

MI Series Microinverter

MI-500/MI-450/MI-425/MI-400



Key Features

Safety & Reliability

- 25-year warranty
- 1,000,000+ hours of reliability verification
- IP67 ingress protection
- Safety DC voltage

High Energy Yield

- Peak efficiency: 97.4 %
- EU efficiency: 97.0 %
- MPPT efficiency: 99.9 %

Easy Installation

- Plug-and-Play cable for fast installation
- One-by-one flexible PV module configuration
- Lightweight to 1.3 kg for easy installation
- PLC communication without additional cables

Flexibility & Intelligence

- Supports all common PV modules up to 700W
- One-stop application solutions
- PV module level management
- Grid-friendliness

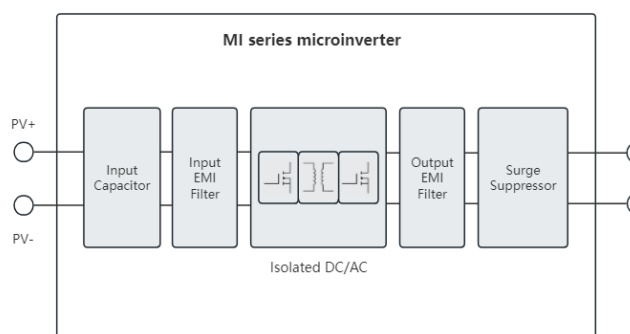


Model		MI-500	MI-450	MI-425	MI-400
Input parameters					
PV module compatibility		54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell			
Max. power of compatible PV modules	P_{dcmax} W		700		
Min./Max. input voltage	U_{dcmin}/U_{dcmax} V		16/60		
Peak power tracking voltage range	U_{mppmin}/U_{mppmax} V	33 to 55	30 to 55		28 to 55
MPPT voltage range	U_{mpptr} V		16 to 60		
Nominal input voltage	U_{dcnom} V		36		
Start-up input voltage	$U_{dcstart}$ V		22		
Max. continuous input current	I_{dcmax} A		16		
Max. input short-circuit current	I_{scmax} A		20		
DC port overvoltage class			II		
DC port backfeed current	A		0		
PV array configuration		1 x 1 ungrounded array			
Output parameters					
Nominal voltage	U_{acnom} V		230		
Voltage range	U_{acmin}/U_{acmax} V		184 to 276		
Nominal output power	P_{acnom} W	500	450	425	400
Max. apparent power	S_{acmax} VA	500	450	425	400
Nominal output current	I_{acnom} A	2.17	1.96	1.85	1.74
Max. output current	I_{acmax} A	2.28	2.06	1.94	1.83
Max. microinverters / 20A branch circuit		7	8	8	9
Max. microinverters / 25A branch circuit		9	10	10	11
Nominal frequency	f_{nom} Hz		50/60		
Extended frequency range	f_{min}/f_{max} Hz		45 to 65		
Power consumption at night	mW		0 ^a		
AC port overvoltage class			III		
Power factor setting	cosphi		>0.99		
Power factor (adjustable)			0.8 leading ... 0.8 lagging		
Total harmonic distortion	THDi		<3%		
AC surge protection			TYPE II		
Efficiency parameters					
Peak efficiency	η_{max} %		97.4		
EU efficiency	η_{EU} %		97.0		
MPPT efficiency	η_{MPPT} %		99.9		
Mechanical parameters					
Ambient temperature range	°C		-40 to 65		
Storage temperature range	°C		-40 to 85		
Relative humidity range	%		4 to 100, condensing		
DC connector type			MT-02502-D		
Number of DC connectors			1 pair		

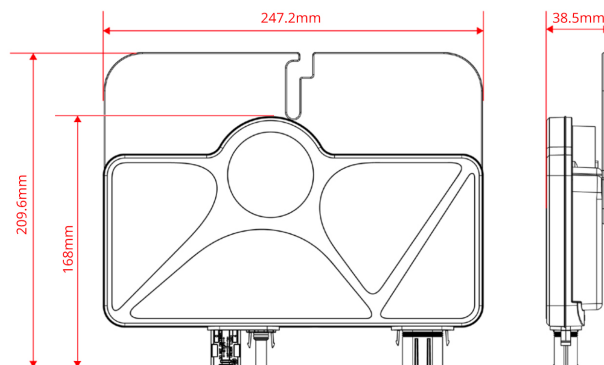
a. The value is tested with M-Relay or M-Combiner.

