

Features

- Input Voltage 90~264V AC
- Optional: DC OK Signal & Redundant Function
- Built in Active PFC Function
- Working Temperature 30~+70°C
- Efficiency up to 96%
- Protection: OLP, OVP, OTP SCP
- 3 Years Warranty



Certified to & Standards and complies with the relevant Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Models

Model Number	DC Voltage (V)	Rated Current (A)	Rated Power (W)	Voltage Adj. Range (V)	Efficiency (%)	Ripple & Noise (mVp-p)
56YEF1000-12	12	80	960	12~14.4	94	150
56YEF1000-24	24	42	1008	24~28.8	95	240
56YEF1000-36	36	028	1008	36~43.2	95.5	240
56YEF1000-48	48	21	1008	48~57.6	96	300

Models

Model Number	DC Voltage (V)	Rated Current (A)	Rated Power (W) 400	Voltage Adj. Range (V)	Efficiency (%)	Ripple & Noise (mVp-p)
56YEF1000R-12	12	80	960	12~14.4	94	150
56YEF1000R-24	24	31.3	1008	24~28.8	95	240
56YEF1000R-36	36	20.9	1008	36~43.2	95.5	240
56YEF1000R-48	48	15.7	1008	48~57.6	96	300

Input Specifications

Voltage Range	90~264VAC 250~370VDC
Frequency Range	47~63Hz
Power Factor	PF>0.95/230VAC PF>0.99/115VAC at full load
AC Current (Typ.)	10.1A/115VAC 5.3A/230VAC
Inrush Current (Typ.)	Cold Start 20A/115VAC Cold Start 40A/230VAC
Leakage Current	<0.75mA/240VAC

Output Specifications

Voltage Tolerance	±1.0%
Line Regulation	±0.5%
Load Regulation	±0.5%
Setup, Rise Time	1000ms, 50ms/230VAC at full load 1000ms, 50ms/115VAC at full load
Hold Up Time (Typ.)	12ms/230VAC at full load 12ms/115VAC at full load

Protection

Overload	105%-150% Rated Output Power Constant current limiting with delay shutdown after 3 seconds. Re-power on to recover
Short Circuit	Constant current limiting with delay shutdown after 3 seconds. Re-power on to recover
Over Voltage	14.5~16v 12v
	29~33v 24v
	43.5~49v 36v
	59~66v 48v
	Protection type: Shut down O/P voltage, re-power on to recover
Over Temperature	Protection type: Shut down O/P voltage, recover automatically after temperature goes down

Environmental Characteristics

Working Temp	-30 °C to +70 °C (Refer to "Derating Curve")
Working Humidity	20 ~ 90% RH Non-Condensing
Storage Temp., Humidity	-40°C ~+85°C, 10 ~ 95% RH non-condensing
Temp. Coefficient	± 0.03%/°C(0~50°C)
Vibration	10~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes

Safety

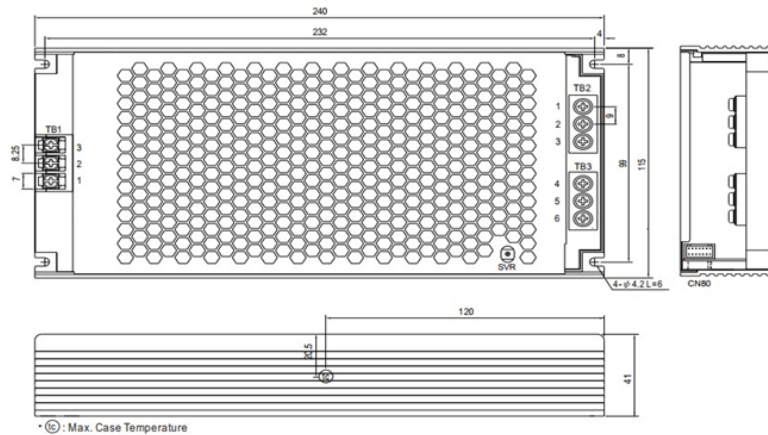
Safety Standards	Pending
Withstand Voltage	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:1.25KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25°C/70% RH
EMC Emission	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3,
EMC Immunity	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11,BS EN/EN55035

Other Specifications

MTBF	65.8K hrs min. MIL-HDBK-217F (25°C)
Dimension	240x115x41mm(L*W*H)
Weight	1.75Kg
Packing	54x30x24cm
Carton Quantities	15pcs/Carton

Notes:

1. All parameters NOT specially mentioned are measured at 230VAC 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. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. The ambient temperature derating of 3.5°C/1000m is needed for operating altitude greater than 2000m(6500ft)
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.
7. R type efficiency slightly less than the Blank type, according to the actual measurement.
8. Inrush current parameter has 10% tolerance.

