range without power 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)
Topology	Without transformer
Standard warranty	5 years (warranty extension available upon request)

Mechanical design	M50A Flex
Dimensions (H x W x D)	699 × 629 × 264 mm
Weight	64 kg
Cooling	Replaceable fan module
Mounting options	Wall mounting [8], floor mounting [9]
Disconnectors	2 mechanical DC disconnectors
Connection type AC side	Screw terminals
Connection type DC side	12 pairs of DC plugs Amphenol H4 [10]

Communication	M50A Flex
Communication interfaces	2 x RS485, 2 x dry contacts, 1 x external power-off, 6 x digital inputs, Bluetooth®
Data visualization	DeltaSolar app, MyDeltaSolar Cloud
Display of operating status	3 LEDs

Safety/Standards	M50A Flex
Protection class	IP66
Safety class	I
Configurable trip parameters	Yes
Insulation monitoring	Yes
Overload behavior	Current limitation, power limitation
Anti-islanding protection/grid regulation	VFR 2019 (Enedis-PRO-RES_10E/_64E), VDE-AR-N 4105/4110, EN 50549-1/-2/-10
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 max. voltage withstand is 1100 VDC. The inverter starts to work when the input voltage drops below 1000 VDC.
2) At ambient temperatures < 40 °C; from 40 to < 50 °C: 390 to 850 VDC
3) Cos Phi = 1 (VA = W)
4) Full reactive power available up to 900 V V_{OC} and restarted at a hysteresis level of 850 VDC.
5) At ambient temperatures ≤ 50°C.
6) AC voltage and frequency range are programmed based on the respective country regulations.
7) Night-time consumption with standby communication
8) Mounting plate included in scope of delivery
9) Mounting feet can be ordered separately
10) Included in scope of delivery

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