

10-100W Low Profile DIN Rail Mount Power Supplies

Features

- ◆ Low Profile for Building Automation
- ◆ Class II Double Insulation
- ◆ High Efficiency (Up to 90%)
- ◆ ErP Compliant Design
- ◆ Low No Load Power Consumption
- ◆ Class 2 Models to UL1310
- ◆ SEMI F47 Compliant



Key Market Segments & Applications



Specifications					
Model		DRL10	DRL30	DRL60	DRL100
Input Voltage range	V	85 - 264VAC, 120 - 373VDC* (Withstands 300VAC for 5 seconds)			
Input Frequency	Hz	47 - 63Hz			
Inrush Current at 230VAC (typ) (Cold Start)	A	40A	50A	60A	60A
Power Factor (115/230VAC)		Meets IEC61000-3-2 Class A			
Input Current (110/230VAC)	A	0.56 / 0.42	0.58 / 0.45	0.5 / 0.43	0.5 / 0.47
Line & Load Regulation	-	0.18 / 0.12	0.6 / 0.4	1.2 / 0.8	2.0 / 1.1
Ripple & Noise	-	See model selector			
Overcurrent Protection	-	12 to 15V: 120mV, 24V: 240mV			
Overvoltage Protection	-	>1.05% Hiccup with auto recovery			
Hold Up Time (typ) at 115VAC Input	ms	See model selector. Cycle AC input voltage to reset			
Efficiency	-	20ms	20ms	20ms	15ms
No Load Power Draw	W	See model selector			
LED Indicator	-	<0.3W	<0.3W	<0.5W	<0.5W
Operating Temperature (-25°C start-up)	°C	Green LED indicates DC is OK			
Storage Temperature	-	DRL10, 30, 60: -20 to +71°C, derate linearly to 60% load from 55 to 71°C			
Operating Humidity (non condensing)	%RH	DRL100: -20 to +71°C, derate linearly to 60% load from 51 to 71°C			
Parallel Operation	-	DRL100 (<115VAC): -20 to +71°C, derate linearly to 40% load from 40 to 71°C			
Series operation	-	40 to +85°C			
Cooling	-	5 - 95%RH			
Withstand Voltage (For 1 minute)	VAC	Not available			
Isolation Resistance	MΩ	Possible			
Vibration (Operating)	-	Convection			
Shock	-	Input to Output 3kVAC			
Safety Agency Certifications	-	>100MΩ at 25°C, 70%RH & 500VDC			
Conducted & Radiated EMI	-	IEC 60068-2-6, Sine Wave, 10-500Hz, 19.6m/s ² (2G peak)			
Immunity	-	10 min per cycle, 60 min for all X,Y,Z directions			
Line Dip (200-240VAC)	-	IEC 60068-2-27, Half Sine Wave, 39.2m/s ² (4G) for a duration of 22ms			
Weight (Typ)	g	3 shocks for each 3 directions, 9 times in total			
Size (WxHxD)	in	UL508 Listed, UL/CSA/EN60950-1†, UL1310 Class 2 (1), CE Mark			
Mounts on TS-35/7.5 or -35/15 rail	mm	EN55032-B Conducted, EN55032-A Radiated			
Case material	-	EN61000-4-2 (lvl 3) , -3 (lvl 3), -4 (lvl 4), -5 (lvl 3), -6 (lvl 3), -8 (lvl 4), -11 (class 3)			
Warranty	hrs	SEMI F47 Compliant			
		65	120	200	280
		0.71x3.58x2.19	1.42x3.58x2.19	2.13x3.58x2.19	2.83x3.58x2.19
		18x91x55.6	36x91x55.6	54x91x55.6	72x91x55.6
		Flame Retardant Polycarbonate (UL94 V-0)			
		Three years			

(1) NEC Class 2 in accordance with UL1310. Excludes DRL100-24-1 model

† Certification to the IEC62368-1 standard in progress (2018)

* Safety certified for AC input only

	Output Voltage	Adjust Range	Max Current	Max Power	Load Reg	Line Reg	Overvoltage V	Efficiency (%) (115/230VAC)	UL1310 Class 2
Model	(V)	(V)	(A)	(W)	(mV)	(mV)			
DRL10-12-1	12V	-	0.84A	10.08W	120mV	120mV	13.8 - 16.2V	85 / 85	Yes
DRL30-12-1	12V	12 - 15V	2.1A	25.2W	120mV	120mV	16 - 19V	87 / 88	Yes
DRL60-12-1	12V	12 - 15V	4.5A	54W	120mV	120mV	16 - 19V	87 / 87	Yes
DRL30-15-1	15V	12 - 15V	1.68A	25.2W	120mV	120mV	16 - 19V	87 / 88	Yes
DRL60-15-1	15V	12 - 15V	3.6A	54W	120mV	120mV	16 - 19V	87 / 87	Yes
DRL10-24-1	24V	-	0.42A	10W	240mV	240mV	29 - 35V	87 / 87	Yes
DRL30-24-1	24V	24 - 28V	1.25A	30W	240mV	240mV	29 - 35V	88 / 90	Yes
DRL60-24-1	24V	24 - 28V	2.5A	60W	240mV	240mV	29 - 35V	89 / 90	Yes
DRL100-24-1	24V	24 - 28V	4.2A	100.8W	240mV	240mV	29 - 35V	88 / 90	-
DRL100-24-1/C2	24V	-	3.67A	88W	240mV	240mV	26 - 30V	88 / 90	Yes

[illegible]

Figure 1: Dimensions of the TDK-Lambda 2K12-241. The figure includes three views: a top view, a side view, and a front view. The top view shows a rectangular board with dimensions 94.1 ± 0.5 mm (width) and 55.8 ± 0.5 mm (length). It features a 'NAME PLATE' and a 'VR FOR Vadj.' potentiometer. The side view shows a height of 18.1 ± 0.5 mm. The front view shows a height of 50.8 ± 0.5 mm and a width of 36.1 ± 0.5 mm. It includes 'OUTPUT TERMINAL' (2-M2.5-M2.6), 'DC OK INDICATOR' (LED), and 'INPUT TERMINAL' (2-M2.5-M2.6). A 'BIN PAIR REMOVAL GATE BY SCREW DRIVER' is also indicated. The TDK-Lambda logo and model number '2K12-241' are visible on the front view.

