



Industrial



Test



Renewable



Broadcast

## 120W - 480W Single Output DIN Rail Mount Power Supplies

Features	Benefits
• 150% Peak Power, 4 sec	• Better Start-up of Capacitive & Inductive Loads
• Efficiency up to 94%	• Cooler Applications - Improved Thermal Performance
• Ultra Compact Footprint	• Saves Space on Rail and Cabinet Cost
• ErP Referenced Design	• Better "Environmental Footprint"
• Remote On/Off	• For Intelligent System Implementation
• Remote Programming	• Wide Range of Applications



Specifications		DRF-120-24-1	DRF-240-24-1	DRF-480-24-1
AC Input voltage range	VAC	85-264		
Input frequency	Hz	47-63		
Inrush cold (typ)	A	20		40
Power factor (typ) (115/230)	-	0.98/0.95	0.98/0.95	0.98/0.92
Input current (typ) (2)	A	1.2/0.6	2.4/1.2	4.7/2.5
Output voltage	V	24		
Output current	A	5	10	20
Peak output current (1)	A	7.5	15	30
Peak output power (1)	W	180	360	720
Line regulation	mV	<96		
Load regulation	mV	<240		
Ripple and noise (2 & 3)	mV	<240		
Over current protection (4)	-	>105% peak output current		
Over voltage protection (5)	V	30-35.5		
Hold up time (230VAC)	ms	20		
Efficiency (typ) (230VAC)	%	91	94	
Average efficiency (230VAC)	%	88.6	92.4	92
Standby input power (230VAC)	W	<0.5	<0.5	<0.75
Parallel operation (6)	-	Possible		
Series operation (6)	-	Possible		
LED indicators	-	DC OK signal - green (Vout > 80% rated output voltage): Peak power mode - red		
DC OK relay (24V model only)	-	Relay contact 30V/1A		
Operating temperature	°C	-25°C to +70°C(60 to 70°C derate linearly to 75% load)		
Storage temperature	°C	-40°C to +85°C		
Operating humidity	-	5-95% RH (non condensing)		
Cooling	-	Convection		
Withstand voltage	-	I/P to FG:1.5kVAC (20mA), I/P to O/P 3kVAC (20mA), O/P to FG: 500VAC (100mA) for 1 min		
Isolation resistance	MΩ	I/P to FG, IP to O/P and O/P to FG: >100MΩ (500VDC) at 25°C & 70%RH		
Vibration	-	Non-operating,10-55Hz(sweep for 1 min.):19.6 m/s <sup>2</sup> constant, X,Y,Z axis 1 hour each		
Shock	-	<196m/s <sup>2</sup>		
Safety agency approvals (7)	-	IEC/EN/UL60950-1, CE, UL508 listed, ATEX, IEC Ex, GL		
Emissions	-	EN55022 Class B, CISPR22-B		
Immunity	-	EN61000-4-2,-3,-4,-5,-6,-8,-11		
Weight (typ)	g	600	900	1300
Size (W x H x D)	mm	36.5 x 123.4 x 115	49 x 123.4 x 115	82 x 123.4 x 115
Case material	-	Metal		
Warranty	yrs	5		

See Page 2 for Notes

## Notes from page 1

1. Operating period at peak output current is 4 sec, max duty cycle<35% &< rated output power
2. At 115/230VAC, Ta = 25°C, nominal output voltage, rated output power
3. Ripple & noise is measured at 20MHz using 300mm twisted pair of load wires terminated with 0.1µF film cap & 47µF electrolytic cap
4. Constant current limit with auto recovery. Over rated current (>105%) condition for more than 4 sec will cause power supply to shutdown.
5. Output will shutdown, manual reset by mains cycle off/on or CNT on/off
6. Refer to instruction manual
7. Select /HL model for ATEX, IEC Ex and GL (Germanischer Lloyd) approvals (see optional models table)

