AC – DC

Features

- Voltage Input Range 180~550V AC or 254~848V DC
- Operating Temperature Range: -30°C~+85°C
- Built-in DC OK relay Contact
- High-Efficiency up to 90.5%
- Safety Standards to EN/BS EN 62368-1
- Output SCP, OCP, OVP, OTP
- Three Years Warranty

Ideal Power's 56YSDW60-xy 60W DIN Rail Mount AC/DC Power Supply Converter Series are certified to UKCA, CE, cULus & UL 661010-1/BS EN 62368-1/EN 62368-1 Standards and comply with the relevant Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Models

Model Number*	Output Power (W)	Voltage Adj Range (V)	Current Range (A)	Efficiency at 230V AC (%) Typ	Over Voltage Range (V)	Ripple & Noise (mVp-p)
56YSDW60-5	50	5~6	10	83.5	6.2~7.2	100
56YSDW60-12	60	12~15	5	86.5	16~18	120
56YSDW60-24	60	24~29	2.5	89	31~37	150
56YSDW60-48	60	48~57	1.25	90.5	58~60.5	200

Input Specifications

	Conditions	Min	Typ	Max	Unit
Input Voltage Range	AC input	180	--	550	VAC
	DC input	254	--	848	VDC
Frequency Range		47	--	63	Hz
AC Current	400V AC	--	0.4	--	A
	230V AC	--	0.7	--	
Inrush Current		COLD START 50A/400V AC 30A/230V AC			
Leakage Current		<2mA/530V ac			

Output Specifications

	Conditions	Min	Typ	Max	Unit
Voltage Tolerance		--	±2.0	--	%
Line Regulation		--	±0.5	--	
Load Regulation	56YSDW60-5	--	±1.5	--	
	Others	--	+0.5	--	
Set up, Rise Time		1000ms, 70ms, 20ms/400VAC at full load			
Hold up Time		2000ms, 70ms, 10ms/230VAC at full load			

Protection

Overload Protection	>105%-135% rated output power: Protection type: Hiccup mode when output voltage <50%, recovers automatically when the fault condition is removed. Constant current limiting within <50%~100% rated output voltage recovers automatically when the fault condition is removed.
Over Voltage Protection	Shut down o/o voltage, repower on to recover.
Protection Type	Shut down o/p voltage repower on to recover.
Over Temperature	Shut down o/p voltage, re-power on to recover

Environmental Characteristics

Item	Operating Conditions
Operating Temperature	-30℃ to 85℃ (Refer to "Derating Curve")
Operating Humidity	20 ~ 90% RH non-condensing
Storage Temperature	-40ºC ~ 85 ºC
Cold Start	-40ºC
Temp Coefficient	± 0.03%/ºC (0~60ºC)
Vibration	10~500Hz, 2G 10min/1cycle, 60min each along x, y, z axes. Mounting clip: Compliance to IEC60068-2-6
MTBF	1854.1K hrs min, Telcordia SR-332 (Bellcore)
Operating Altitude	2000 meters
Over Voltage Category	II: According to EN 61558, EN 50178, EN 60664-1, EN62477-1, EN 60204-1: Altitude up to 200 meters
MTBF	160K hrs min, Telcordia SR-332 (Bellcore)

Safety & EMC

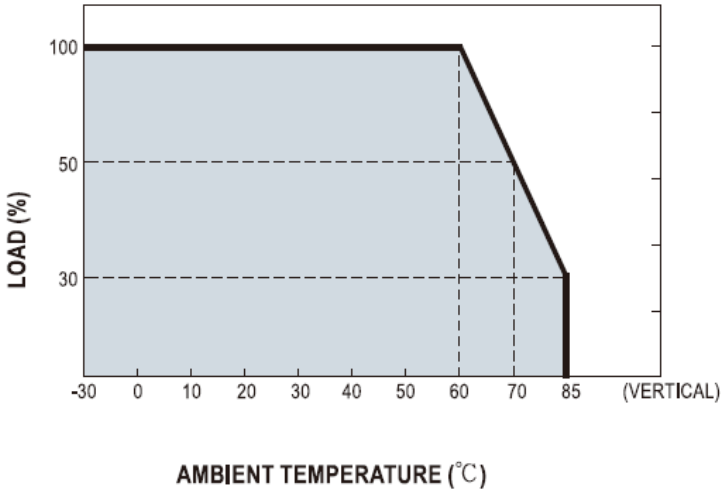
Safety Standards	UL61010-1, UL61010-2-1, BS EN/EN62368-1
Withstand Voltage	I/P-O/P:4.7KVAC I/P-FG:2.5KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25℃/70% RH
EMC Emissions	BS EN/EN55032, BS EN/EN61000-3-2, -3
EMC Immunity	BS EN/EN61000-4-2,3,4,5,6,8,11

