

GIV-300 series

300W LED Switching Power Supply (CV) with PFC function



INVENTRONICS



■ Feature:

- Constant voltage design
- Built-in active PFC function
- Universal AC input / Full range
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- High efficiency
- IP67 design for indoor and outdoor appliances

SELV  IP67     CE

ELECTRICAL SPECIFICATION

MODEL	GIV-300-12	GIV-300-24
FACTORY PART NO.	EUV-300S012SV	EUV-300S024SV

OUTPUT

Rated Voltage	12V	24V
Rated Current	22.9A	12.5A
Rated Power	274.8W	300W
Line Regulation	± 1%	
Load Regulation	± 3%	
Tolerance [1]	± 5%	
Ripple & Noise (max.)	240mV _{p-p}	480mV _{p-p}
Setup time	Typ.: 0.4s; Max.: 1s / 220VAC	
Overshoot / Undershoot (max.)	10% when power on or off	
Load Dynamic Response	5% for R/S: 1A/μs; load: 25% ÷ 75%	

INPUT

Voltage Range	90 ÷ 305VAC	
Frequency Range	47 ÷ 63Hz	
Efficiency (typ.)	91.5%	91%
AC current (typ.)	3.3A / 110VAC, 1.5A / 220VAC	
Power Factor	Min.: PF > 0.9 ; Typ.: PF > 0.98 / 100VAC ÷ 277VAC; Load: 75% ÷ 100%	
Inrush current	155A, 2.33A ² s / 220VAC; cold start; 25°C, t = 3ms (10%Ipk-10%Ipk)	
Leakage current (max.)	0.75mA / 240VAC	
No load power consumption (max.)	4.5W	

PROTECTIONS

Over Current	Range: 130 ÷ 200% rated current	
	Type: hiccup mode. Recovers automatically after fault condition is removed.	
Short Circuit	Type: hiccup mode. Recovers automatically after fault condition is removed.	
Over Voltage	14V ÷ 18V	28V ÷ 35V
	Type: Limits output voltage at no load and in case the normal voltage limit fails. Re-power on to recovery.	
Over Temperature	Range: 110°C ± 10°C	
	Typ: shut off output voltage. Recovers automatically after temperature goes down.	

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WORKING ENVIRONMENT

Working Temperature	For safety: $T_{CASE} = -40^{\circ}C \div +90^{\circ}C$; For warranty: $T_{CASE} = -40^{\circ}C \div +60^{\circ}C$
Working Humidity	20 ÷ 90% RH non-condensing
Storage Temperature and Humidity	$-40^{\circ}C \div 85^{\circ}C$, 10 ÷ 95% RH non-condensing
Temperature Coefficient	$\pm 0.02\% / ^{\circ}C$ ($T_{CASE} = 0^{\circ}C \div 90^{\circ}C$)

SAFETY AND EMC REGULATIONS

Safety Standards	Compliance to EN61347-1, EN61347-2-13
Withstand Voltage	IN/OUT: 3.75kVAC; IN/GND(CASE): 1.5kVAC; OUT/GND(CASE): 0.5kVAC
Isolation Resistance	IN/OUT: 100M Ω /500VDC/25 $^{\circ}C$ /70%
EMC Emission	Compliance to EN 55015
EMC Immunity	Compliance to EN 61547; IEC 61000-4-2, -3, -4, -5, -6, -8, -11
Harmonic Current	Compliance to EN61000-3-3; EN61000-3-2

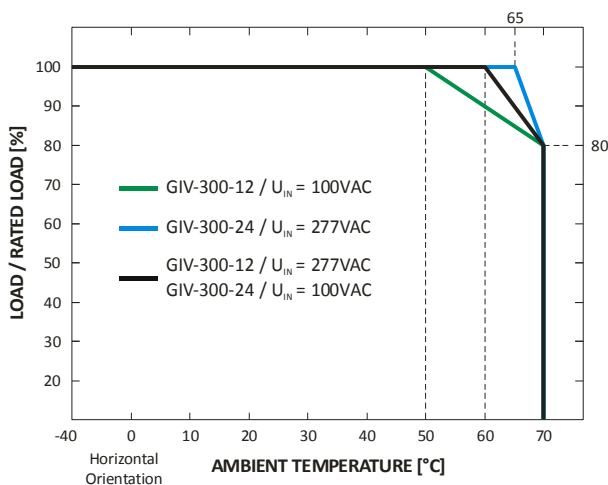
OTHERS

MTBF	278 000 hours according to MIL-HDBK-27F ($U_{IN} = 110VAC$; load: 80%, $T_A = 25^{\circ}C$)
Lifetime	58 000 hours ($U_{IN} = 220VAC$; load: 80%, $T_{CASE} = 60^{\circ}C$)
Dimensions	224 x 98 x 44.5mm (L x W x H)
Weight and Packing	1.55kg; 10pcs/box; box weight and dimensions: 17.8kg; 31 x 40 x 20cm

