

Features

- Three-phase input 340~550V AC or 480~780V DC
- Operating Temperature Range: -30°C~+70°C
- Built-in Passive PFC Function
- High-Efficiency up to 93%
- DC OK Relay Contact
- Safety Standards to IEC/EN/UL 62368-1
- Output SCP, OCP, OVP, OTP
- Single output 24~48V DC



Ideal Power's 56YSDT480-xy 480W DIN Rail Mount AC/DC Power Supply Converter Series are certified to UKCA, CE, cULus & UL 61010-1/EN 62368-1/BS EN 62368-1 Standards and comply with (EU) 2019/1782, Level VI Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request.

Models

Model Number*	Output Power (W)	Output Voltage (V DC)	Rated Current (A)	Output Voltage Adjustable Range (V)	Efficiency at 230V AC (%) Typ
56YSDT480-24020000-RS	480	24	20	24-28	92.5
56YSDT480-48010000-RS		48	10	48-55	93

Input Specifications

Conditions			Min	Typ	Max	Unit
Input Voltage Range	Three Phase	AC input	340	--	550	VAC
	Dual phase operation possible	DC input	480	--	780	VDC
Frequency Range			47	--	63	Hz
Power Factor	400V AC at full load		--	≥0.9	--	--
	500V AC at full load		--	≥0.88	--	--
AC Current	400V AC at full load		--	0.85	--	A
	500V AC at full load		--	0.7	--	A
Inrush Current	Cold start		--	50	--	A
Leakage Current	530V AC		--	<3.5	--	mA

Output Specifications

Conditions		Min	Typ	Max	Unit
Ripple & Noise		--		150	mVp-p
Voltage Tolerance		--	±1.0	--	%
Line Regulation		--	±0.5	--	
Load Regulation		--	±1.0	--	
Set up, Rise Time		1200ms, 60ms/400V AC at full load			
		800ms, 60mx/500V AC at full load			
Hold up Time		20ms/400V AC at full load			
		20ms/500V AC at full load			

Protection

Overload Protection	>105%-130% rated output power: Protection type: constant current limiting, unit will hiccup after 3 sec, re-power on to recover
Over Temperature	Shut down o/p voltage, recovers automatically after temperature goes down
Over Voltage Protection	29~33V - 56YSDT480-24020000-RS 56~65V - 56YSDT480-48010000-RS Protection type : Shut down o/p voltage, re-power on to recover

Environmental Characteristics

Item	Operating Conditions
Operating Temperature Range	-30°C to 70°C
Operating Humidity	20% ~ 95% RH non-condensing
Storage Temperature Range	-40°C to 85°C
Storage Humidity	10% ~ 95% RH non-condensing
Temp Coefficient	± 0.03%/°C (0~50°C)
Vibration	Component: 10~500Hz, 2G 10min/1cycle, 60min each along x, y, z axes. Mounting: Compliance to IEC 60068-2-6
MTBF	100000 hrs min, Telcordia SR-332 (Bellcore)

Safety & EMC

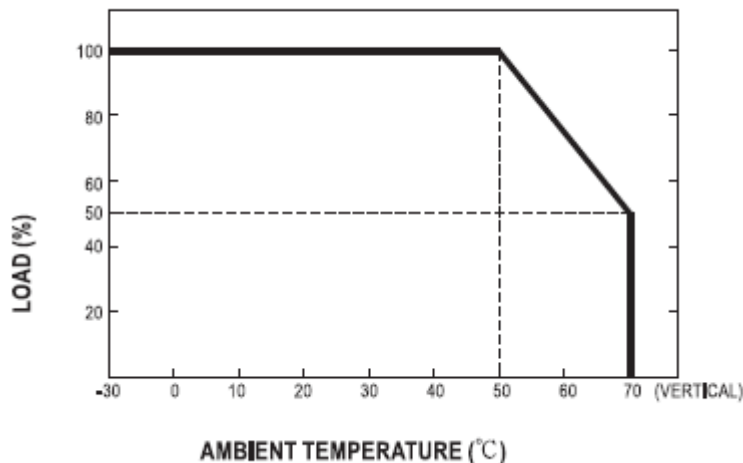
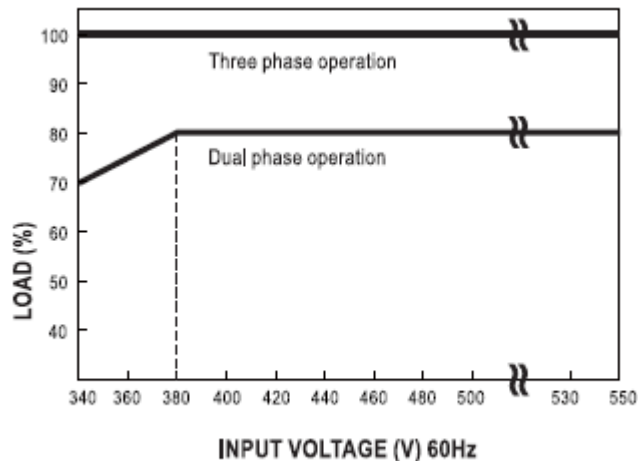
Safety Standards	UL 61010-1, UL 61010-2-201, BS EN/EN 61558-1, BS EN/EN 61558-2-16
Withstand Voltage	I/P-O/P:4.87KVAC I/P-FG:2.4KVAC O/P-FG:0.5KVAC O/P-DC OK:0.5KVAC
Isolation Resistance	I/P=O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25 / 70%RH
EMC Emissions	BS EN/EN 55032(CISPR32)
EMC Immunity	BS EN/EN 61000-4-2,3,4,5,6,8

