LinkPower LPS-SDR-480-48

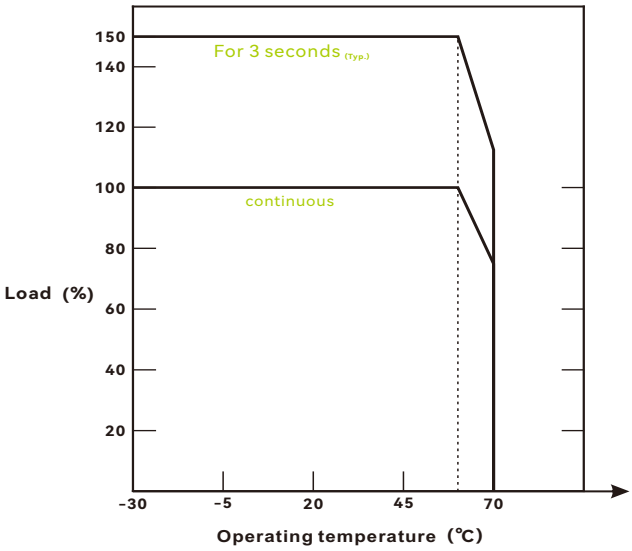
The LinkPower LPS-SDR-480-48 is a compact DIN-rail power supply delivering 48 VDC at 10A for a continuous rated output of 480W. Its 720W peak-power capability supports short-duration load demands for up to 3 seconds. A wide 90-264 VAC input range, 93% typical efficiency and adjustable 48-55 VDC output provide flexibility for compatible DC-powered equipment. Built-in overload, overvoltage, short-circuit and overtemperature protection help safeguard the power supply, while DC OK relay contacts provide an output-status signal for system monitoring. Parallel operation supports up to eight units when installed and configured according to the specified current-sharing requirements. The unit mounts on TS35/7.5 or TS35/15 DIN rail and measures 126.6 x 111.0 x 88.2 mm (H x D x W). Its operating temperature range is -25 to +70 degrees C, with output capacity subject to the published load, input-voltage and temperature derating curves.



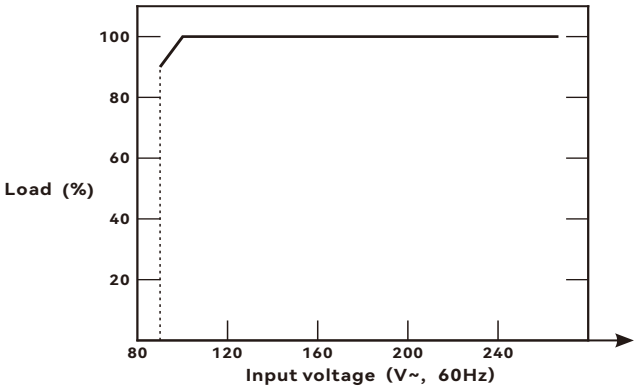
LPS-SDR-480-48 Electrical Specifications

