ATMOCE

Data Sheet

MI Series Microinverter

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



Key Features

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

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

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

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

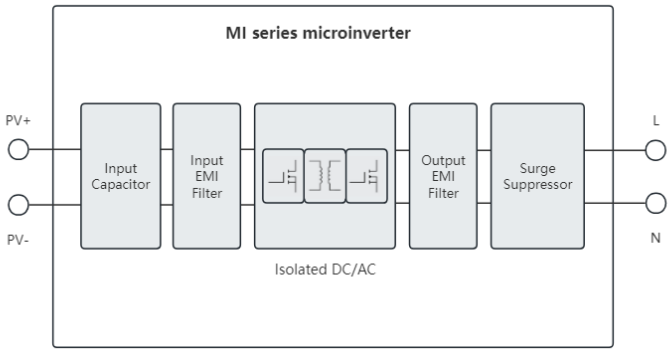


Model		MI-600	MI-500	MI-450	MI-425	MI-400
Input parameters						
PV module compatibility		54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell				
Max. power of compatible PV modules	P_{dcmax}, W	700				
Min./Max. input voltage	U_{dcmin}/U_{dcmax}, V	16/60				
Peak power tracking voltage range	U_{mppmin}/U_{mppmax}, 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_{dcnom}, V	42	36	36	36	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	220/230				
Voltage range	U_{acmin}/U_{acmax}, V	184 to 276				
Nominal output power	P_{acnom}, W	600	500	450	425	400
Max. apparent power	S_{acmax}, VA	600	500	450	425	400
Nominal output current @220Va.c.	I_{acnom}, A	2.73	2.27	2.05	1.93	1.82
Nominal output current @230Va.c.	I_{acnom}, A	2.62	2.17	1.96	1.85	1.74
Max. output current @220Va.c.	I_{acmax}, A	2.86	2.39	2.15	2.03	1.91
Max. output current @230Va.c.	I_{acmax}, 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_{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				

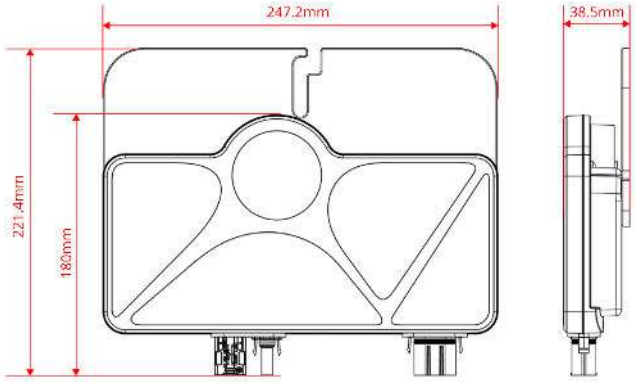
a. The value is tested with M-Relay or M-Combiner.

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 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				

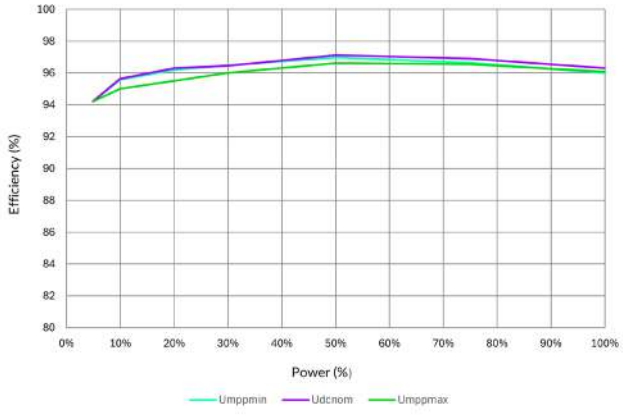
MI Series Microinverter Electrical Topology



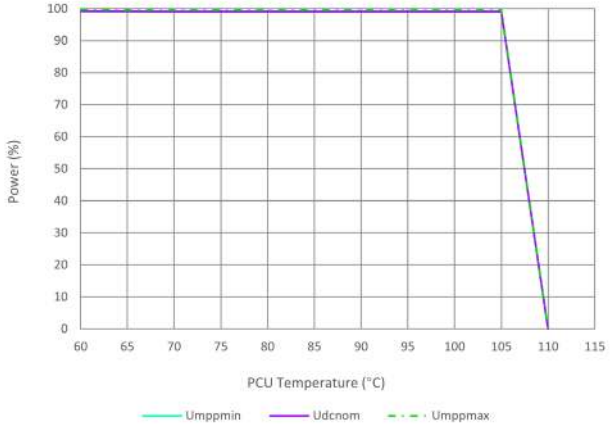
MI Series Microinverter Dimension in mm



MI Series Microinverter Efficiency Curve



MI Series Microinverter Derating Power VS. PCU temperature



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

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