Industrial Test Renewable Broadcast HazLoc Marine

120W - 480W Single Output: 24V
180W - 720W Peak Power DIN Rail Mount Power Supplies for Hazardous Location

Features	Benefits
• IECEx / ATEX Approval	• Use in Explosive Atmospheres
• DNV / German Lloyd Approval	• Suits Marine, Shipbuilding Applications
• Conformal Coated Circuit Boards	• Resistance to Harsh Environment
• Narrow Convection Cooled Design	• Saves Space on Rail & Cabinet Cost
• Remote On/Off	• Supports Intelligent Controls
• ErP Referenced Design	• Improves "Environmental Footprint"

Specifications

MODELS		DRF120-24-1/HL	DRF240-24-1/HL	DRF480-24-1/HL
AC Input voltage range	VAC	85 - 264 (withstand 300VAC surge for 5s)		
Input frequency	Hz	47 - 63		
Inrush current @ cold start (typ)	A	20	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	-	Relay contact 30V/1A (closed if Vout > 80% of rated output voltage)		
Operating temperature	°C	-25°C to +70°C (60°C to 70°C derate to 75% load)		
Operating altitude	m	3,000		
Storage temperature (7)	°C	-40°C to +85°C		
Operating humidity	%	5-95 RH (non condensing)		
Operating altitude	m	Up to 3,000		
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: >100MOhms (500VDC) at 25°C & 70%RH		
Vibration	-	Non-operating,10-55Hz(sweep for 1 min.):19.6 m/s^2 constant, X,Y,Z axis 1 hour each		
Shock	-	<196m/s^2		
Safety agency approvals (8)	-	IEC/EN/UL60950-1, CE, UL508 listed, IECEN60079-0, -15(IECEX, ATEX), DNV-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 115.4	49 x 123.4 x 115.4	82 x 123.4 x 115.4
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 (CC) limit for >105% of peak output current. CC limit with auto recovery within 4 sec, unit will shutdown at >4sec
5. Output will shutdown, manual reset by mains cycle off/on or CNT on/off
6. Refer to instruction manual
7. For -30°C startup please contact your local sales contact or relevent FAE for DIN rail
8. IEC Ex/ATEX code for **DRF120/HL** & **DRF240/HL** - II 3G Ex nAnC IIc T4, **DRF480/HL** - II 3G Ex nAnc IIc T3 DNV-GL type approval procedure V1-7-1

Model Selector

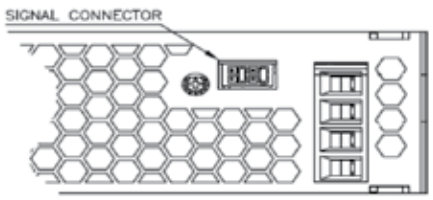
Model	Output Voltage	Output Adjust Range (V)	Max Output Current (A)	Peak Current	Max Output Power (W)	Peak Power	Efficiency at 115/230VAC (%)
DRF120-24-1/HL	24	24 - 28	5	7.5	120	180	89 / 91
DRF240-24-1/HL	24	24 - 28	10	15	240	360	92 / 94
DRF480-24-1/HL	24	24 - 28	20	30	480	720	93 / 94

Signal Connector Pin Assignment

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

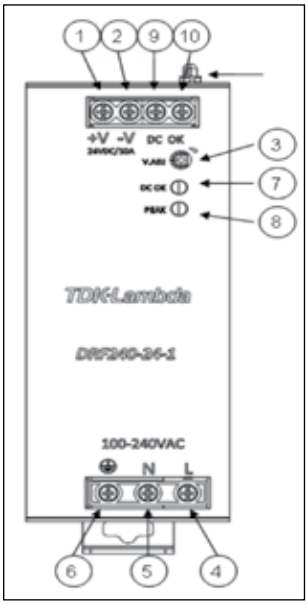
DRF120/HL example*

Signal Connector: please refer to instruction manual.
Potentiometer on top of unit is for factory setting only.
Please do not adjust.