Model category		LPS-SDR-480-48
Output	DC voltage	48V
	Rated current	10.0A
	Peak current	480.0W
	Rated power	15A
	Peak power	720.0W (3 seconds)
	Ripple and Noise (maximum)	480mV$_{P-P}$
	Voltage adjustment range	48.0-55.0V
	Voltage accuracy	±1%
	Linear regulation	±0.5%
	Load regulation	±1%
	Start-up, rise time	1500ms, 60ms/230V~ 3000ms, 60ms/115V~ (full load)
	Hold time (Typ.)	14ms/230V~ 14ms/115V~ (full load)
Input	Voltage range	90-264V~
	Frequency range	47-63Hz (50/60Hz)
	Power Factor (Typ.)	0.93/230V~ 0.99/115V~ (full load)
	Efficiency (Typ.)	93%
	Alternating current	5.0A/115V~ 2.5A/230V~
	Inrush current	Cold start 40A/115V~ 80A/230V~
	leakage current	<1mA/240V~
Protect	Overload	When the rated output power is 110%~150%, the output voltage will be turned off after more than 3 seconds of normal operation and can be automatically restored
		When >150% of the rated output power, the constant current is limited within 2 seconds and automatically recovered, and the output voltage may be turned off after 2 seconds.
	Overvoltage	56.0-65.0V
		Protection mode: shut down the output voltage and recover automatically
	Short circuit	Hiccup mode, power restarts automatically
	Overheat	Detect the radiator of the power switch, turn off the output when the temperature reaches 100℃ over-temperature point, and automatically restore when the temperature drops to 75℃
Function	DC OK relay contacts	60VDC/0.3A、30VDC/1.0A、30VAC/0.5A resistive load
Environment	Operating temperature	-25℃-+70℃
	Working humidity	20%-95%RH, non-condensing
	Storage temperature, humidity	-40℃-+85℃, 10%-95%RH, non-condensing
	Temperature coefficient	±0.03%/℃ (0℃-50℃)
	Vibration resistance	10~500Hz, 2G 10 minutes/period, X, Y, Z each 60 minutes; installation: conform to IEC60068-2-6
Safety Electromagnetic Compatibility	Safety regulations	Design reference 4943、UL508、EN62368
	Withstand voltage	I/P-O/P: 3KVAC、I/P-FG: 2KVAC、O/P-FG: 0.5KVAC、O/P-DC OK: 0.5KVAC
	Insulation resistance	I/P-O/P、I/P-FG、O/P-FG: >100M Ohms/500VDC/25℃/70%RH
	EMC launch	BS EN/EN55032、BS EN/EN61000-3-2、BS EN/EN61000-3-3
	EMC Immunity	BS EN/EN61000-6-2
Other	MTBF	100,000 hours (min) MIL-HDBK-217F (25℃) MIL-HDBK-217F (25℃)
	Dimensions	Height (H)* Depth (D)* Width (W) : 126.6*111.0*88.2mm
	Applicable guide rail	TS35/7.5 or TS35/15 DIN rail
Remark	1. Unless otherwise specified, all specifications are measured at an input of 230V~, rated load, and an ambient temperature of 25℃. 2. Ripple and noise measurement method: use a 12" twisted pair, and connect 0.1uF and 47uF capacitors in parallel at the terminal, and measure at a bandwidth of 20MHz. 3. Error: including setting error, linear adjustment rate and load adjustment rate . 4. The power supply is regarded as an independent component, but the final power supply still needs to be confirmed in conjunction with the terminal equipment for electromagnetic compatibility. 5. Installation distance: when the full power is permanently loaded, the recommended top distance is 40mm, the bottom distance is 20mm, and the distance between the left and right sides is 5mm. If the adjacent equipment is a heat source, the recommended space distance is 15mm. 6. The peak power lasts up to 3 seconds, and the average output power cannot exceed the rated power. 7. The actual output refers to the static characteristic curve (load-input voltage) and derating curve (load-ambient temperature). 8. When the altitude exceeds 2000 meters, the ambient temperature of the model will rise at 3.5℃/1000 meters.	