Dimensions and Installation


AC Input Terminal (TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L		13.8Kgf-cm
2	AC/N		
3	⊕		

DC Output Terminal (TB2, TB3) Pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1,2,3	+V		8Kgf-cm
4,5,6	-V		

※Control Pin No. Assignment (CN80): HRS DF11-14DP-2DS or equivalent

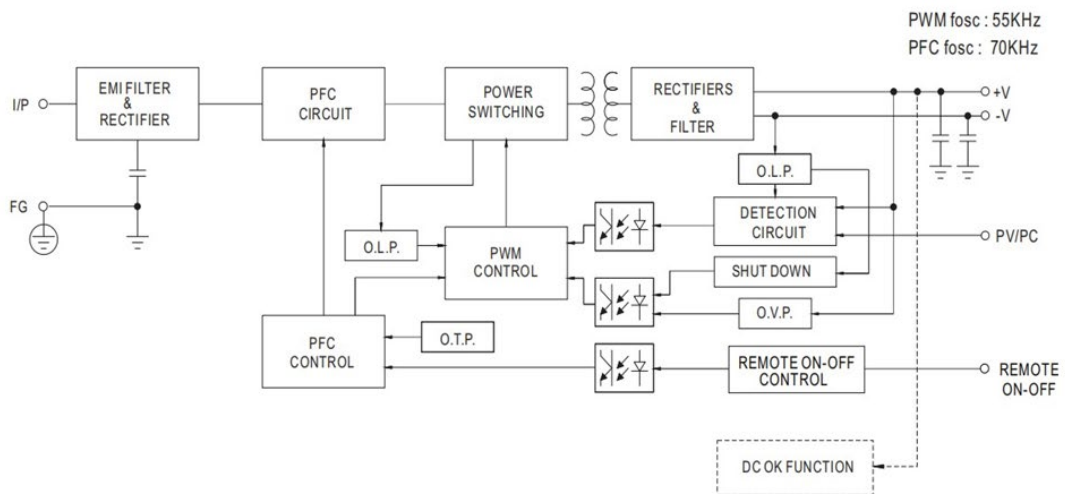


Mating Housing	HRS DF11-14DS or equivalent
Terminal	HRS DF11-14SC or equivalent

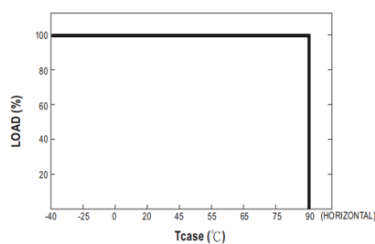
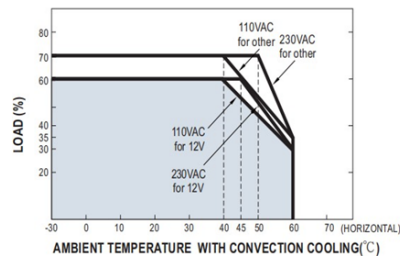
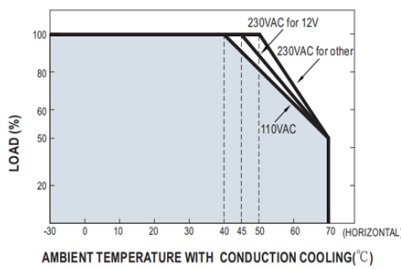
Pin No	Function	Description
1,3	PV	Connection for output voltage programming.
2	PV-DIS	Short connecting between PV (pin 1) and PV-DIS (pin-2) if the output voltage programming function is not activated
4,8,10,12	GND (Signal)	Negative output voltage signal.
5	+12V-AUX	Auxiliary voltage output, 10.8~13.2v, referenced to GND-AUX (pin-6) The max load current is 0.5A. This output is not controlled by "Remote ON-OFF "

6	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V)
7	Remote ON OFF	The unit can turn output ON/OFF by electrical signal or dry contact between Remote ON/OFF. Short (0~0.5V): Power ON: Open (2~5V): Power OFF: The maximum input voltage is 5.5V.
9	DC-OK	Low (-0.1~0.5V): When the $V_{out} \leq 80\% \pm 5\%$ High (4.5~5.5V): When $V_{out} \geq 80\% \pm 5\%$ The max sink current is 10mA and only for output
11	PC	Connection for constant current-level programming.
13	Vccs	Positive output voltage signal.
14	PC-DIS	Short connecting between Vccs (pin 13) and PC-DIS (pin 14) if output current programming function is not activated

