

ATMOCE

Data Sheet

MI Series Microinverter

MI-600/MI-500/MI-450/MI-425/MI-400



Key Features

Ultimate Safety

- No DC arc
- Rapid shut down
- Safety DC voltage
- No need of AFCI

Higher Reliability

- 25-year warranty
- Lightweight to 1.3 kg
- Polymer housing
- IP67 ingress protection

Maximum Electricity

- Module level management and optimization
- Peak efficiency: 97.4 %
- EU efficiency: 97.0 %
- MPPT efficiency: 99.9 %

Flexibility & Intelligence

- All-in-one solution
- One SKU for all 1-phase & 3-phase installation
- Supports all common PV modules up to 700W



Model		MI-600	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_{dcmin}/U_{dcmaxr} V			16/60		
Peak power tracking voltage range	$U_{mppmin}/U_{mppmaxr}$ V	39 to 55	33 to 55	30 to 55	30 to 55	28 to 55
MPPT voltage range	U_{mppt} V			16 to 60		
Nominal input voltage	U_{dcnomr} V	42	36	36	36	36
Start-up input voltage	$U_{dcstart}$ 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			220/230		
Voltage range	U_{acmin}/U_{acmaxr} V			184 to 276		
Nominal output power	P_{acnomr} W	600	500	450	425	400
Max. apparent power	S_{acmaxr} VA	600	500	450	425	400
Nominal output current @220Va.c.	I_{acnomr} A	2.73	2.27	2.05	1.93	1.82
Nominal output current @230Va.c.	I_{acnomr} A	2.62	2.17	1.96	1.85	1.74
Max. output current @220Va.c.	I_{acmaxr} A	2.86	2.39	2.15	2.03	1.91
Max. output current @230Va.c.	I_{acmaxr} A	2.74	2.28	2.05	1.94	1.83
Max. microinverters / 20A branch circuit		6	7	8	8	9
Max. microinverters / 25A branch circuit		8	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_{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		

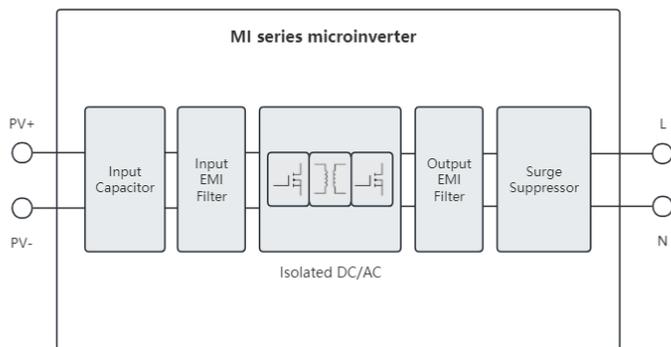
a. The value is tested with M-Relay or M-Combiner.

Model	MI-600	MI-500	MI-450	MI-425	MI-400
DC connector type			Stäubli MC4		
Number of DC connectors			1 pair		
AC connector type			MT-02502-A ^b		
Number of AC connectors			1 pair		
Dimensions (without bracket)	mm	247.2 × 180 × 38.5 (W × H × 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			

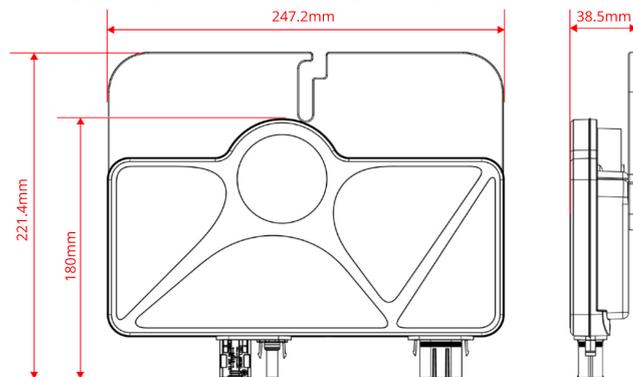
Features					
Communication	PLC				
Indicator	1 × LED				

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				

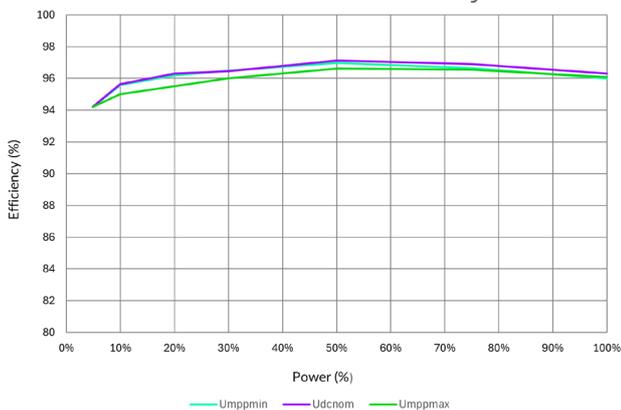
MI Series Microinverter Electrical Topology



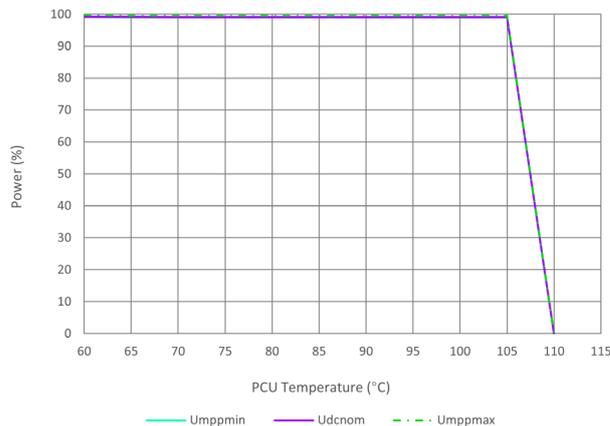
MI Series Microinverter Dimension in mm



MI Series Microinverter Efficiency Curve



MI Series Microinverter Derating Power VS. PCU temperature



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