TDK·Lambda DRF120-960 Series

120-960W, 24V Output DIN Rail Mount Power Supplies

Features

- Very Compact Size
- High Efficiency (Up to 95%)
- 150% Peak Power Capability for 4s
- ErP Compliant Design
- Low Standby Power Draw
- Remote On/Off
- Remote Voltage Adjustment
- Hazardous Location Option (/HL)

Key Market Segments & Applications

Industrial Test Semi-Fab

RoHS

Specifications

Model		DRF120	DRF240	DRF480	DRF960
Input Voltage Range (1)	V	85 - 264VAC, 125 - 370VDC*			180 - 264VAC
Input Frequency	Hz	47 - 63Hz			
Inrush Current (typ) (Cold Start)	A	20			
Power Factor (115/230VAC) (Meets EN61000-3-2)	-	0.98 / 0.95	0.98 / 0.95	0.98 / 0.92	- / 0.98
Input Current (115/230VAC)	A	1.2 / 0.6	2.4 / 1.2	4.7 / 2.5	- / 4.5
Line Regulation	mV	<96mV			
Load Regulation	mV	<240mV			
Ripple & Noise (2)	mV	<240mV			
Overcurrent Protection	-	>101% of peak current rating. Shutdown after 4 seconds			
Overvoltage Protection	-	30 - 35.5V, (31.5 - 34V for DRF960). Cycle input voltage or remote on/off to reset			
Hold Up Time (230VAC input)	ms	> 20ms			>10ms
Efficiency (115 / 230VAC)	%	89 / 91	92.5 / 94	92.5 / 94	- / 95
Standby Power Draw	W	<0.5W	<0.5W	<0.75W	<1W
LED Indicators	-	Green LED = DC is OK (>80% Nom). Red LED = Peak Load Operation			
DC OK relay	-	Relay contact 30V/1A			
Remote On / Off	-	When signal is low, the output is On			
Remote Voltage Adjust	-	5 - 6V voltage programs output from 24 - 28V			
Operating Temperature	°C	-25 to +70°C. Start up at -40°C. Derate linearly to 75% load above 60°C (50°C for DRF960)			
Storage Temperature	°C	-40 to +85°C			
Operating Humidity (non condensing)	%RH	5 - 95%RH			
Parallel Operation	-	Droop Mode - Refer to Installation Manual			
Series Operation	-	Possible			
Cooling	-	Convection			
Withstand Voltage (For 1 minute)	VAC	Input to Output 3kVAC, Input to GND 1.5kVAC, Output to GND 500VDC (960W : 500VAC)			
Isolation Resistance	MΩ	>100MΩ at 25°C, 70%RH & 500VDC			
Vibration (Non operating)	-	10-55Hz (sweep for 1 min); 19.6m/s² (2G) Constant; X,Y,Z each 1 hour			
Shock	-	<196m/s²			
Safety Agency Certifications (3)	-	UL508 Listed, IEC/UL/EN60950-1†, CE Mark ATEX, IEC Ex, & GL. Class 1 Div 2, Group A, B, C, D (DRF120-480 only)			
Conducted & Radiated EMI	-	EN55032-B Radiated & Conducted			
Immunity	-	EN61000-4-2 (contact lvl 2, air lvl 3) , -3 (lvl 3), -4 (lvl 3) -5 (norm mode lvl 3, com mode lvl 4), -6 (lvl 3), -8 (lvl 4), -11			
Line Dips	-	SEMI-F47 (200VAC input, 120-480W only)			
Weight (Typ)	g	600	900	1300	1735
Size (WxHxD)	in	1.44 x 4.86 x 4.53	1.93 x 4.86 x 4.53	3.23 x 4.86 x 4.53	4.33 x 4.86 x 5.47
Mounts on TS-35/7.5 or -35/15 rail	mm	36.5 x 123.4 x 115	49 x 123.4 x 115	82 x 123.4 x 115	110 x 123.4 x 139
Case material	-	Metal			
Warranty	yrs	Five years			

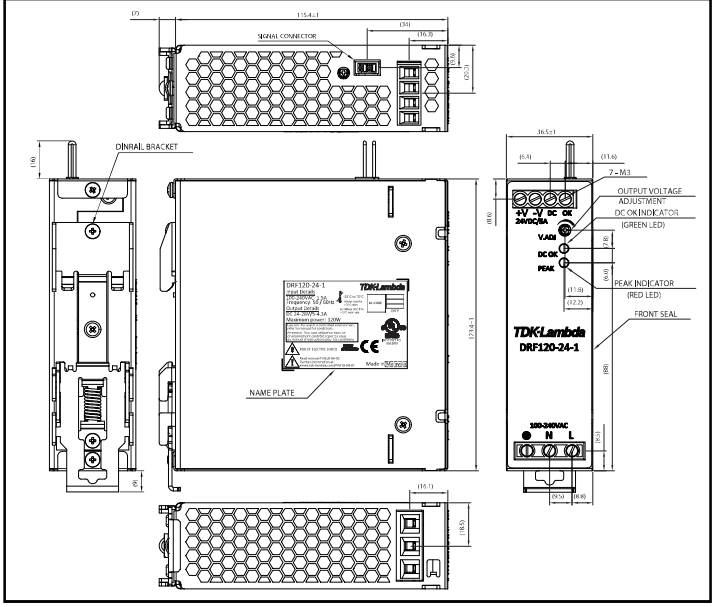
(1) Withstands 300VAC for 5s (2) See installation manual (3) See options table *Safety certified for AC input only
(4) Operating period at peak output current is 4 sec, max duty cycle <35% & < rated output power
† Certification to the IEC62368-1 standard in progress (2019)

