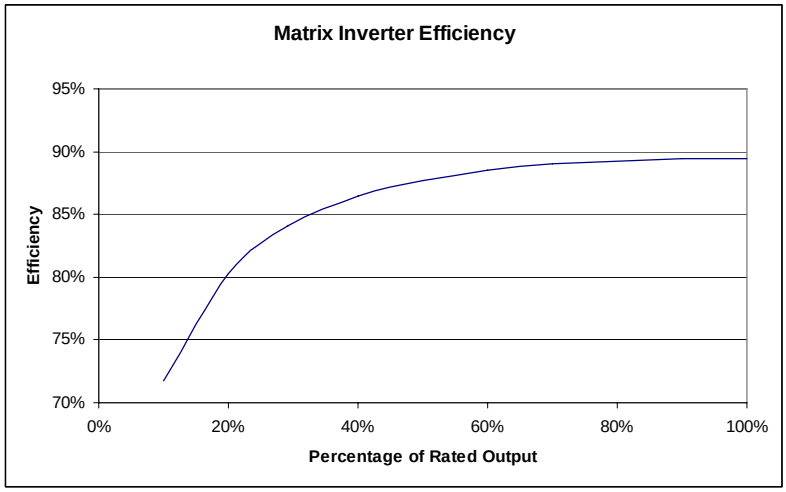
Matrix Inverter INV-4810E/INV-4815E (230V)

Contents

Powering Business Worldwide

DC Input

Nominal voltage	48Vdc
Operating range	40.5Vdc ~ 58Vdc
Isolation AC-DC	4242Vdc / 1min
Inrush current	< 2 * Irated
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	< 1.0mVpsof (25Hz~5kHz) < 20mVrms (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 ±2%
Output frequency	50/60Hz
Frequency variation	Nominal ±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