

# Matrix Inverter INV-4810E/INV-4815E (230V)



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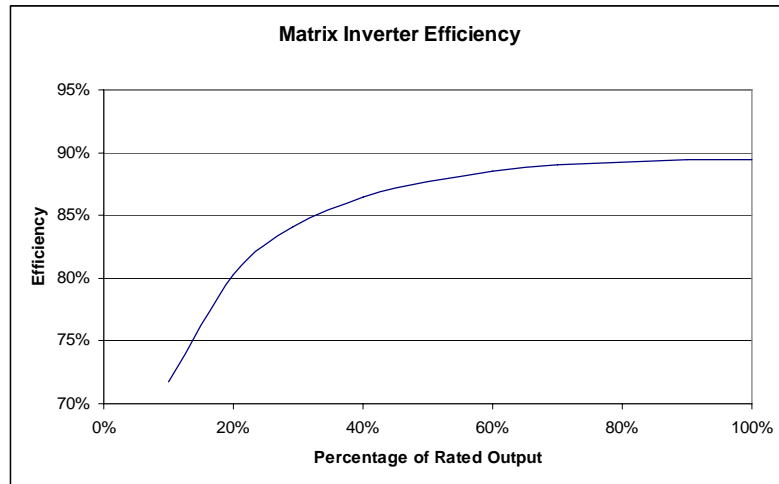
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**DC Input**

Nominal voltage	48Vdc
Operating range	40.5Vdc ~ 58Vdc
Isolation AC-DC	4242Vdc / 1min
Inrush current	< 2 * I <sub>rated</sub>
Isolation DC-enclosure	707Vdc (Varistors and filter capacitor removed) / 1min
Input protection	Reverse Polarity Protection
Psophometric noise voltage	1.0mV ITU-T O.41 (16.66 ~ 6000Hz)
Reflected Psophometric noise current	< 1% to YD /T 777-2006
Reflected relative wideband current noise	< 10% (0-2Mhz) to YD/T 777~2006
Wide Band Noise	< 1.0mVps <sub>of</sub> (25Hz~5kHz) < 20mV <sub>rms</sub> (25Hz~20kHz)
Peak to peak noise	150mV up to 100MHz
Under voltage warning threshold	45Vdc
Under voltage shutdown threshold	40Vdc *
Over voltage warning threshold	58Vdc
Over voltage shutdown threshold	60Vdc*



**AC Output**

Power Output INV-4810E INV-4815E	1000VA / 800W 1500VA / 1200W
Waveform	Pure sine wave
Power factor	0.8
Nominal output voltage	230Vac
Voltage regulation	Nominal $\pm 2\%$
Output frequency	50/60Hz
Frequency variation	Nominal $\pm 0.5\%$
Frequency setting	Manually, field selectable
Crest factor	3:1
THD	<3% for linear load <5% for non-linear load
Capacitive/inductive load	-0.8 to +0.8 without exceeding specification for resistive load
Efficiency	Min 89% at rated load for 48Vdc System
Current limitation	Electronic current limitation at overloads and short circuits.
Isolation AC-enclosure	Basic isolation (Primary - Ground) 2121Vdc/1min
Surge protection	EN61000-4-5. Telcordia GR-1089 Core ANSI C62.41-IEEE, STD 587-1980
Dynamic response	< 10%, according to IEC 62040-3 class 1
Over load protection	2 * Inom, 5s max 1.5 * Inom, 10s max 1.25 * Inom temperature controlled Inom = 1000VA (1500VA) / output voltage
Load Sharing	< 5 %

**Inverter Default Configuration Values**

Inverter output voltage	230V
Inverter output frequency	50Hz
Inverter AC output high	264V
Inverter AC output low	185V
Inverter shut down - low input Vdc	40V
Inverter shut down - high input Vdc	60V
Inverter Power Limit	100%
Inverter Fan Speed	Normal

**Inverter Configuration values when used with MC-1000 Controller**

Inverter output voltage	208	220	230	240
Inverter output frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Inverter AC output high	220~240	233~252	244~264	254~276
Inverter AC output low	176~198	176~209	185~218	193~228
Inverter shut down - low input	39~44Vdc			
Inverter shut down - high input	59~61Vdc			
Inverter Power Limit	0%~100%			

### Environmental Requirements

Operating temperature range	-20°C to 70°C (-4°F to 158°F) -5°C to 50 °C (23°F to 122°F), full performance
Storage temperature	-40°C to 85°C (-40°F to 185°F)
Operating humidity	90% Relative Humidity (non condensing)
Operating Attitude	1500m
Audible noise	55dB ETS 300 753, class 3.1

### Mechanical

Dimension (D, W, H)	270mm, 215mm, 43.8mm (10.6", 8.5", 1.7")
Weight	2.5kg (5.5lb)
Heat dissipation	Forced air cooling
Front Panel LEDs	
Power On	Green
Warning	Yellow
Fault	Red

### Compliances

Safety	EN60950-1 / UL60950-1
EMC - immunity	
Electrostatic Discharge	EN 61000-4-2
Radiated radio frequency	EN 61000-4-3
Electrical fast Transients	EN 61000-4-4
Surge	EN 61000-4-5
EMC – emissions	
Conducted emissions (AC)	EN 55022 (Class B)
Conducted Emissions (DC)	EN 300 386
Radiated Emissions	EN 55022 (Class B)
Harmonics	EN 61000-3-2
Fluctuation and Flicker	EN 61000-3-3
Low-Frequency Conducted Disturbances	EN 61000-2-2

### Certifications

Europe	CE-mark
USA	UL

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