Model		MI-500	MI-450	MI-425	MI-400
AC connector type			MT-02502-A ^b		
Number of AC connectors			1 pair		
Dimensions (without bracket)	mm		247.2 × 168 × 38.5 (W x H x D)		
Weight (without bracket)	kg		1.3		
Cooling			Natural convection		
Approved for wet locations			Yes		
Pollution degree			III		
Topology			Isolated		
Enclosure protection class			Class II double-insulated		
Environmental category			Outdoor - IP67		
Altitude	m		3000		
Noise	dB		<25		
Features					
Communication			PLC		
Indicator			1 × LED		
Compliance					
Safety			IEC 62109-1/-2		
EMC			IEC 61000-6-1/-2/-3/-4, EN 62920		
Grid compliance			VDE 0124, VDE 4105, UTE 0126, EN 50549, EN 50530		

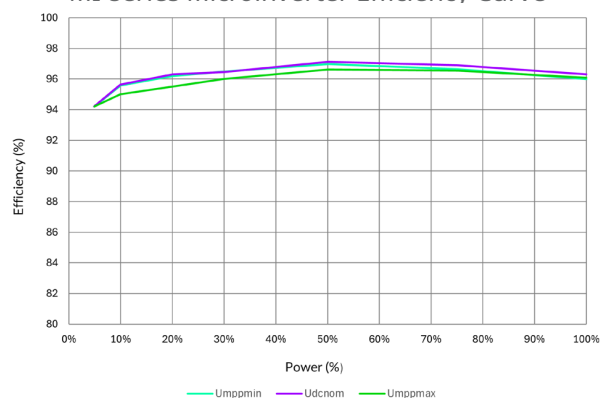
MI-series Microinverter Electrical Topology



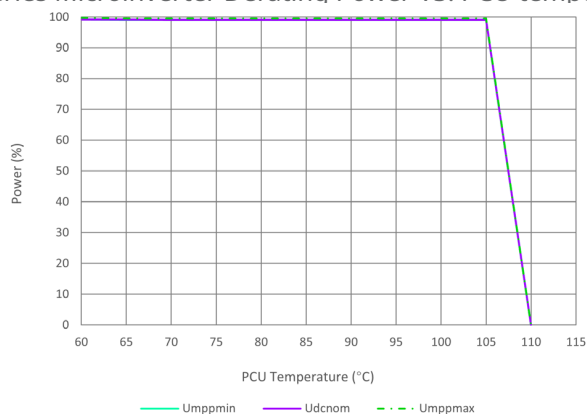
MI-series Microinverter Dimension in mm



MI-series Microinverter Efficiency Curve



MI Series Microinverter Derating Power VS. PCU temperature



b. The AC connector must be used with MW-Cables.

M-Combiner



The M-Combiner is an energy management equipment that integrates gateway, grid interface relay, current sensors and power breakers, and interacts with microinverters, batteries and loads, and enables grid connection.

- MC100L: Single-phase M-Combiner Lite supports one PV branch of up to 5kW.
- MC100: Single-phase M-Combiner supports two PV branches of up to 10kW.
- MC100-T: Three-phase M-Combiner supports two PV branches of up to 30kW.

M-Cable

Model	MW-025013-A	MW-025020-B0	MW-025023-A
Type	Three-terminal AC cable	Two-terminal AC cable	Three-terminal AC cable
Length	1.3 m	2 m	2.3 m
Copper conductor	2-core, 2.5 mm ²		
Temperature	90 °C		
Voltage rating	600 V (connector rating 277 V)		
Maximum nominal voltage	277 Vac		
Scenario	Installation of PV modules in portrait	AC extension cable	Installation of PV modules in landscape



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