Mechanical Specifications

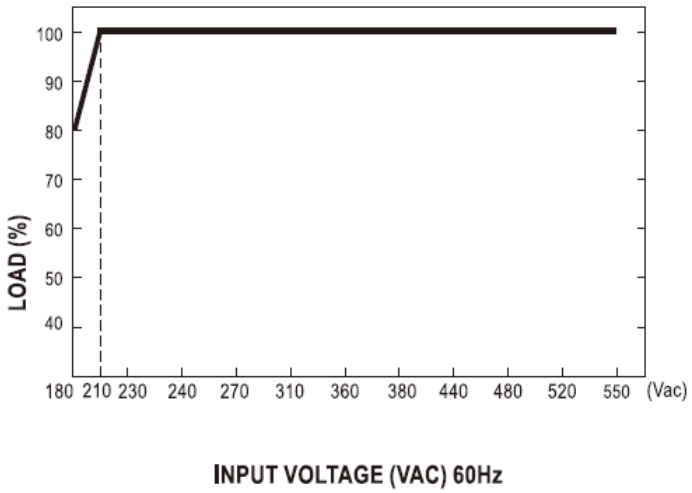
Dimension	32 x 100.5 x 125mm (L x W x H)
Weight	0.45kg
DC OK Signal	Relay contact ratting(max) : 30V/1A restive

Note:
1. All parameters NOT specially mentioned at 400V AC input rated load and 25ºC of ambient temperature.
2. Ripple & Noise are measured at 20MHZ bandwidth using a 12” twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is the heat source.
4.The ambient temperature derating of 3.5ºC/1000m for operating higher than 2000m(6500ft)
5. The power supply is considered a component which will be installed into the final equipment. The final equipment must be re-confirmed to meet EMC directives. For guidance on performing these EMC tests, please refer to "EMI testing of component power supplies."

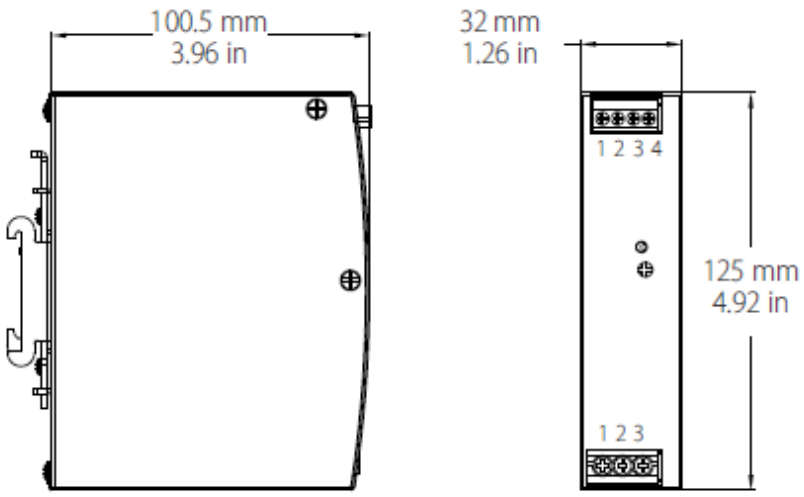
Derating Curve



Output Derating VS Input Voltage



Dimensions and Recommended Layout



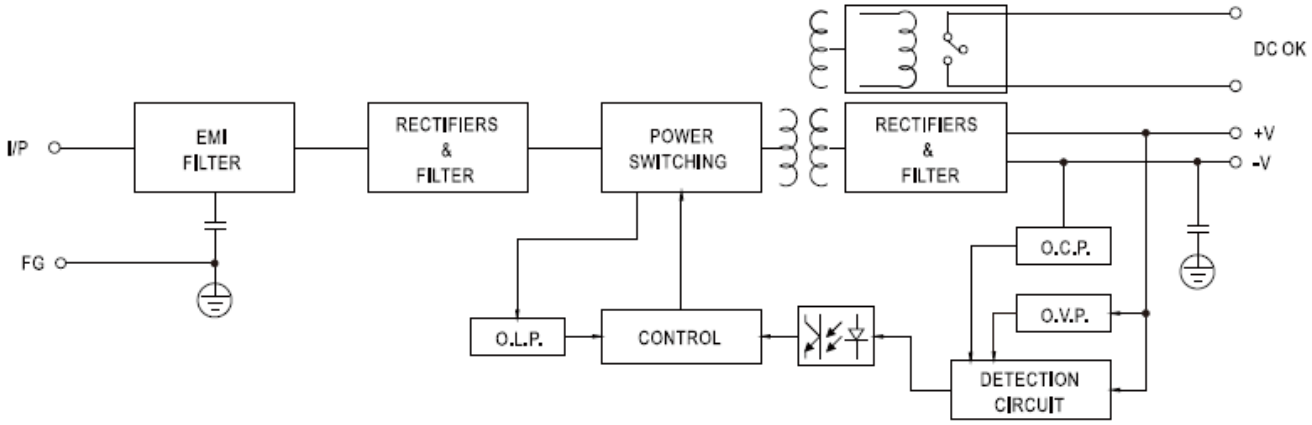
Input

No.	Description
1	FG ⏚
2	AC/L2
3	AC/L1

Output

No.	Description
1	DC OUTPUT -V
2	DC OUTPUT +V
3,4	Relay Contact

Block Diagram



DC OK Relay Contact

Contact Close	PSU turns ON/DC OK
Contact Open	PSU turns OFF/DC Fail
Contact Ratings (max)	30V/1A resistive load