***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

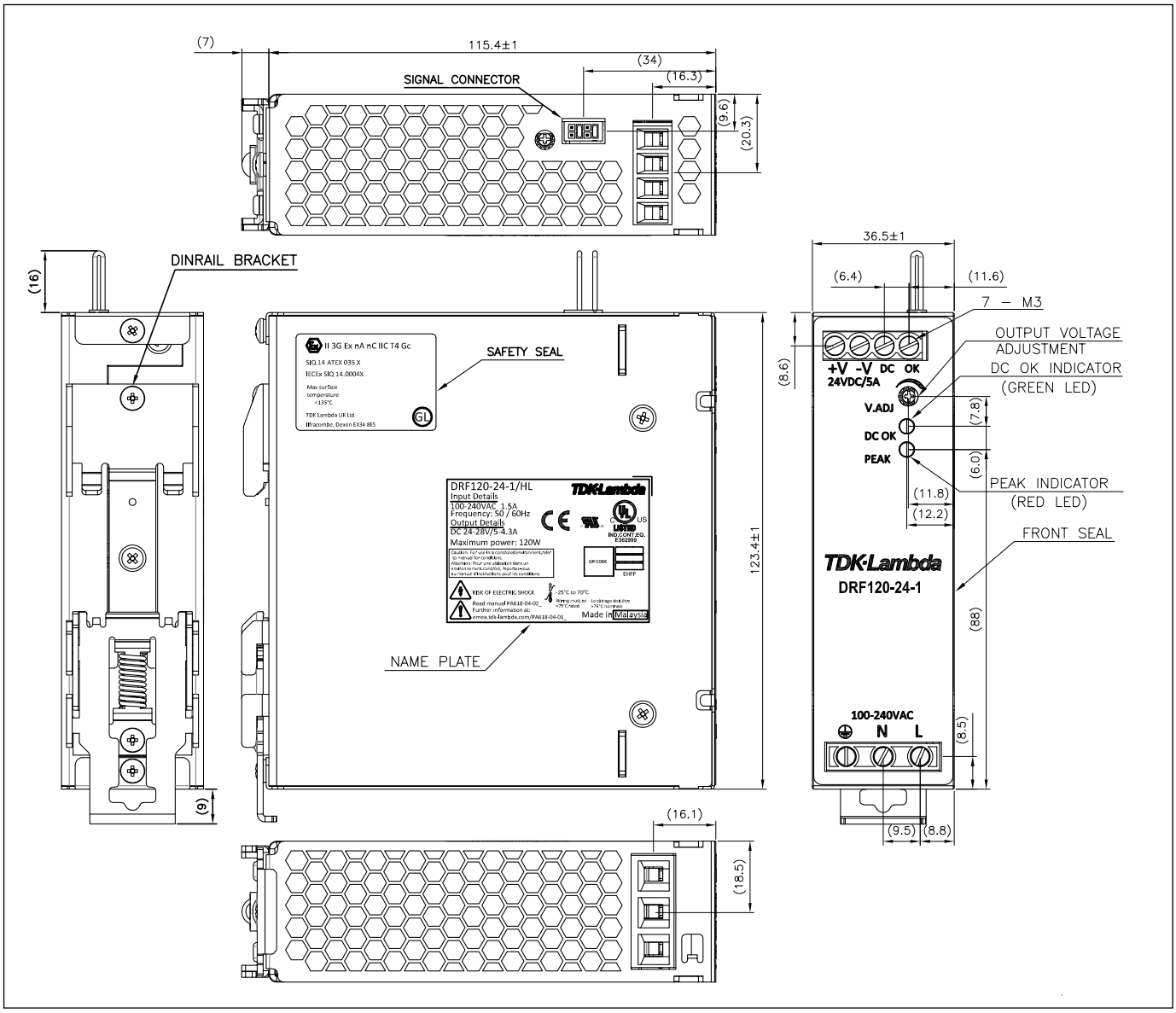
7 DC OK:
Green LED lights when output voltage is > 80% of rated output voltage