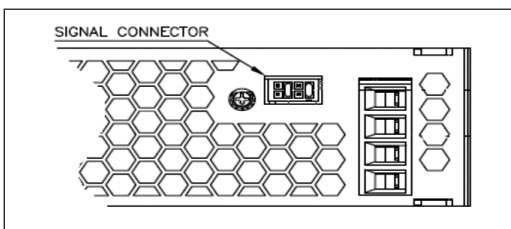
## Model Selector

Model	Output Voltage	Output Adjust Range (V)	Max Output Current (A)	Max Output Power (W)	Efficiency at 115/230VAC (%)
DRF120-24-1	24	24-28	5	120	89/91
DRF240-24-1	24	24-28	10	240	92.5/94
DRF480-24-1	24	24-28	20	480	92.5/94

## Signal Connector Pin Assignment

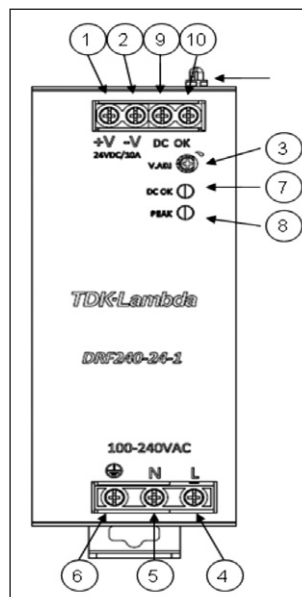
PIN	Function	Detail
1	CB	
2	CB-COM	For parallel operation cut the link between pins 1 & 2 for droop mode current share
3	N/C	
4	N/C	No Connection
5	CNT+	
6	CNT-	Remote ON/OFF control, when CNT+ is pulled to TTL low the power supply turns ON, otherwise it turns OFF
7	PV	
8	COMM	Programming voltage range 5 - 6V presets the output to 24 - 28V

## DRF120 example\*



\*Signal connectors are found on the topside of the unit. See product outline drawings for locations