DRF120-960 Series

Model Selector

Model	Output Voltage	Adjust Range	Max Current	Max Power	Peak Output Current (4)	Peak Output Power (4)
DRF120-24-1	24V	24 - 28V	5A	120W	7.5A	180W
DRF240-24-1	24V	24 - 28V	10A	240W	15A	360W
DRF480-24-1	24V	24 - 28V	20A	480W	30A	720W
DRF960-24-1	24V	24 - 28V	40A	960W	60A	1440W

Outline DRF120-24-1



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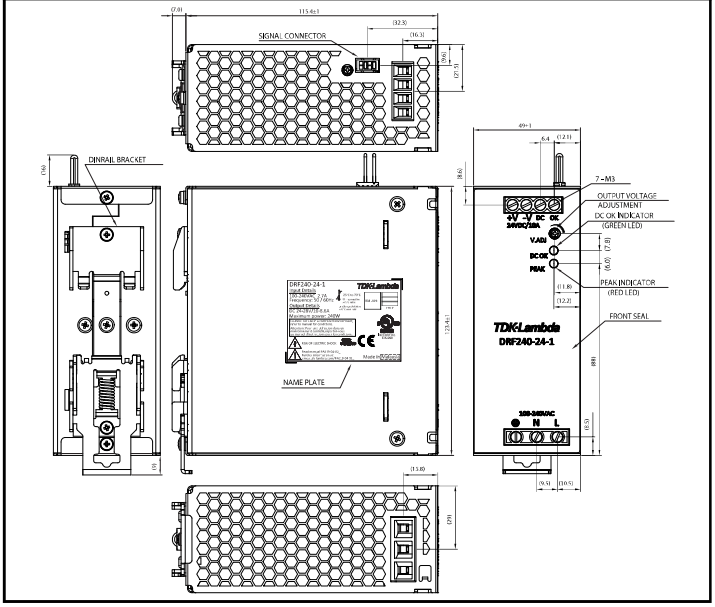

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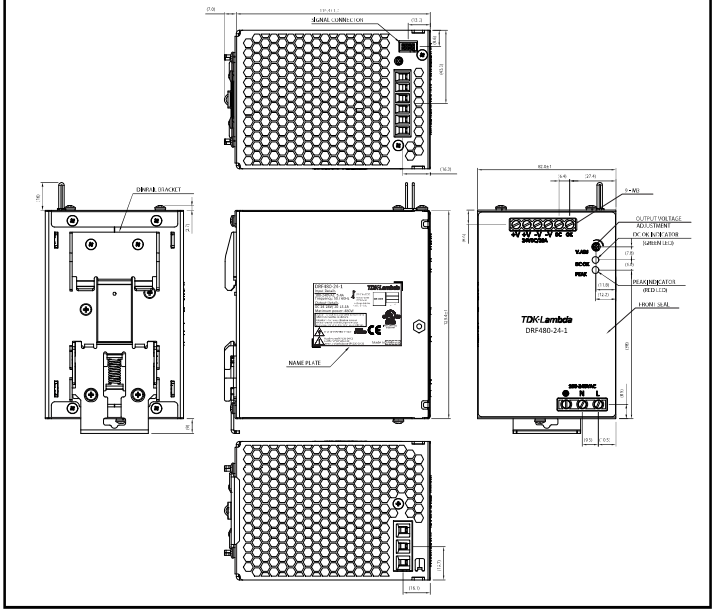

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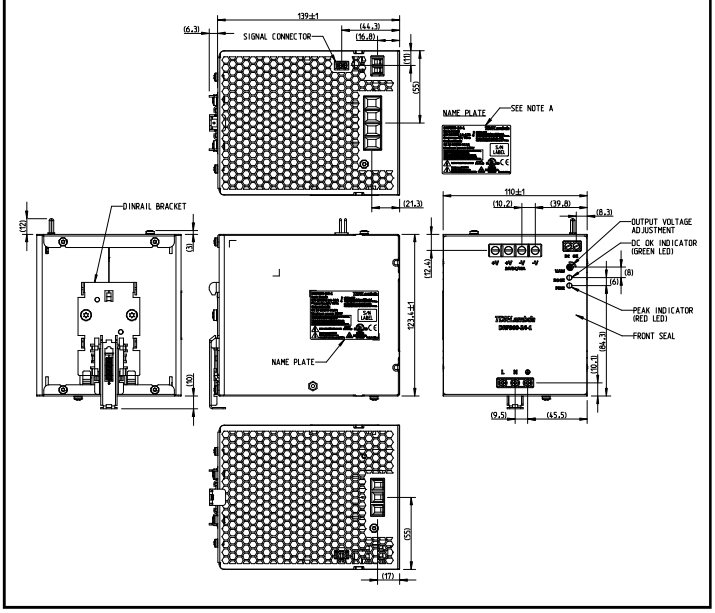

Options

Suffix	Description
/HL (DRF120-480 only)	ATEX, IEC EX, GL Certification (Incl pcb coating)

For Additional Information, please visit
https://product.tdk.com/info/en/products/power/index.html