

AC/DC POWER SUPPLY- 480W

THREE PHASE DIN RAIL MOUNTING TYPE



Power Supplies

5331x SERIES



MAIN FEATURES:

- 480W Slim Size - 85.5mm width
- Built-in Active PFC Function
- Regulated Output Range: 24VDC~48VDC
- Input Range: Three-phase 340VAC – 550VAC wide range input
- Optional DC OK Relay Contact
- High Energetic Efficiency: Meets the requirements of Energy Star and EC Code of Conduct
- Operating Altitude: 5000 meters
- Safety : Meets All Requirments of UL61010-1, UL61010-2-201, EN/IEC61558-1, EN/IEC61558-2-16, IEC/EN62368-1, UL62368-1, CSA22.2NO.62368-1-14, CE, UKCA
- EMC Emission : conform to EN55032(CISPR 32), EN61204-3, EN/IEC61000-3-2 Class C, EN61000-3-3
- EMC Immunity: conform to EN61000-4-2, EN/IEC61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11
- Over Voltage Category : OVCIII @ IEC/EN61558-1

DATA SHEET



Part No.	Power Rating Watts	Output Voltage (VDC)	Rated Output Current (A)	Output Voltage Range-ADJ(Vdc)	Ambient Temp. (°C)	Efficiency Typical	Input Range
53313	480	24	20	24 ~ 28	-30°C ~ +70°C	92.5%	Three-Phase 340 ~ 550VAC Or (480-780VDC)
53314	480	36	13.3	36 ~ 42	-30°C ~ +70°C	92.5%	
53315	480	48	10	48 ~ 55	-30°C ~ +70°C	93%	

NOTE : Other output voltage are available upon request.

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Model : 480 Watt		Specifications
AC Input Characteristics	Rated Input Voltage	Three-phase 380~500VAC or 540VDC-710VDC (Dual phase operation possible in connecting L1,L3,FG or L2,L3,FG)
	Input Voltage Range	Three-phase 340~550VAC or 480VDC-780VDC (Dual phase operation possible in connecting L1,L3,FG or L2,L3,FG)
	AC Input Frequency Range	47Hz~63Hz
	Rated AC Input Frequency	50/60Hz
	Input Current	1.0A Max.
	Input Inrush Current	50A (Typ.) cold start
	Power Factor	>0.9@400Vac input at full load >0.88@500Vac input at full load
	Leakage Current	< 3.5mA/530VAC
DC Output Characteristics	Output Voltage Accuracy	±2% (Output Voltage ADJ Range See table)
	Output Voltage Line Regulation	± 0.5%
	Output Voltage Load Regulation	± 1%
	Ripple & Noise	Max. 150mVp-p@ Rated AC input, at nominal line (The measuring will be terminated with a 47μF AL E-Cap and a 0.1μF Ceramic-Cap. An oscilloscope set at 20MHz bandwidth)
	Dynamic Response	The output voltage shall not exceed ± 10% rated output voltage @ 50% ~ 90 % Load change, 1A/μS, 1KHz 50% duty cycle
	Hold Up Time	20mS typ.@ 400VAC, 40mS typ.@500Vac at full load
	Turn On Delay	2S max. @ 340VAC~550VAC input and DC output with full load
	Rise Time	60ms max. @ 400VAC , 60ms max.@500Vac at full load
	Overshoot	The output voltage shall not exceed +10% rated output voltage @ Power on and 340VAC~550VAC input, and DC with full load
	Undershoot	The output voltage shall not exceed -10% rated output voltage @ Power off and 340VAC~550VAC input and DC output with full load