## Terminal Explanation



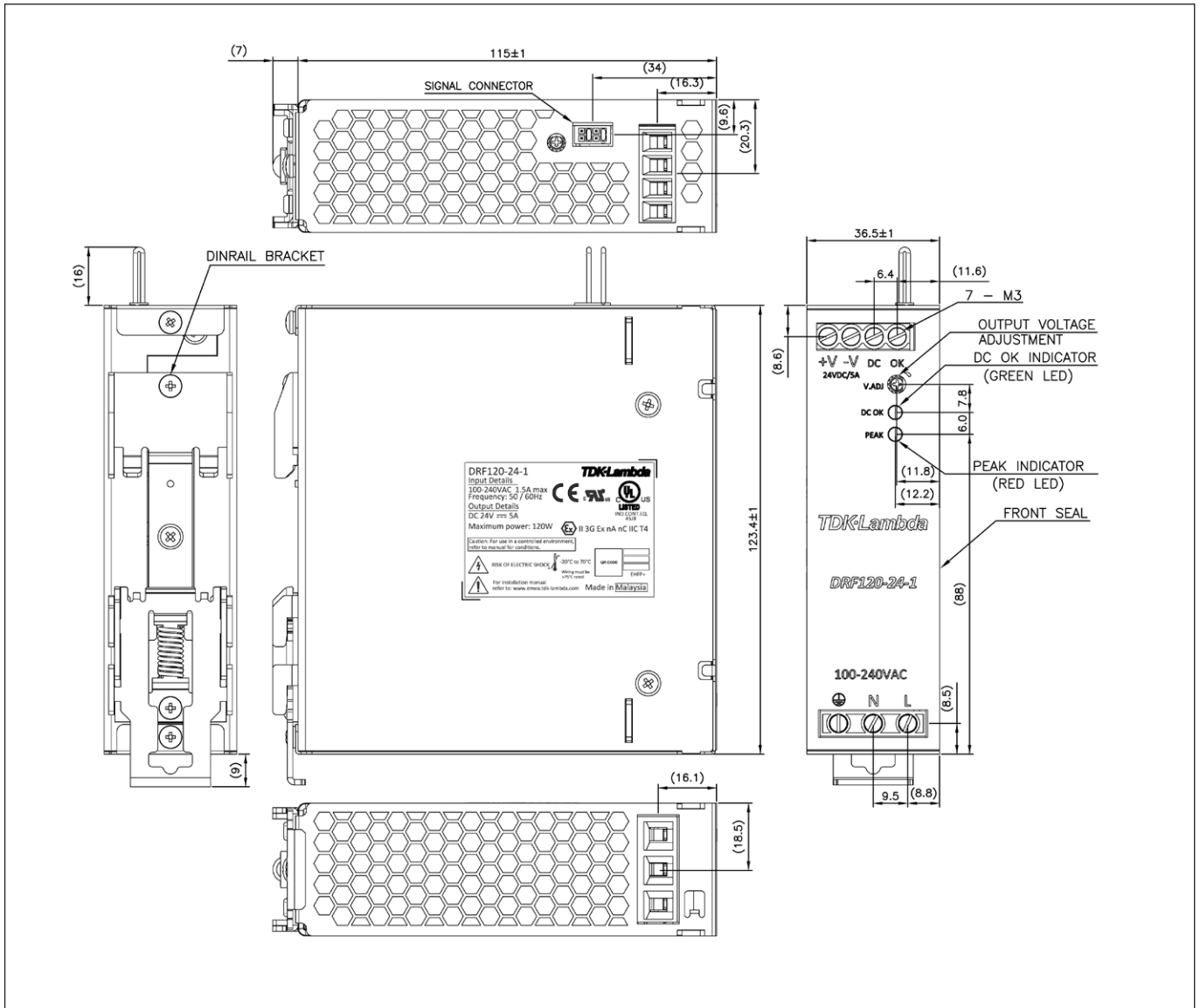
## Connection

- 1 +V: +Output terminal
- 2 -V: -Output terminal
- 3 V.ADJ: Output voltage adjust trimmer  
The output voltage rises when a trimmer is turned clockwise
- 4 L: AC Input terminal. Live line (fuse in line)
- 5 N: AC Input terminal. Neutral line
- 6 -V: Protective Earth  
Connect to safety ground of apparatus or equipment
- 7 DC OK:  
Green LED lights when output voltage is > 80% of rated output voltage
- 8 PEAK:  
Red LED lights when unit is in peak power mode
- 9 DC OK: Relay contact
- 10 DC OK: Relay contact

