

[Data Sheet](#)

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

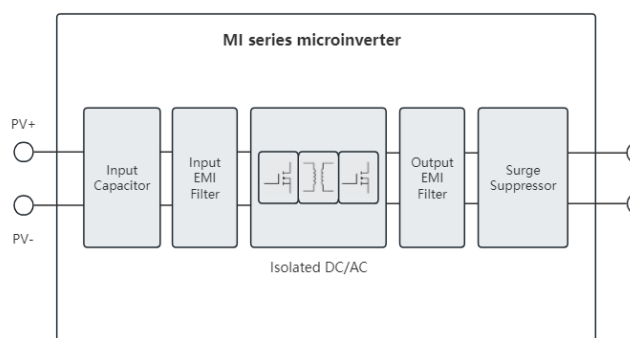


Model		MI-500	MI-450	MI-425	MI-400
Input parameters					
PV module compatibility		54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell			
Max. power of compatible PV modules	P_{dcmaxr} W			700	
Min./Max. input voltage	U_{dcminr}/U_{dcmaxr} V			16/60	
Peak power tracking voltage range	$U_{mppminr}/U_{mppmaxr}$ V	33 to 55		30 to 55	28 to 55
MPPT voltage range	U_{mpptr} V			16 to 60	
Nominal input voltage	U_{dcnomr} V			36	
Start-up input voltage	$U_{dcstartr}$ V			22	
Max. continuous input current	I_{dcmaxr} A			16	
Max. input short-circuit current	I_{scmaxr} 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_{acnomr} V			230	
Voltage range	U_{acminr}/U_{acmaxr} V			184 to 276	
Nominal output power	P_{acnomr} W	500	450	425	400
Max. apparent power	S_{acmaxr} VA	500	450	425	400
Nominal output current	I_{acnomr} A	2.17	1.96	1.85	1.74
Max. output current	I_{acmaxr} 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_{nomr} Hz			50/60	
Extended frequency range	f_{minr}/f_{maxr} 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_{maxr} %			97.4	
EU efficiency	η_{EUr} %			97.0	
MPPT efficiency	η_{MPPTr} %			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	

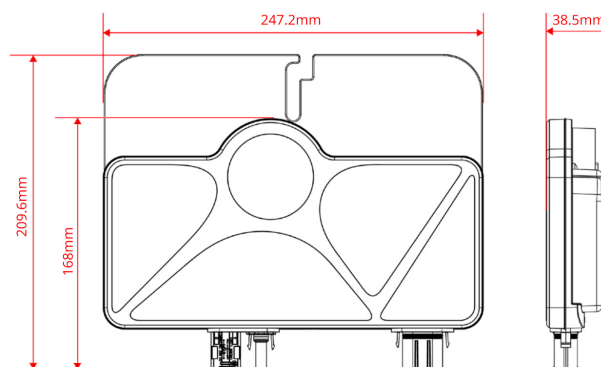
a. The value is tested with M-Relay or M-Combiner.

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			

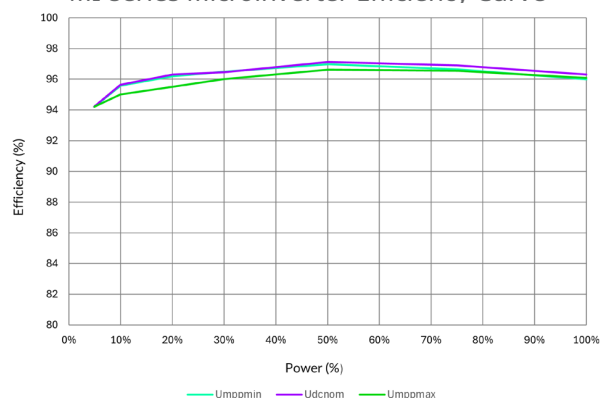
MI-series Microinverter Electrical Topology



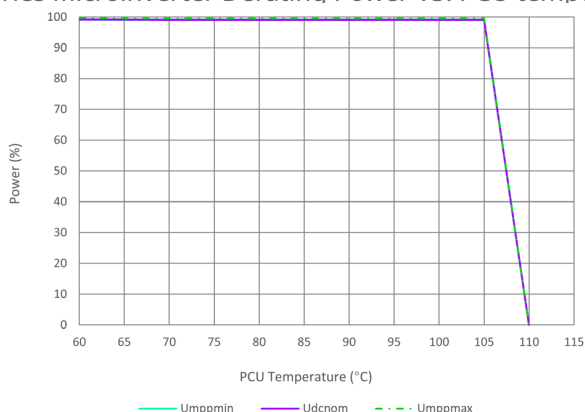
MI-series Microinverter Dimension in mm



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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