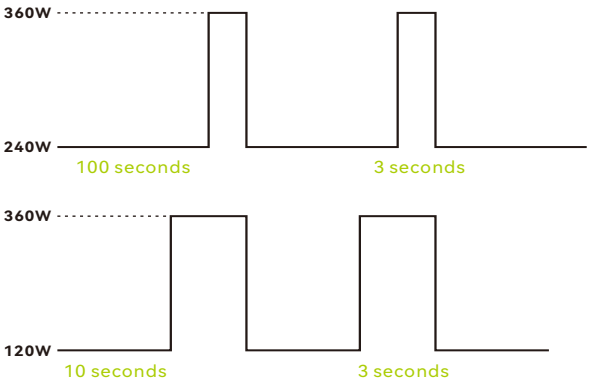
Derating curve



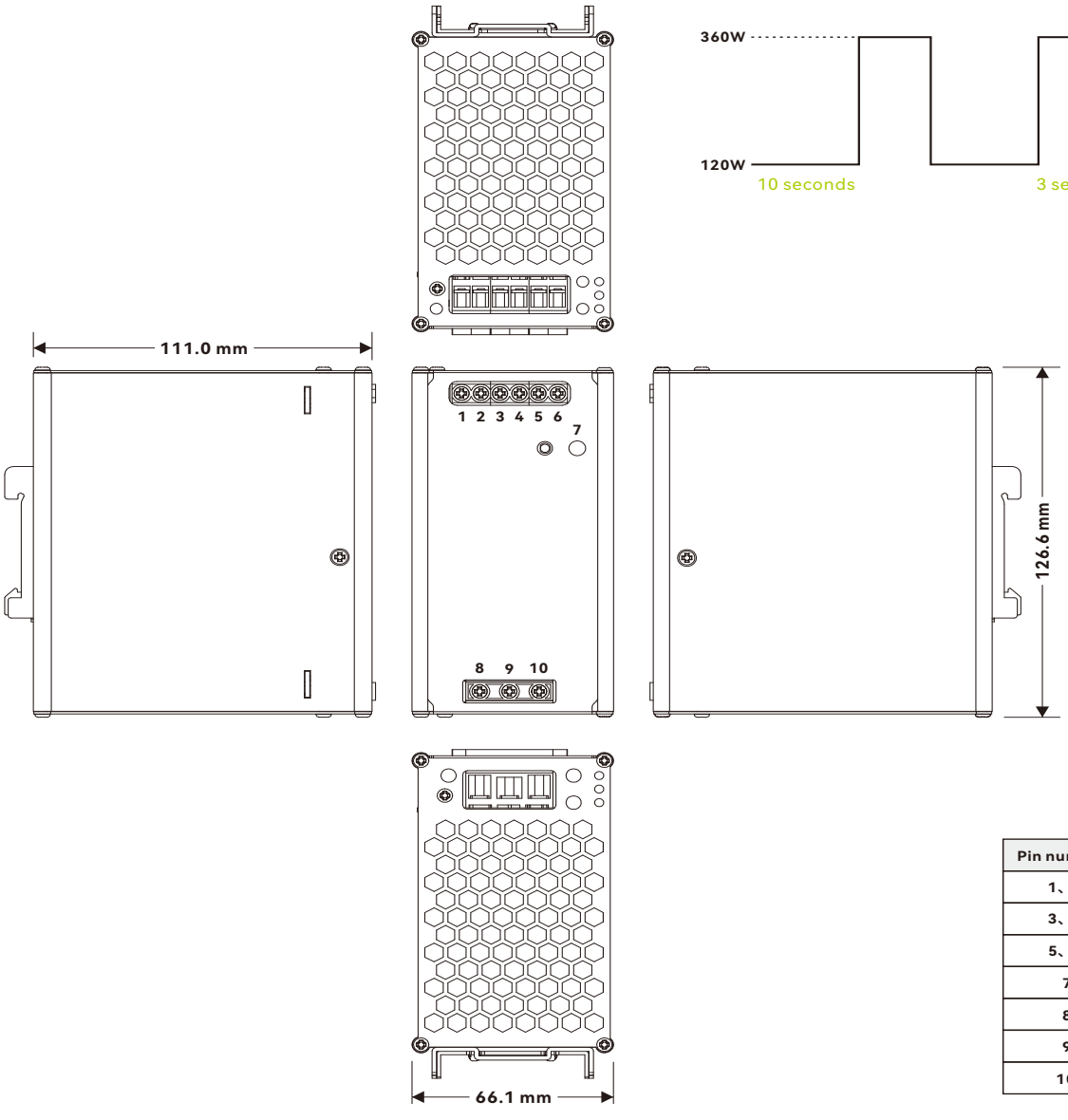
Static characteristic curve



Peak load curve

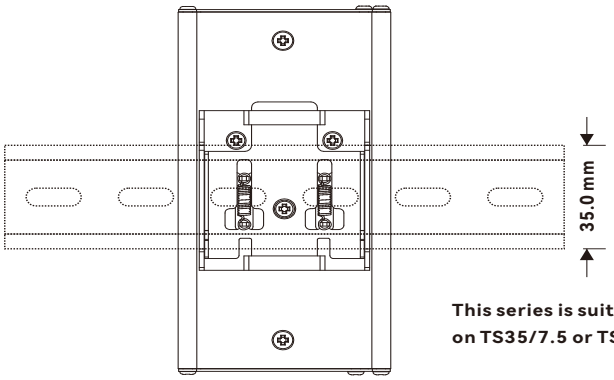


Power structure size



Pin number	Pin function
1、2	DC OK: relay contact
3、4	+V: DC output positive pole
5、6	-V: DC output negative pole
7	+V ADJ: DC output voltage regulation
8	⏚ FG ground terminal
9	N: AC/mains neutral line
10	L: AC/mains live wire