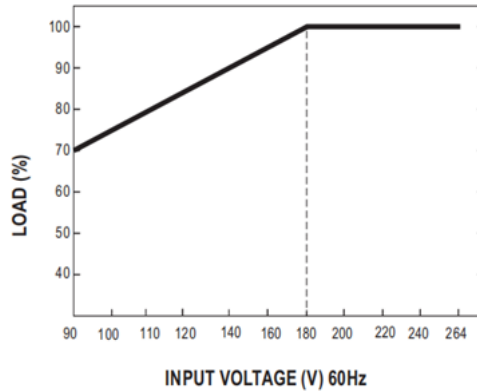
Block Diagram



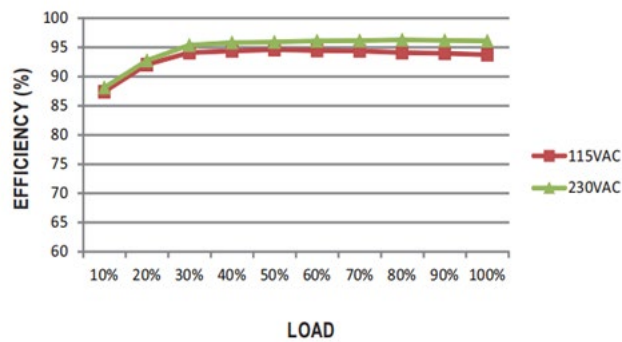
Derating Curves



Minus output and input voltage curves

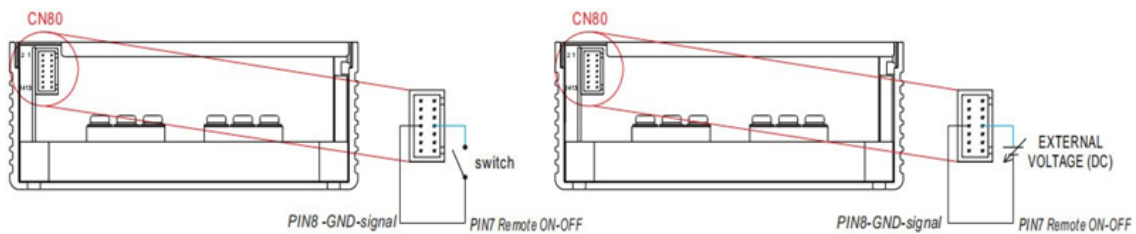


Efficiency vs Load



Remote ON-OFF Control

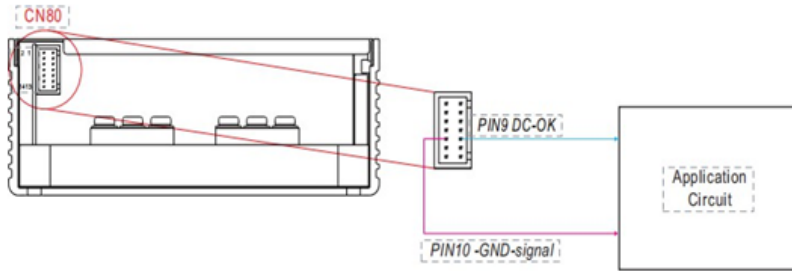
The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
"Low" <0-0.5V or Short circuit	ON
"Hi" >2-5V or Open circuit	OFF

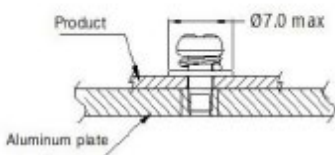
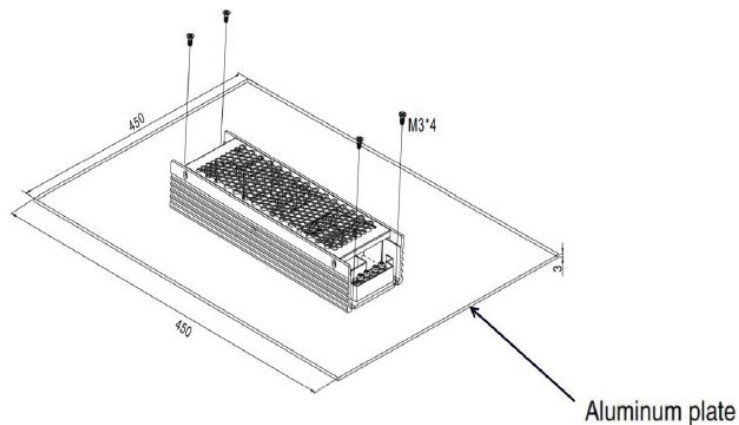
DC OK Relay Contract

DC-OK signal is a TTL level signal. The maximum sink current is 10mA and the maximum external voltage is 5.6V.



DC-OK signal	Power Supply Status
"Hi" >4.5~5.5V	ON
"Low" <0.1~0.5V	OFF

Installation Diagram



Position	Screw Spec.	Torque(max)
① - ④	M3	0.4N • m

Note:

- Operate with an additional aluminium plate
To meet the "Derating Curve" and the "Static Characteristics", the 56YEF series must be installed onto an aluminium plate (or a cabinet of the same size) on the bottom. The size of the suggested aluminium plate is shown below. For optimising thermal performance, the aluminium plate must have an even and smooth surface (or be coated with thermal grease), and the 56YEF series must be firmly mounted at the centre of the aluminium plate.
- It is suggested to install the product with M3 combination screws, and the product must be firmly installed at the centre of the aluminium plate.