



# Network Transmission Industrial Hardened Power Supply

## Overview

GE's Industrial Hardened Power Supply is now IFS. Engineered for optimal performance in harsh environmental conditions, the IFS 48 VDC (240W) Hardened Power Supply is designed to perform under full-load in industrial environments where dust and condensation can be a problem and when operating temperatures range from -30°C to 70°C.

Reliability and safety are enhanced by free-air cooling, eliminating potential mechanical breakdowns and wear from moving parts. Short circuit/overload protection, as well as over voltage and temperature recovery features, protect against damage with an automatic recovery function that does not require user intervention. The unit is equipped with an industry standard IEC connector allowing for the appropriate regional power plug to be used for installation.

The advanced switching power supply technology reduces power consumption, meeting Level IV (4) International Efficiency in compliance with California Energy Commission, Energy Star and the EU Code of Conduct for external power supplies. Supplies can be mixed and matched to a variety of IFS products to meet installation requirements.

This power supply is ideal for use with industrial network equipment, such as switches with full PoE power per port, in harsh environments.

## Standard Features

### Hardened Design

- 48 VDC @ 5 amp (240W) output for industrial PoE switches
- IP 67/IP 65 rated industrial closure is rated for environmental protection in harsh dust and high-humidity environments
- Wide operating temperature -30°C to 70°C

### Reliability and Safety

- Cooled by free air with no fan or moving parts required, increasing reliability
- Over voltage and over temperature recovery automatically protects against damage without user intervention

### Installation

- Universal IEC male power input plug accommodates IEC power cords regardless of country location
- Low-voltage flying leads provides easy power interface termination
- Wall mount design easily mounts to walls and cabinets

# 48 VDC Hardened 240W Power Supply

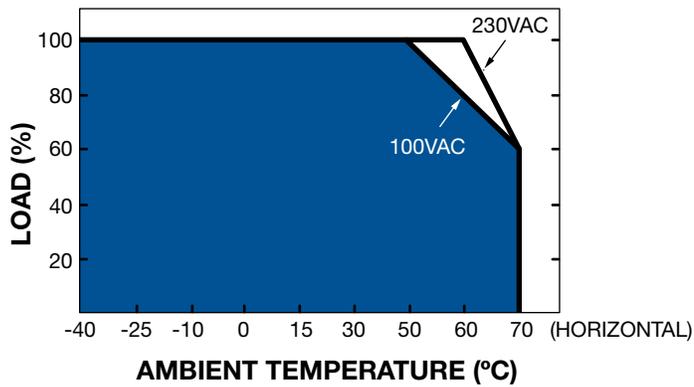


# Specifications

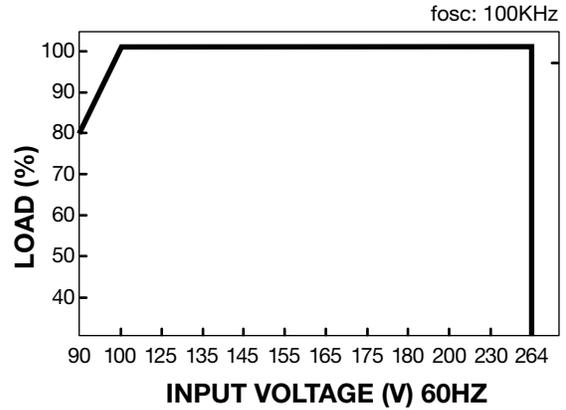
Output	
DC Voltage	48V
Constant Current Region	24~48V
Rated Current	5A
Rated Power	240W
Ripple & Noise (max.)	250mVp-p
Voltage ADJ. Range	44.8~51.2V
Current ADJ. Range	2.5~5A (Can be adjusted by internal potential meter)
Voltage Tolerance	±1.0%
Line Regulation	±0.5%
Load Regulation	±0.5%
Setup, Rise Time	2500ms, 80ms at full load 230VAC/115VAC
Hold Up Time (Typ.)	15ms at full load 230VAC/115VAC
Input	
Voltage Range	90~264VAC, 127~373VDC
Frequency Range	47~63Hz
Power Factor	PF>=0.95/230VAC, PF>=0.98/115VAC at full load and rated output voltage, PF>=0.95 at 65 ~ 100% load
Efficiency (Typ.)	94%
AC Current	4A/115VAC, 2A/230VAC
Inrush Current (Typ.)	Cold start 75A/230VAC
Leakage Current	<0.75mA/240VAC
Protection	
Over Current	95~108%, Protection type: Constant current limiting, recovers automatically after fault condition is removed
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed
Over Voltage	53~62V, Protection type: Shut down and latch off o/p voltage, re-power on to recover
Over Temperature	95°C±5°C (TSW1), Protection type: Shut down o/p voltage, recovers automatically after fault condition is removed
Environment	
Working Temperature	-40° ~ to 60°C @ full load; +70°C @ 60% load (Refer to derating curve)
Working Humidity	20 ~ 95% RH non-condensing
Storage Temperature, Humidity	-40 ~ +80°C, 10 ~ 95% RH
Temperature Coefficient	±0.03%/°C (0~50°C)
Vibration	10 ~ 500Hz, 5G 12min./1 cycle, period for 72 min. each along X, Y, Z axes
Safety & EMC	
Safety Standards	UL1012, TUV EN61347-1, EN61347-2-13 independent (except for HLG-240H C type), UL60950-1, UL8750, TUV EN60950-1, IP65 or IP67 approved
Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:1.88KVAC O/P-FG:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH
EMI Conduction & Radiation	Compliance to EN55015, EN55022 (CISPR22) Class B
Harmonic Current	Compliance to EN61000-3-2 Class C (>=50% load) ; EN61000-3-3
EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN61547, EN55024, heavy industry level (surge 4KV), criteria A
Others	
MTBF	207.9Khrs min. MIL-HDBK-217F (25°C)
Dimensions (LxWxH)	9.61 x 2.67 x 1.52 in., 244.2 x 68 x 38.8mm
Weight	2.8 lbs., 1.3Kg

- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- Tolerance : includes set up tolerance, line regulation and load regulation.
- Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
- Derating may be needed under low input voltages. Please check the static characteristics for more details.
- Safety and EMC design refer to EN60598-1, subject 8750(UL), CNS15233, GB7000.1, FCC part18.
- Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
- The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.
- Refer to warranty statement.

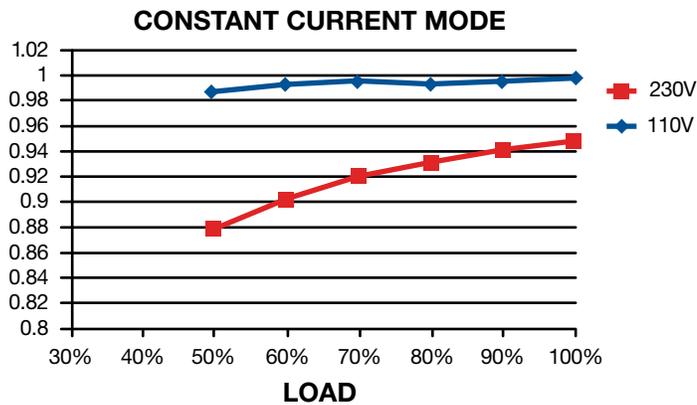
## Derating Curve



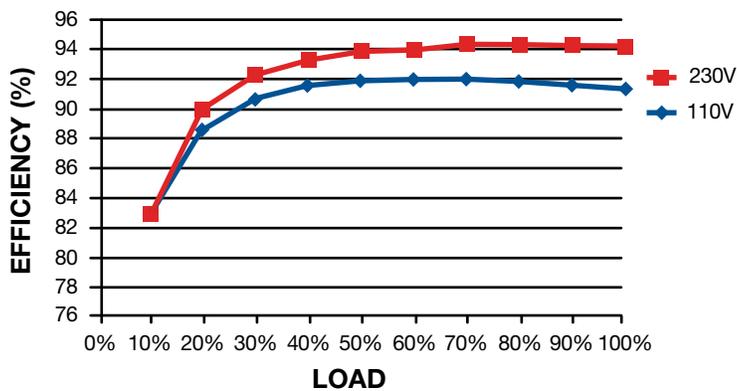
## Static Characteristics



## Power Factor Characteristic



## Efficiency vs. Load (48V Model)



North America  
T 888-437-3287  
F 503-691-7566  
E sales@ifs.com

Asia  
T 852-2907-8108  
F 852-2142-5063

Australia and New Zealand  
T 613-9239-1200  
F 613-9239-1299

Europe  
T 44-113-238-1668  
F 44-113-253-8121

Latin America  
T 561-998-6100  
F 561-994-6572

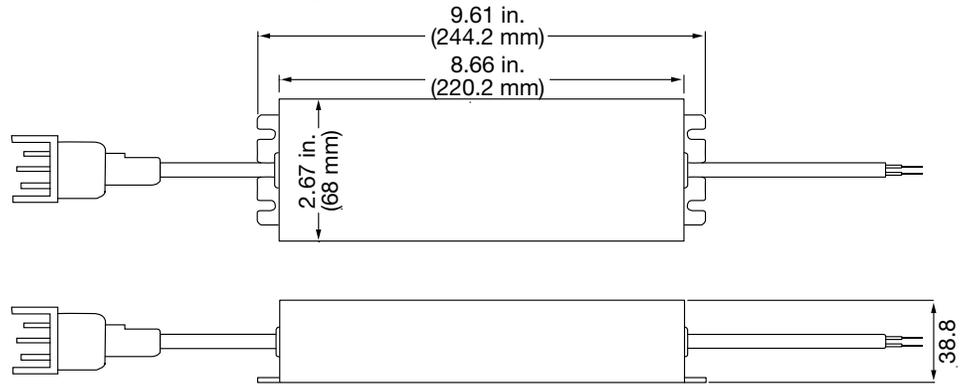
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## Dimensional Diagram



## Ordering Information

HLG-240-48

48 Volt D.C. (240W) Single Output, Environmentally Hardened Switching Power Supply

Security Products by GE are now part of the UTC Fire & Security family



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