



RPI M20A

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

Versatile applications

- Aluminium housing ensures long lasting protection against moisture and corrosion
- Wide input voltage range
- Suitable for indoor and outdoor applications (IP65)

Maximum profitability

- Peak efficiency of 98.4 %
- 2 MPP trackers for increased flexibility and maximum yield
- Symmetrical and asymmetrical loading possible (33/67 %)
- Improved thermal performance at high ambient temperature

20 kVA transformerless solar inverters

Technical data RPI M20A

INPUT (DC)	RPI M20A
Max. recommended PV power	25 kW _p ¹⁾
Max. input power	22 kW ²⁾
Nominal power	20.6 kW
Voltage range	200 ... 1000 V
MPP operating voltage range	200 ... 1000 V
Startup voltage	250 V
Voltage range for maximum power	470 ... 820 V with symmetrical load (50/50 %)
Max. current	44 A (22 A per MPP tracker)
Max. number of MPP trackers	Parallel inputs: 1 MPP tracker Separate inputs: 2 MPP trackers
Input load	≤ 14.8 kW per MPP tracker; symmetrical and asymmetrical (33/67 %)

OUTPUT (AC)

Max. apparent power	21 kVA ^{3) 4)}
Nominal apparent power	20 kVA ⁴⁾
Voltage range	230 ± 20% / 400 V ± 20 % ⁵⁾ 3 phase + PE or 3 phase + N + PE
Nominal current	29 A
Nominal frequency	50 / 60 Hz
Frequency range	50 / 60 Hz ± 5 Hz ⁵⁾
Power factor adjustable	0.8 cap ... 0.8 ind
Total harmonic distortion (THD)	< 3 % @ nominal apparent power

GENERAL SPECIFICATION

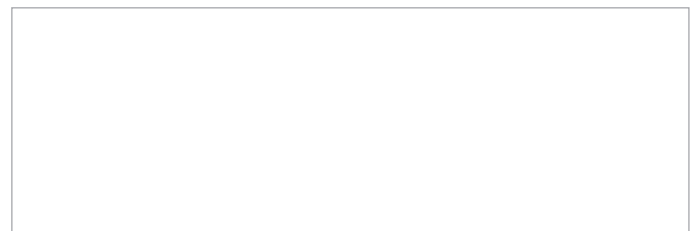
Model name	RPI-M20A
Part number Delta	RPI203FA0E0000
Max. efficiency	98.4 %
Efficiency EU	98.1 %
Operating temperature	-25 ... +60 °C
Full power without derating	-25 ... +51 °C ⁶⁾
Storage temperature	-25 ... +60 °C
Humidity	0 ... 100 % non-condensing
Max. operating altitude	2000 m (above sea level)
Standard guarantee	5 years (guarantee extension is possible)

MECHANICAL DESIGN

Size (L x W x D)	625 x 612 x 278 mm
Weight	43 kg
Cooling	Fans
AC connector	Amphenol C16-3 (included)
DC connector	4 pairs of Multi-Contact MC4 (included)
Communication interfaces	2 x RS485, 1 x Dry Contact, 1 x EPO
DC disconnecter	Integrated
Display	2 LEDs, 5 inch monochrome graphical LCD

SAFETY / STANDARDS	RPI M20A
Protection degree	IP65
Safety class	I
Configurable trip parameters	Yes
Insulation monitoring	Yes
Overload behavior	Current limitation; power limitation
Anti-islanding protection / Grid regulation	VDE 0126-1-1/A1 ; UTE C15-712-1 VDE 16 1-1 A1 VFR 2013/VFR 2014 ; French Islands (50 Hz/60 Hz) ; VDE-AR-N 4105 ; Synergrid C10/C11 06/2012 ; G59/3 2013 ; EN 50438 2013
EMC	EN61000-6-2; EN61000-6-3; EN61000-3-11; EN61000-3-12
Safety	IEC62109-1 / -2; CE compliance

- 1) When operated with balanced DC inputs (50/50 %)
- 2) Max. 14.8 kW per DC input with asymmetrical load
- 3) The maximum AC apparent power indicates the power an inverter is able to deliver. This maximum apparent power may not necessarily be reached.
- 4) Cos Phi = 1 (VA = W)
- 5) AC voltage and frequency range will be programmed according to the individual country requirements.
- 6) Full nominal power available up to 51 °C with nominal voltages (AC and DC) and Cos Phi = 1.



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