Power Supply Installation Reference



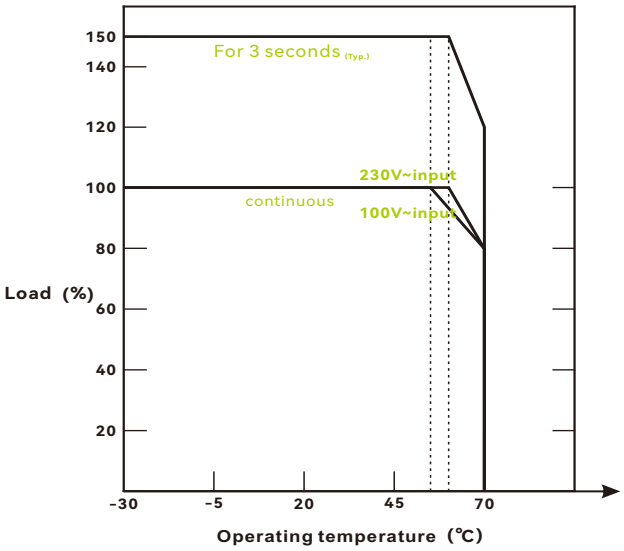
This series is suitable for installation on TS35/7.5 or TS35/15 DIN rail.

DC OK relay triggers

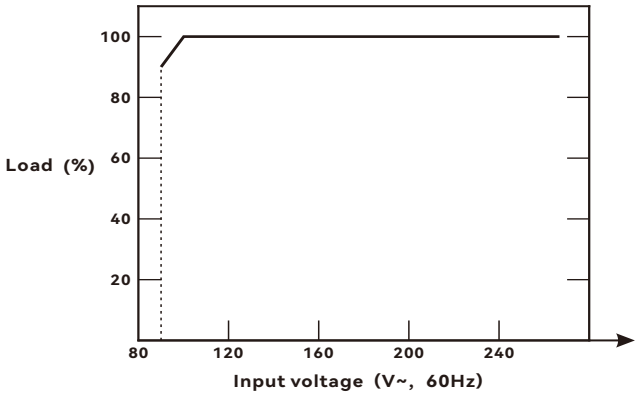
contact closed	Power On/DC OK
contact open	Power Shutdown/DC Fail
contacts (max.)	30V1A resistive load



