

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

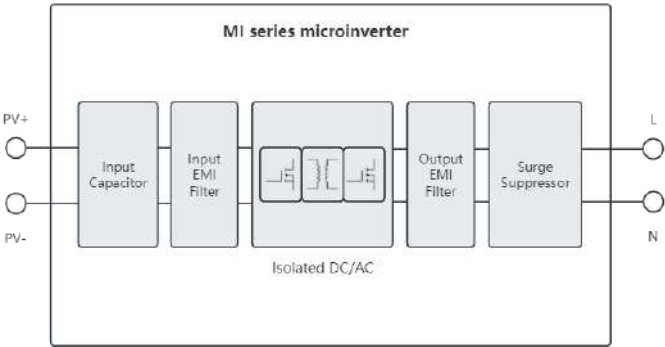


Model		MI-600	MI-500	MI-450	MI-425	MI-400
Input parameters						
PV module compatibility		54-cell/108 half-cell, 60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell				
Max. power of compatible PV modules	P_{dcmax} W			700		
Min./Max. input voltage	U_{dcmin}/U_{dcmax} V			16/60		
Peak 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			

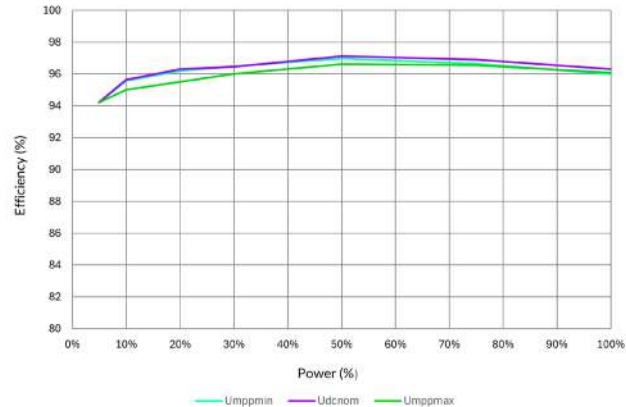
a. The value is tested with M-Relay or M-Combiner.

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

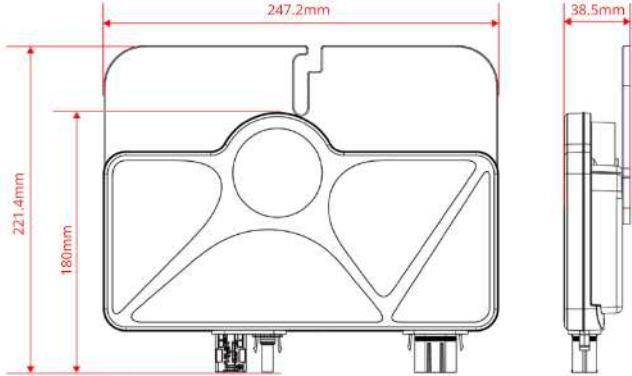


MI Series Microinverter Efficiency Curve



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

MI Series Microinverter Dimension in mm



MI Series Microinverter Derating Power VS. PCU temperature