Mechanical Specifications

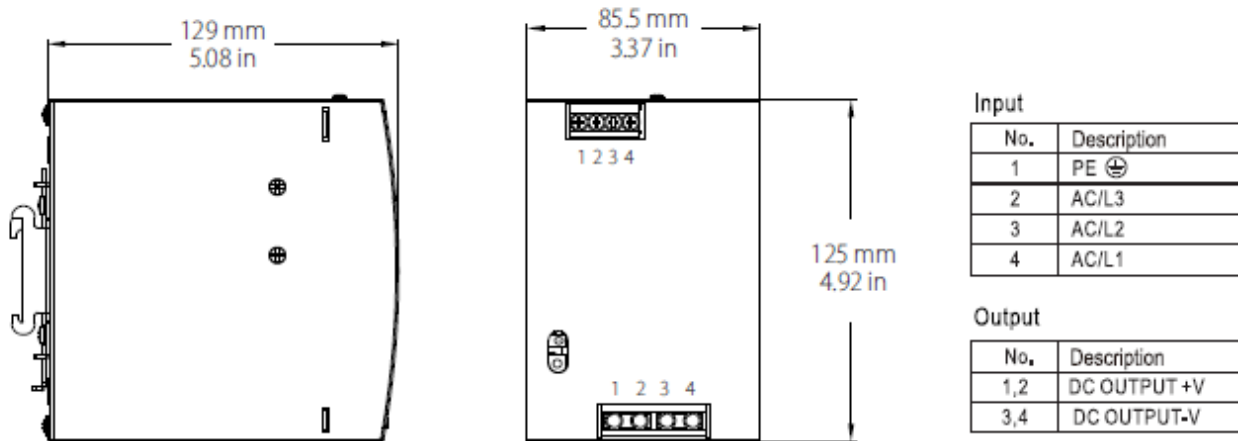
Dimension	85.5 x 129 x 125mm (L x W x H)
Weight	1.51kg (Typ.)

Note:

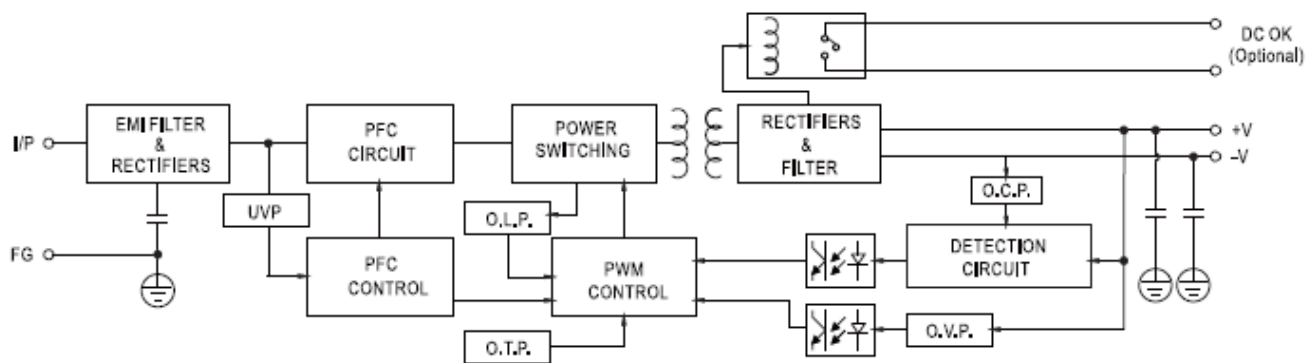
1. All parameters NOT specially mentioned at 400V AC input rated load and 25°C of ambient temperature.
2. Ripple & Noise are measured at 20MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Installation clearances, top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is a heat source.
4. The ambient temperature derating of 3.5°C/1000m for operating altitude higher than 2000m(6500ft)
5. The power supply is considered a component with 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 the EMC tests, please refer to EMC testing of component power supplies.

Derating Curve

Output Derating VS Input Voltage


Dimensions and Recommended Layout



Block Diagram



DC OK Relay Contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load.

Control Pin: DINKLE ECH250R-02P or equivalent (CN25)

Pin No.	Assignment	Mating Housing	Wire Diameter
1,2	DC OK Relay Contact	Dinkle ESC250V-02P or equivalent (Including in the package)	0.081~0.517mm ² (20~28AWG)

