

Eaton 9E-IN

01kVA 1x1 (Inbuilt Battery) UPS

Manufacturer's declaration in accordance with IEC 62040-3



Value Proposition:

High Performance

- True Online Double Conversion
- True Input PF 0.99
- True output PF 0.9
- Output THDv 2%
- Higher Power Density
- Higher Efficiency upto 98% in ECO Mode
- Support Critical Virtualization

High Reliability and Adaptability

- Wide Input Voltage Range 110 to 300 Vac
- Inbuilt Hardware Current Limit Technology.
- Upgraded Phase Lock Algorithm
- Inbuilt Over-voltage Cut-off Device
- Inbuilt Over Temperature Protection.
- Upto 50 Degree Celsius operation @50% Load (Specific to XL Model)
- Better Overload Protection upto 105% Constant

High Flexibility and Availability

- Adjustable Charging Current 0 to 1.5 Amps
- Better Short Ckt Handling Capacity.
- Auto Fault Recovery.
- Conformal Coated Boards.
- More Accessories.

Major Application

- Networking/Server/Storage.
- Wiring Closets.
- Security and Surveillance System.
- Industrial Automation Control.
- Laboratory Equipment.
- ATM/Telecom/Railway Signalling.



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Technical Specification of Eaton 9E-IN 1 kVA-Inbuilt Battery

Model Name	Eaton 9E-IN 1000
Catalog number	E9E1K-IN
Plant Part Number	9103-53862XT1
UPC Code	743172091840
INPUT Characteristics	
Acceptable Input Voltage	100VAC-300VAC
Phase	Single phase with ground
Transfer Voltage Range (low load)	100VAC-300VAC (40% load)
Transfer Voltage Range (100% load)	176VAC-300VAC
-Line low loss	176VAC/100VAC (±3%)
-Line low comeback	186VAC/110VAC (±3%)
-Line high loss	300VAC (±3%)
-Line high comeback	290VAC (±3%)
Nominal input current (r.m.s) @ 230V input and battery fully recharged	4.5A
Inrush Current Limit	8*I _{rms}
THDi	5 % typical, 7% Max with R full load @ 230v input
Input Power Factor	≥0.99(R FULL LOAD) @ 230V input
Input Frequency Range	45-55Hz / 54-66Hz
Input protection	Breaker
OVCD	Withstand 440Vac, 24Hours
Generator Set	2.2 x UPS Rating Power
OUTPUT Characteristics	
Output Power(VA) max	1000
Output Power(W) max	900
Output Power Factor	0.9
Output Waveform	Pure sine wave
Output nominal voltage	220VAC/230VAC/240VAC
Output Voltage Variation	± 1 %
Output Transient recovery	100ms (IEC 62040-3 Non-linear load)
Output Voltage distortion	< 2% THD, linear load@Line mode
	< 2% THD, linear load @ battery mode, battery voltage 12V / per battery
	< 6% THD, linear load@Line mode < 6% THD, linear load @ battery mode, battery voltage 12V / per battery
Output Frequency in inverter mode Synchronization range	45-55Hz / 54-66Hz
Output Frequency Slew rate	1 Hz/s
Output Frequency in Battery mode	(50/60±0.05) Hz
Transfer time Inverter Mode to Battery Mode.	0ms
Transfer Time Inverter Mode to Bypass Mode.	4ms
Line mode efficiency @ full load with battery fully charged	>89%
ECO mode efficiency @ full load with battery fully charged	>97.5%
Battery mode efficiency @ full load 12Vdc/Battery	>84.4%
Overload Capability (Line mode)	100%~105% :Constant 105%~130% :60s 130%~150% :10s >150% :300ms
Overload Capability (Battery mode)	100%~105% :Constant 105%~130% :10s 130%~150% :1s >150% :300ms >105% and Vbat<10.5V: 300ms

BATTERY Characteristics	
DC Voltage	24VDC
Battery-Low Voltage(full load)	21VDC, 10.5V/pcs
Battery shutdown voltage @ 0 ~ 20% Load (for long run model) / 0~ 30% (for standard model)	21.4VDC,10.7V/pcs
Battery shutdown voltage @ 20 ~ 70% Load (for long run model) / 30%~70% load (for standard model)	20.4VDC, 10.2V/pcs
Battery shutdown voltage @ > 70% Load	19VDC, 9.5V/pcs
Charger Current	1.5A
Leakage current	< 150uA
FEATURES	
ECO Mode	YES
EPO Function	NA
Battery Capacity Calculation	YES
Fan Speed Control	YES
Frequency Converter Mode(CVCF)	YES, 60% load
INTERFACE	
RS232	Yes
USB	NA
COM Slot	YES
NMC card	Optional
AS400 card(Dry contact card)	Optional
Modbus card	Optional
Input connection	IEC Inet 10A
Outlet socket	4 x IEC 10A outlets
MECHANICAL	
WxHxD (mm)	144 x 228 x 356
Net Weight	9.2Kg
Operating Temperature Range	0°C ~ 40 °C
Relative Humidity	0 ~ 95% (No condensing)
Audible Noise	<40dB at front 1m @ typical load
Regulations and Standards	
-ESD	IEC 61000-4-2 Level 3
-RS	IEC 61000-4-3 Level 3
-EFT	IEC 61000-4-4 Level 4
-Surge	IEC 61000-4-5 Level 4
-Safety	BIS
-Transportation	ISTA 2A
-Protection	IP20 (static)
ACCESSORIES	
User manual	Yes
External battery power cord	NA

EMC	
Conduction	Class 2 Ref Std: IEC 62040-2:2005
Radiation	Class 2 Ref Std IEC 62040-2:2005
Low frequency conducted disturbances	Criteria A Ref Std : IEC61000-2-2:2002
Harmonic current	Class A Ref Std :IEC 61000-3-2:2014
ESD	Criteria B, Level 3 Ref Std : IEC 61000-4-2:2008
RS	Criteria A, Level 3 Ref Std IEC 61000-4-3:2006+AMD1:2007+AMD2:2010 CSV
EFT	Criteria B ,Level 4 Ref Std :IEC 61000-4-4:2012
Surge	Criteria B, DM Level 3: 2KV, CM Level 4: 4KV Ref Std : IEC 61000-4-5:2014
C/S	Criteria A, level 3 Ref Std : IEC61000-4-6:2013
M/S	Criteria B, level 4 Ref Std : IEC61000-4-8:2009
Voltage Dips, short interruptions and voltage variations	Criteria B ,Level 4 Ref Std : IEC61000-4-11: 2004
Certificate	
BIS	YES
CE	YES



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