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	Efficiency	See table (Meets the requirements of Energy Star and the EC Code of Conduct)
Protection Characteristics	Over Current Protection	The power supply shall automatic protection @ 105% ~160% rated output power. Protection type : Constant current limiting, unit will shut down after 3 sec. ,re-power on to recover. No excessive heat, odour, no safety hazard
	Output Short Circuit Protection	The power supply shall withstand a continuous output short without damage in 24 hours; The short may be applied before power on, or after power on; The power supply shall resume normal operation after the short is removed, no excessive heat, odour ,no safety hazard.
	Over temperature protection	The power supply is built thermal protection function and can be shut down(hiccup mode) when NTC thermistor's body temperature reach approx.110°C@ power supply operating ambient temperature approx.+80°C ±10°C @ at the DC output with full load. The power supply shall auto-recovery normal operation,it is subject to the shut-down is long enough to allow the thermal detection is down to auto reset.
	Over voltage protection	Protection type: shut down output voltage and re-power on to recover.
DC OK Function	DC OK Relay Contact Ratings	Optional (60Vdc/0.3A,30Vdc/1A,30Vac/0.5A resistive load)
Environmental	Operation Temperature	-30°C~+70°C (Refer to« DERATING GRAPH »)
	Operation Humidity	20~95% RH (No Condensing) @ full load
	Storage Temperature	-40°C~ +85°C (Recommended +5°C~ +35°C)
	Storage Humidity	10%~95% (Recommended <75%RH)
	Cooling Method	Ordinary or thermostat
	Operation Altitude	5000 meters The ambient temperature derating of 3.5 /1000m is needed for operating altitude higher than 2000m(6500ft)
Safety & EMC Requirement	Dielectric Strength	Input to Output : 3000VAC 5mA, 3 sec. Input to FG: 2000VAC 10mA, 3 sec. Output to FG: 500VAC 10mA, 3 sec Output to DC OK: 500VAC 10mA, 3 sec
	Insulation Resistance	100MΩ max @500Vdc/25°C /70% RH
	Radiation	Meets EN55032(CISPR32), EN/IEC61204-3, Class B. under 3dB margin

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Safety & EMC Requirements	Conduction	Meets EN55032(CISPR32), EN/IEC61204-3, Class B. under 3dB margin
	Harmonic Current Distance	Meets EN/IEC61000-3-2, Class C
	Voltage Fluctuation and Flicker	Meets EN61000-3-3
	Electrostatic Discharge	Meets EN61000-4-2 Contact Discharge $\pm 8\text{KV}$, Air Discharges $\pm 15\text{KV}$
	RF Field Strength Susceptibility	Meets EN/IEC61000-4-3
	Electrical Fast Transient	Meets EN61000-4-4, $\pm 4\text{KV}$
	Lightning Surge	Meets EN61000-4-5, $\pm 4\text{KV}$ common mode, $\pm 2\text{KV}$ diff.mode
	Conducted Susceptibility	Meets EN61000-4-6
	Power Frequency Magnetic Field Susceptibility Test	Meeting EN61000-4-8
	Voltage Dips and interruptions	Meets EN61000-4-11 > 95% dip 0.5 periods, 30% dip 25 periods 95% interruptions 250 periods
	Safety Standards	Meets all requirements of : UL61010-1, UL61010-2-201, UL62368-1, CSA22.2No.62368-1-14 IEC/EN62368-1 IEC/EN61558-1 IEC/EN61558-2-16 CE, UKCA
Reliability Requirement	MTBF	>150K Hours @400VAC input at +25deg.C Calculated in accordance with MIL-HDBK-217-F2
	Burn-in-Test	The unit shall be burned in 2~5hours and DC with full load at and ambient temperature of 30~45 degrees C
Mechanical	Physical size	The units dimension is : (L)125.2*(W)128.5*(H)85.5mm ($\pm 1\text{mm}$) (see appearance drawing)
	Net Weight	Approximately 1500 grams per product unit
Guarantee	This product is in accordance with the European RoHS & REACH directives	