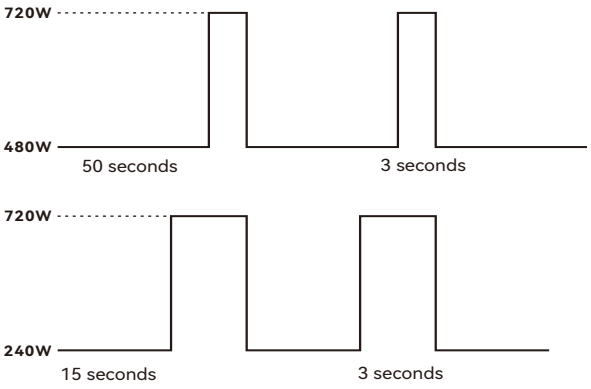
Derating curve



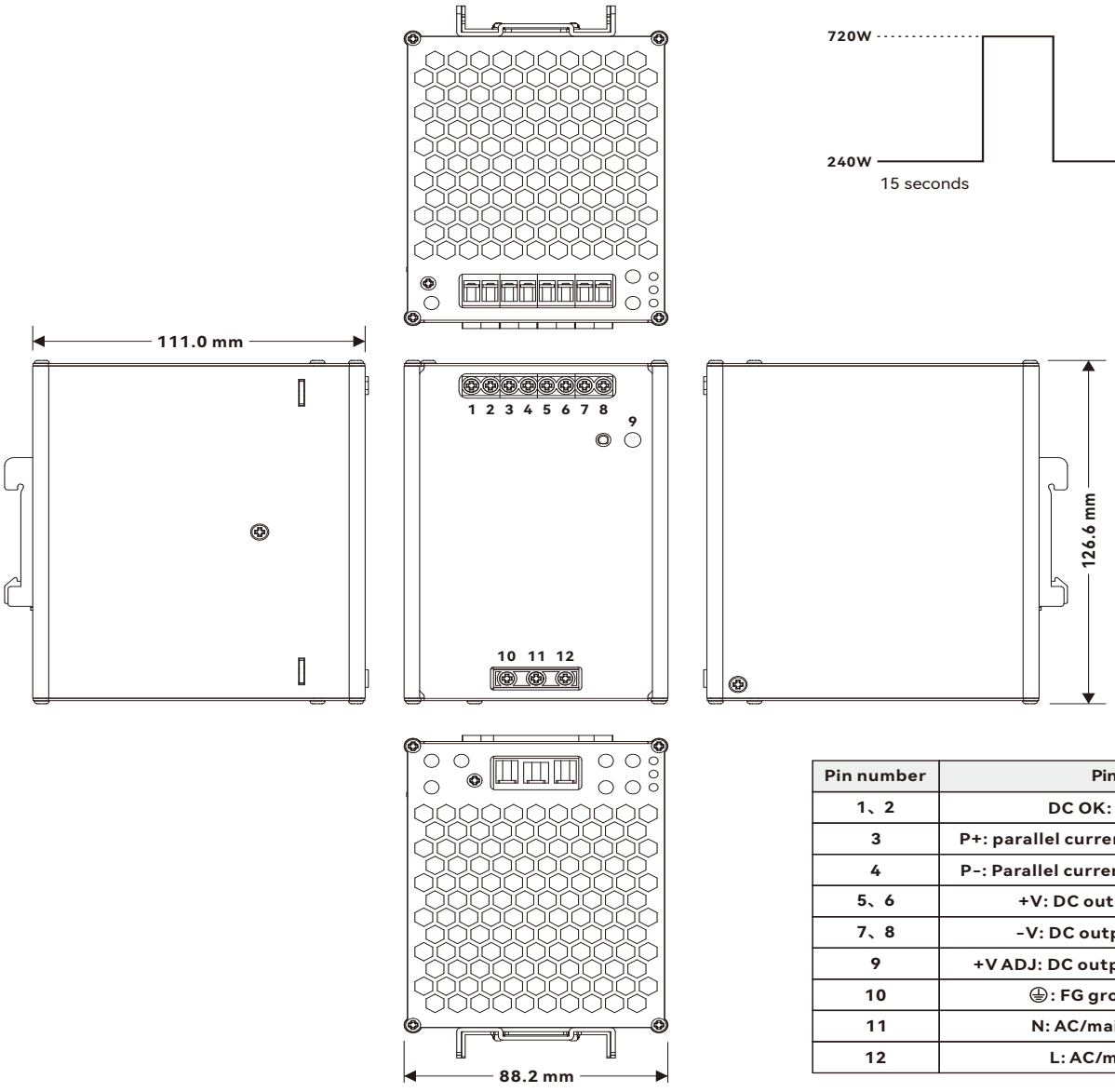
Static characteristic curve



Peak load curve

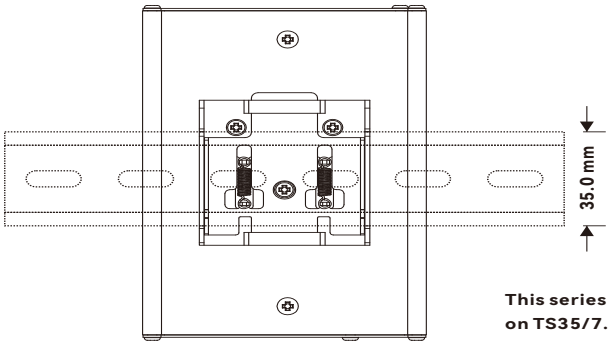


Power structure size



Pin number	Pin function
1、2	DC OK: relay contact
3	P+: parallel current sharing output mode
4	P-: Parallel current sharing output mode
5、6	+V: DC output positive pole
7、8	-V: DC output negative pole
9	+V ADJ: DC output voltage regulation
10	⏚: FG ground terminal
11	N: AC/mains neutral wire
12	L: AC/mains live wire

Power Supply Installation Reference



This series is suitable for installation on TS35/7.5 or TS35/15 DIN rail

Power supply in parallel current sharing output

Parallel current sharing: multiple power supplies of the same specification are used in parallel to achieve the purpose of expanding output current and output power, and make up for the problem that the output current and power of a single power supply do not meet the actual power supply requirements.

1. **The wiring mode of parallel operation is as follows, the wiring mode of SDR-480-24 and LPS-SDR-480-48 is the same: P+P parallel connection**
2. **The output voltage difference between each parallel unit should be less than 0.2V.**
3. **The total output current cannot exceed the calculated value of the equation: output current in parallel connection = rated current of each group × number of groups×0.9.**
4. **The LPS-SDR-480-48 supports up to 8 groups in parallel.**
5. **The power supply should be connected to the load with thick and short parallel cables.**
6. **When operating in parallel, the minimum output load should be greater than 3% of the total output load, and the minimum load should be > 3% of the rated current of each group × the number of groups**



DC OK relay triggers

DC OK relay triggers	Power On/DC OK
contact open	Power Shutdown/DC Fail
contacts (max.)	30V1A resistive load



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