8 PEAK:
Red LED lights when unit is in peak power mode

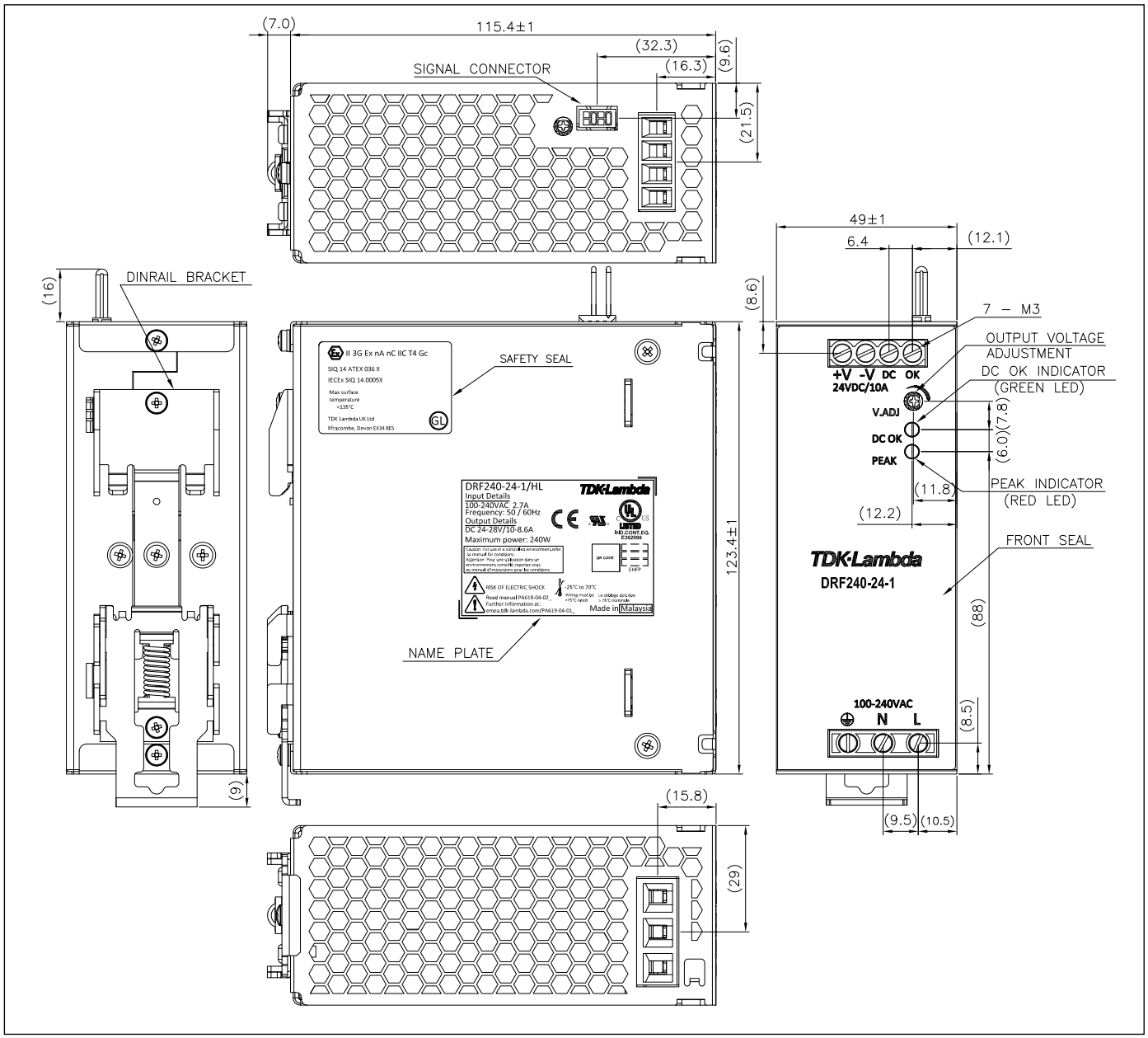
9 DC OK: Relay contact

10 DC OK: Relay contact

DRF120-24-1/HL Outline Drawing



DRF240-24-1/HL Outline Drawing



DRF480-24-1/HL Outline Drawing