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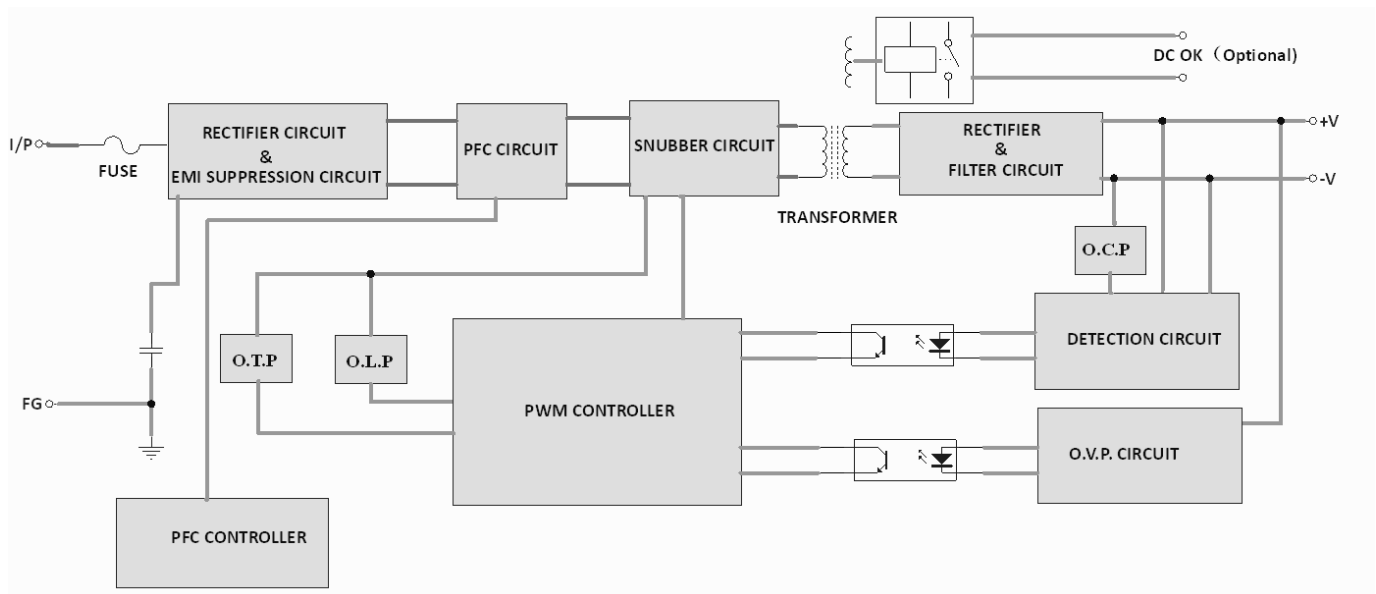
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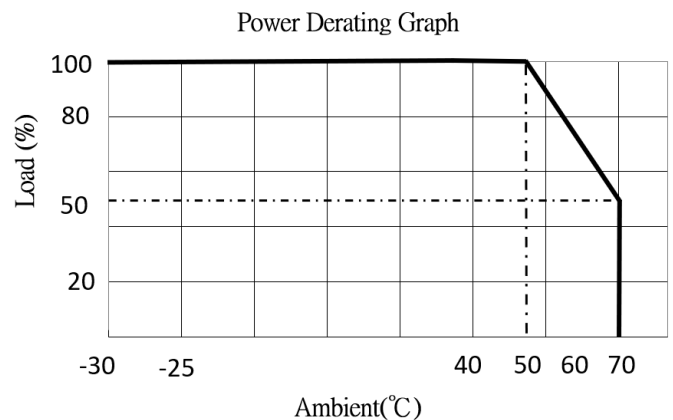
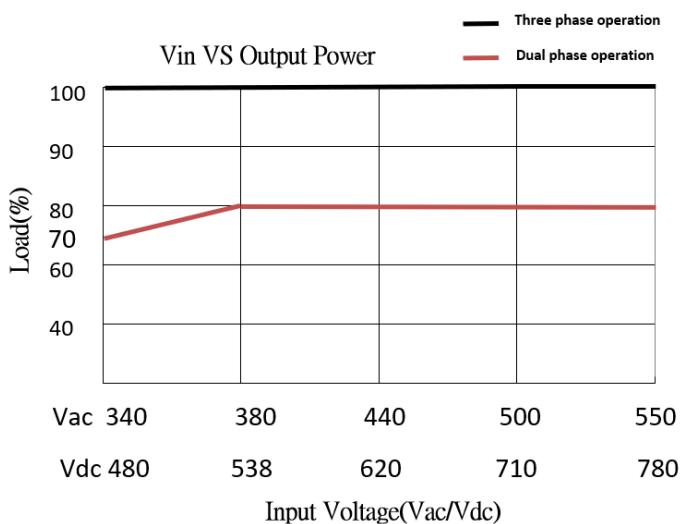


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BLOCK DIAGRAM



DERATING GRAPH



Note:

When the dual phase input voltage is between 340 to 380Vac and ambient temperature is between -10°C to -30°C, the power supply may experience hiccup at cold start; the power supply will start up normally after 5~10 seconds.