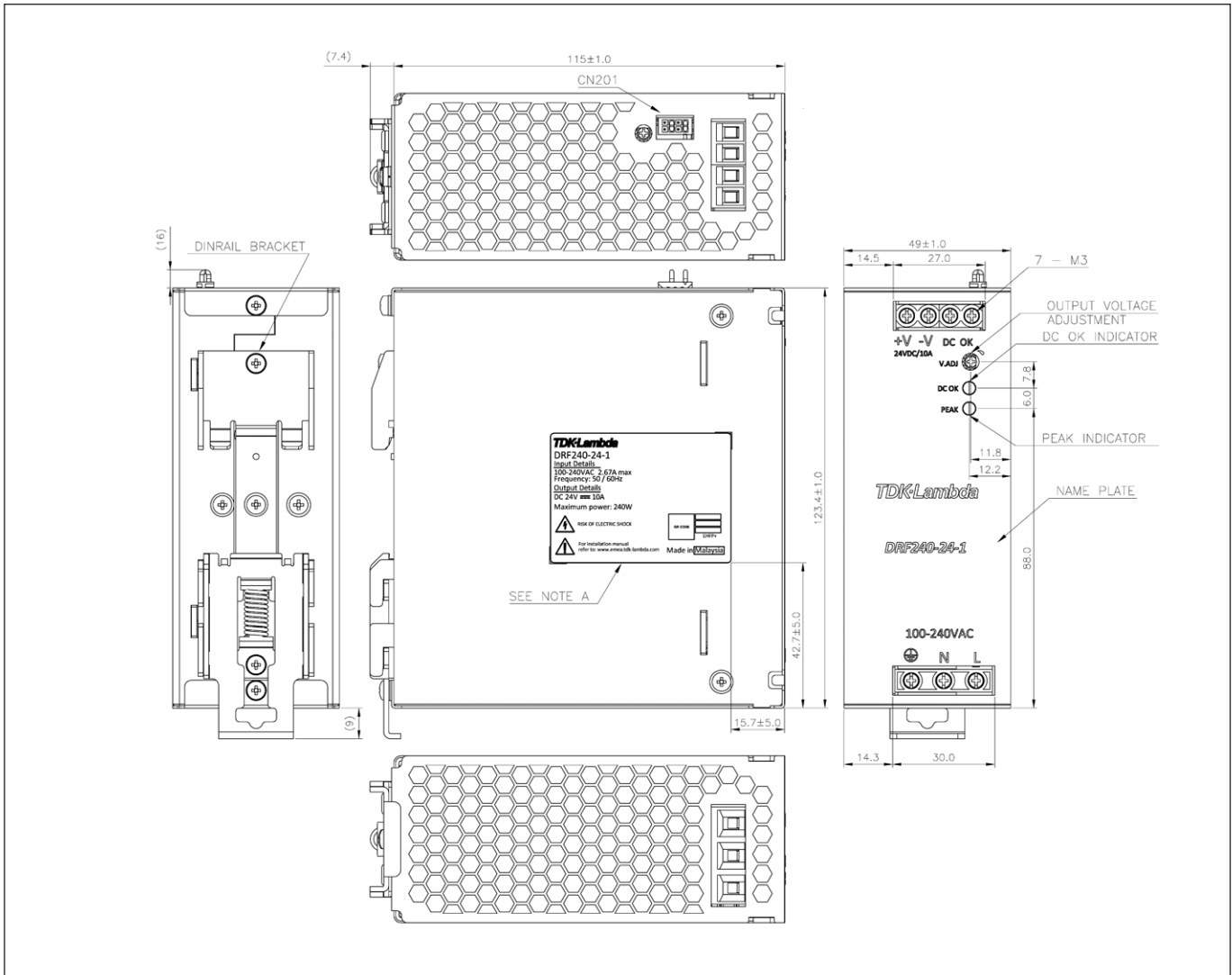
## Optional Models

Suffix	Description
/HL	Conformally Coated (ATEX, IEC EX, GL)