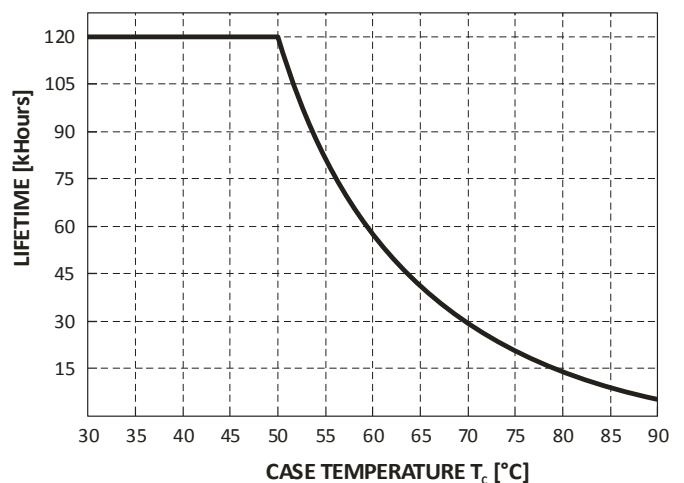
1. Tolerance includes set up tolerance, line regulation and load regulation.

2. 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 must be re-qualify to comply with EMC Directives.

DERATING CURVE



LIFETIME vs. CASE TEMPERATURE T_c



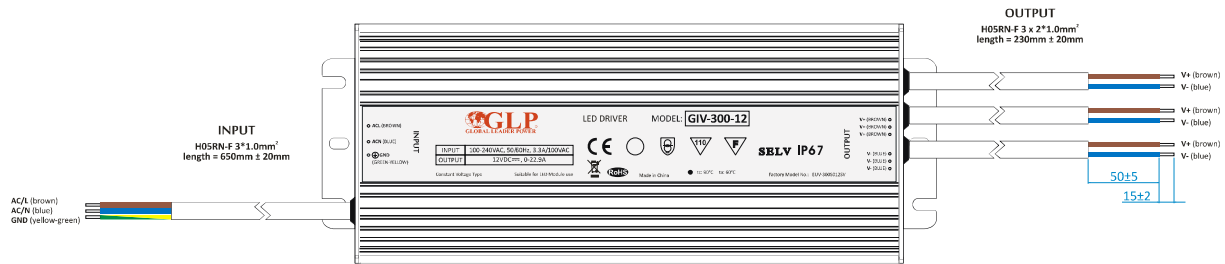
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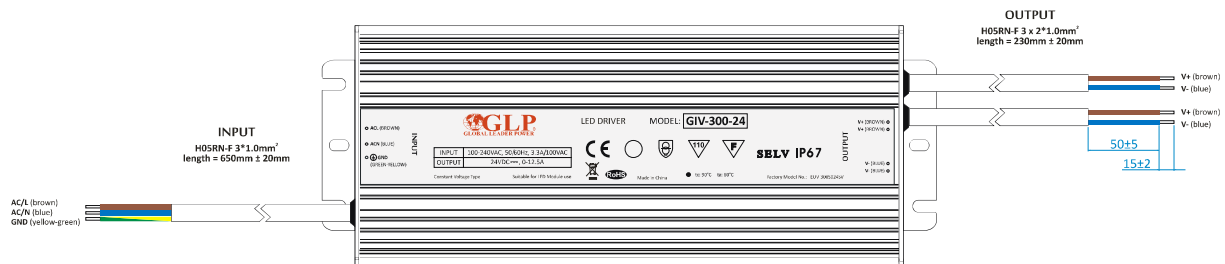
MECHANICAL SPECIFICATION

GIV-300-12



Note! The 3 DC output cables are connected in parallel internally because one 1.0mm² wire can only carry 10A. Please connect the 3 brown wires together and 3 blue wires together in application or ensure each cable carries same current.

GIV-300-24



Note! The 2 DC output cables are connected in parallel internally because one 1.0mm² wire can only carry 10A. Please connect the 2 brown wires together and 2 blue wires together in application or ensure each cable carries same current.

