

## Features

- Voltage Input Range 90~264V AC or 127~370V DC
- Operating Temperature Range: -30°C~+70°C
- With built-in Battery charging circuit
- High-Efficiency up to 88%
- Safety Standards to UL/EN/BS EN 62368-1
- Output SCP, OCP, OVP



Ideal Power's 56YDC60-xy 60W DIN Rail Mount AC/DC Power Supply Converter Series are certified to UKCA, CE, cULus, RoHS & UL 62368-1/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)	DC Voltage CH1 / CH2	Rated Current CH1 / CH2	Voltage Adj Range (V)	Current Range (A)	Efficiency at 230V AC (%) Typ
56YDC60-40-138	40.02	13.8 / 13.8V	1.9 / 1A	12~15	0~2.9	86
56YDC60-40-276	40.02	27.6 / 27.6V	0.95 / 0.5A	24~30	0~1.45	87
56YDC60-60-138	59.34	13.8 / 13.8V	2.8 / 1.5A	12~15	0~4.3	86
56YDC60-60-276	59.34	27.6 / 27.6V	1.4 / 0.75A	24~30	0~2.15	88

### Input Specifications

Conditions		Min	Typ	Max	Unit	
Input Voltage Range	[DC input operation possible by connecting AC/L (+), AC/N (-)]	AC input	90	--	264	VAC
		DC input	127	--	370	VDC
Frequency Range		47	--	63	Hz	
AC Current	115V AC, 0.6A/230V AC	56YDC40	--	0.9	--	A
	115V AC, 0.8A/230V AC	56YDC60	--	1.3	--	
Inrush Current	COLD START 30A/115V AC 60A/230V AC					

## Output Specifications

	Conditions	Min	Typ	Max	Unit
Ripple & Noise	56YDC60-40-138	--	--	120	mVp-p
	56YDC60-40-276	--	--	200	
	56YDC60-60-138	--	--	120	
	56YDC60-60-276	--	--	200	
Voltage Tolerance		--	±1.0	--	%
Line Regulation		--	±0.5	--	
Load Regulation		--	±0.5	--	
Set up, Rise Time		400ms, 50ms/230VAC at full load			
		800ms, 50ms/115VAC at full load			
Hold up Time		50ms/230VAC at full load			
		10ms/115VAC at full load			

## Protection

Overload Protection	>105%-150% rated output power: Protection type: Hiccup mode, recovers automatically when fault condition is removed	
Over Voltage Protection	56YDC60-40-138/56YDC60-60-138	CH1:14.49~18.63V
	56YDC60-40-276/56YDC60-60-276	CH1:28.98~37.26V
Protection Type	Shut down o/p voltage, repower on to recover	
Battery Cut Off	10±0.5V	
	20±1V	

## Environmental Characteristics

Item	Operating Conditions
Operating Temperature	-30°C to 70°C (Refer to "Derating Curve")
Operating Humidity	20 ~ 90% RH non-condensing
Storage Humidity	-40°C ~ 85% RH non-condensing
Storage Humidity	10 ~ 95% RH non-condensing
Temp Coefficient	± 0.03%/°C (0~50°C) on CH1 output
Vibration	10~500Hz, 5G 10min/1cycle, 60min each along x, y, z axes.
MTBF	1854.1K hrs min, Telcordia SR-332 (Bellcore)

## Safety & EMC

Safety Standards	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004, AS/NZS 62368.1 approved
Withstand Voltage	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25 °C/70% RH
EMC Emissions	BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2
EMC Immunity	BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035

