

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

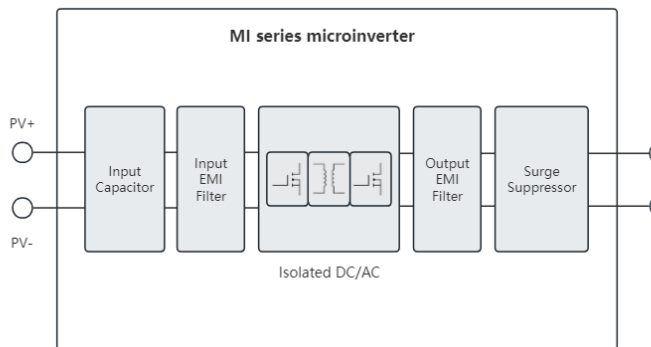


Model		MI-500	MI-450	MI-425	MI-400
Input parameters					
PV module compatibility		54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell			
Max. power of compatible PV modules	P_{dcmax} W		700		
Min./Max. input voltage	U_{dcmin}/U_{dcmax} V		16/60		
Peak power tracking voltage range	U_{mppmin}/U_{mppmax} V	33 to 55	30 to 55		28 to 55
MPPT voltage range	U_{mppt} 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		

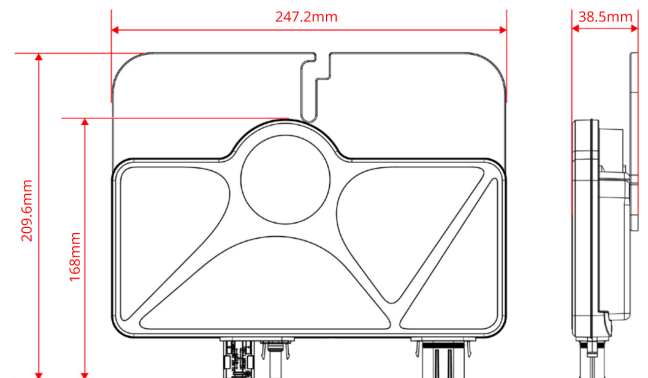
a. The value is tested with M-Relay or M-Combiner.

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		

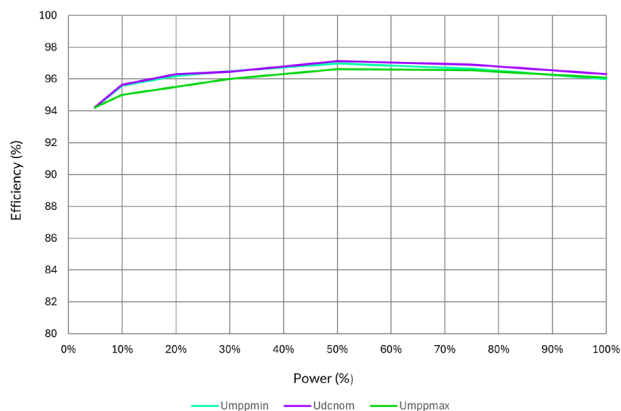
MI-series Microinverter Electrical Topology



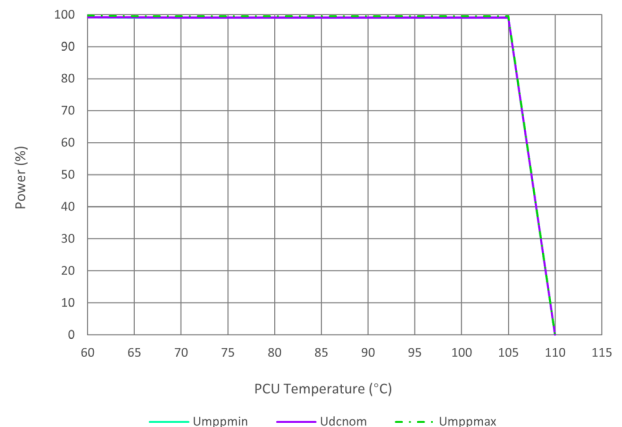
MI-series Microinverter Dimension in mm



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



Copyright © Atmoce Holding B.V. 2025. All rights reserved.

No parts of this document may be reproduced or transmitted in any form or by any means without the prior written consent of Atmoce Holding B.V.

Trademark Notice

ATMOCE Atmoce and  logo are trademarks or registered trademarks of Atmoce Holding B.V. Other trademarks, product names, services, and company names mentioned are the property of their respective owners.

General Disclaimer

The information in this document may contain predictive statements, including, without limitation, statements regarding future financial and operational results, future product portfolios, new technologies, etc. There are a number of factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purposes only and constitutes neither an offer nor an acceptance. Atmoce may change the information at any time without notice.