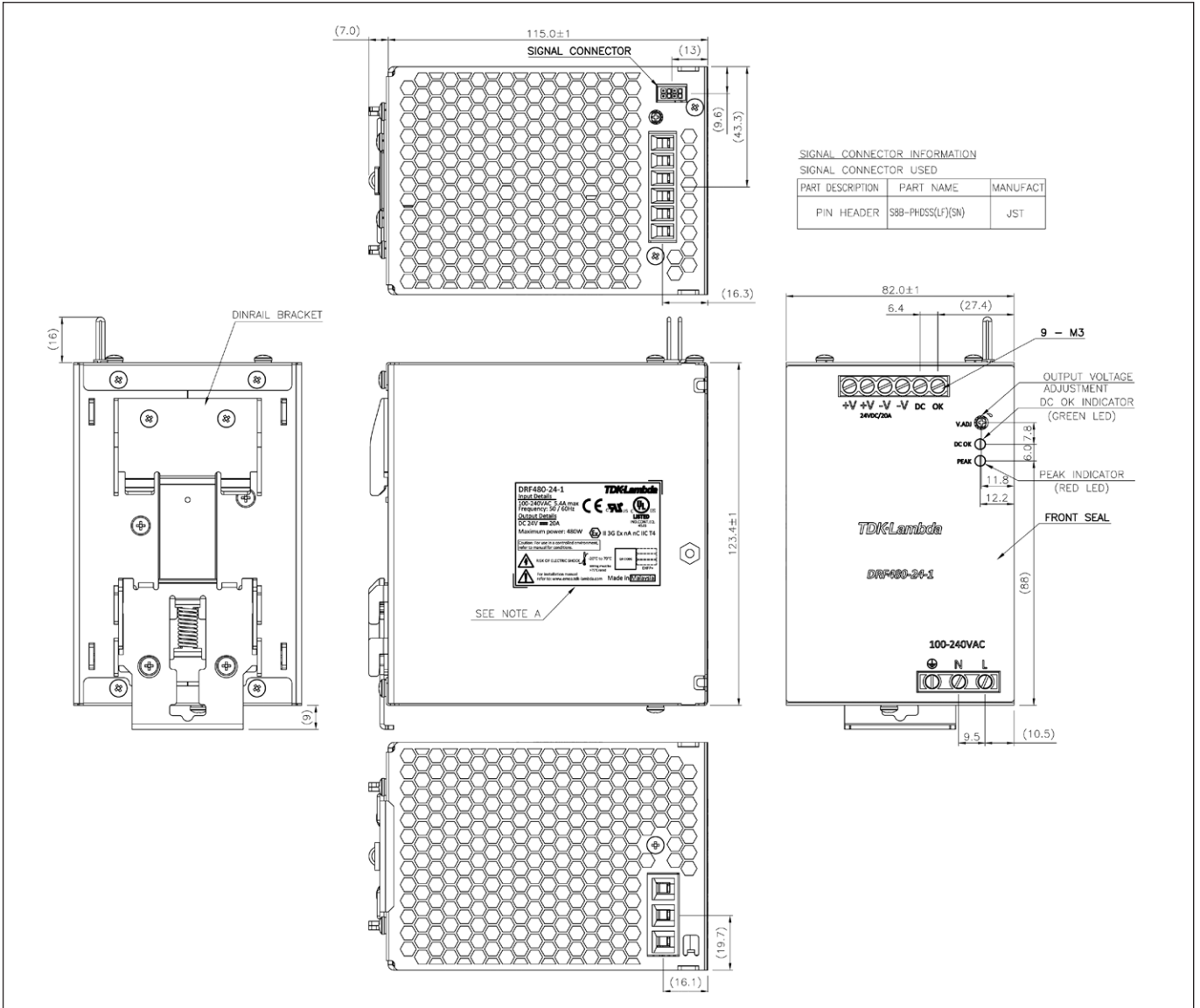
## DRF120-24-1 Outline Drawing



## DRF240-24-1 Outline Drawing



## DRF480-24-1 Outline Drawing





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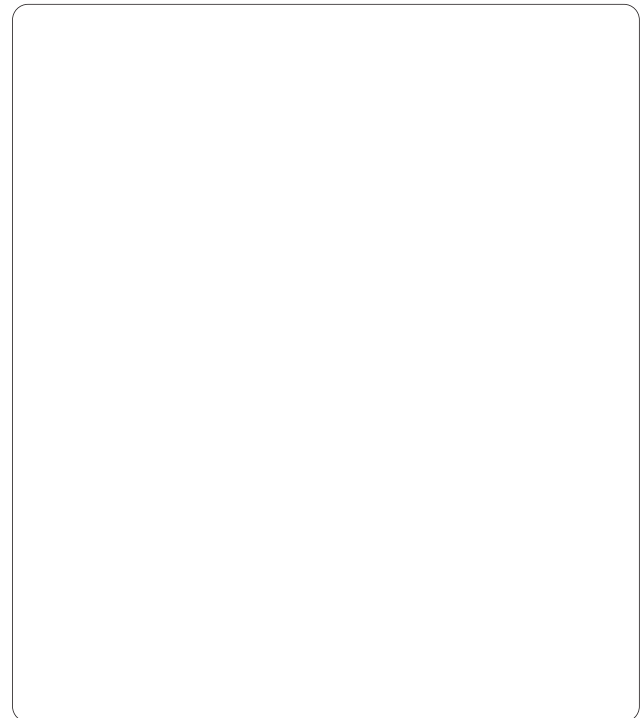
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