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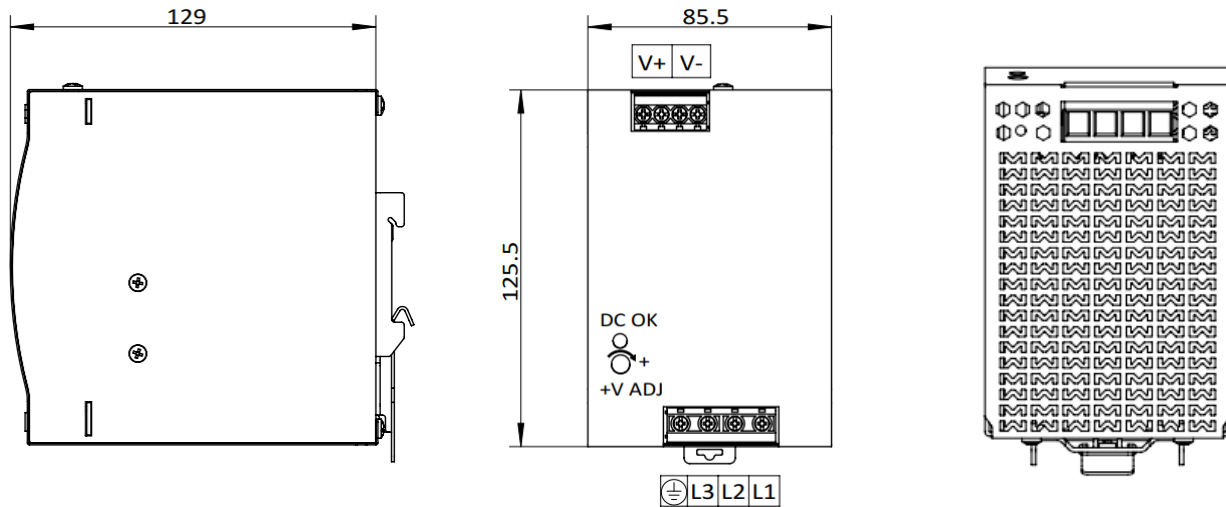
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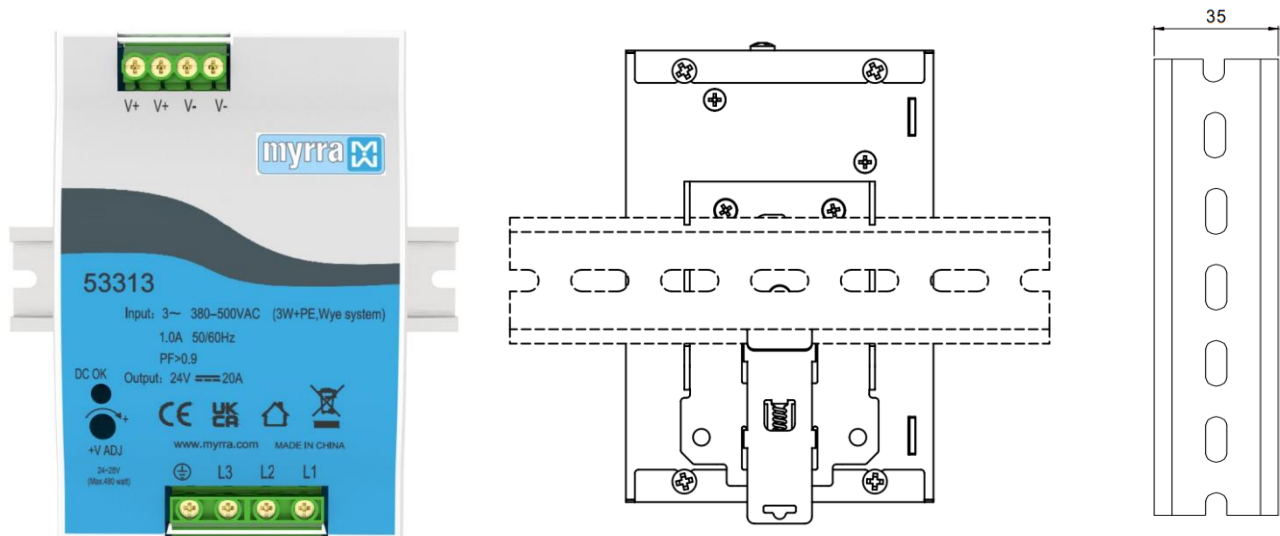


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DIMENSIONS



INSTALLATION INSTRUCTION



Admissible Din-Rail: TS35/7.5 or TS35/15, For reference only, not included with unit.

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