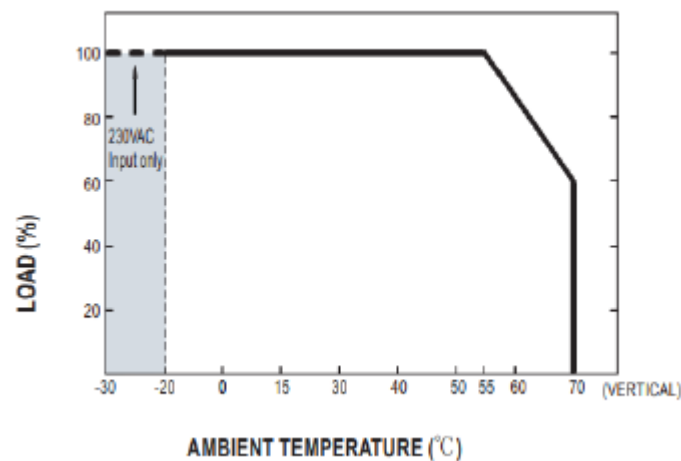
## Mechanical Specifications

Dimension	41 x 100 x 925mm (L x W x H)
Weight	300g

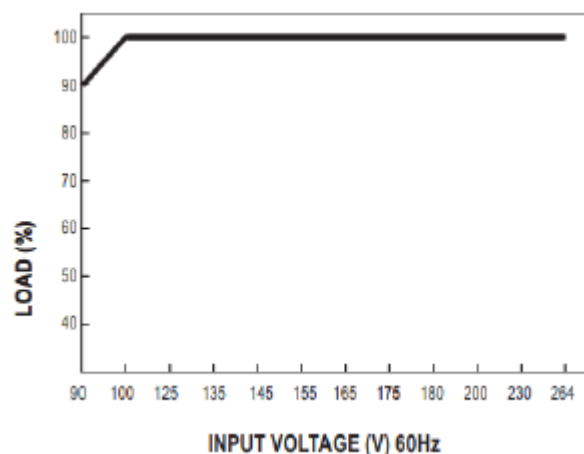
### Note:

1. All parameters NOT specially mentioned at 400V AC input rated load and 25°C of ambient temperature.
2. Ripple & Noise are measured at 20MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set-up time.
5. Please refer to suggested Application 2. (2) - (3) in page 4.
6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."
7. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).

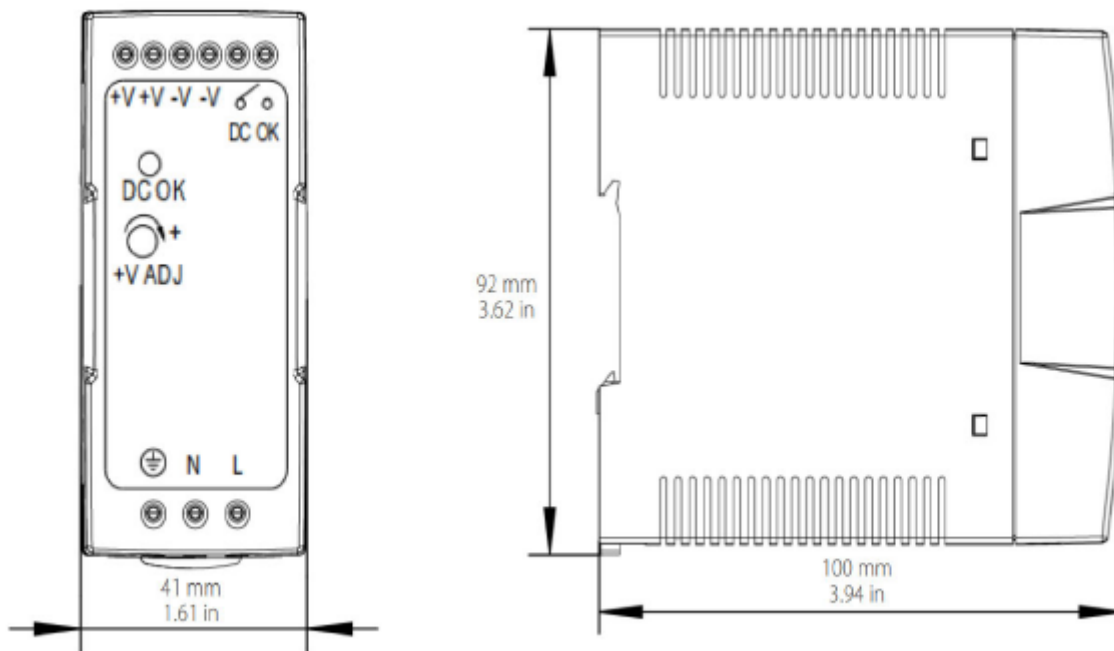
## Derating Curve



## Output Derating VS Input Voltage



## Dimensions and Recommended Layout



## Block Diagram

