

## 120W - 960W Single Output 24V 180W - 1440W Peak Power DIN Rail Mount Power Supplies



Features	Benefits
• 150% Peak Power, 4 sec	• Better Start-up of Capacitive & Inductive Loads
• Efficiency up to 95%	• 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	DRF-960-24-1
AC Input voltage range	VAC	85 - 264 (withstand 300VAC surge for 5s)			180 - 264VAC
Input frequency	Hz	47 - 63			
Inrush cold (typ)	A	20			
Power factor (typ) (115/230)	-	0.98/0.95	0.98/0.95	0.98/0.92	-/0.98
Input current (typ) (2)	A	1.2/0.6	2.4/1.2	4.7/2.5	-/4.5
Output voltage	V	24			
Output current	A	5	10	20	40
Peak output current (1)	A	7.5	15	30	60
Peak output power (1)	W	180	360	720	1440
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			31.5 - 34
Hold up time (230VAC)	ms	>20			>10ms
Efficiency (typ) (230VAC)	%	91	94	94	95
Average efficiency (230VAC)	%	88.6	92.4	92	87
Standby input power (230VAC)	W	< 0.5	< 0.5	< 0.75	< 1
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. Start up at -40°C (Derate linearly to 75% load above 60°C (50°C for DRF960)			
Storage temperature	°C	-40°C to +85°C			
Operating humidity	%	5-95 RH (non condensing)			
Operating altitude	m	OVC II up to 3000m			OVC III up to 3000m OVC II up to 5000m
Cooling	-	Convection			
Withstand voltage	-	I/P to FG:1.5kVAC (20mA), I/P to O/P 3kVAC (20mA), O/P to FG: 500VDC (100mA) for 1 min (960W 500VAC)			
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 <sup>2</sup> constant, X,Y,Z axis 1 hour each			
Shock	-	<196m/s <sup>2</sup>			
Safety agency certifications	-	IEC/EN/UL60950-1, CE, UL508 listed, (ATEX / IECEx / Marine-GL approved models available) Class 1 Div 2, Group A, B, C, D ISA 12.12.01 (DRF120-480 only)			
Emissions	-	EN55032-B, CISPR22-B			
Immunity	-	EN61000-4-2,-3,-4,-5,-6,-8,-11			
Line dips	-	SEMI -F47 (200VAC input)			
Weight (typ)	g	600	900	1300	1735
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	110 x 123.4 x 139
Case material	-	Metal			
Warranty	yrs	5			

## 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

## Model Selector

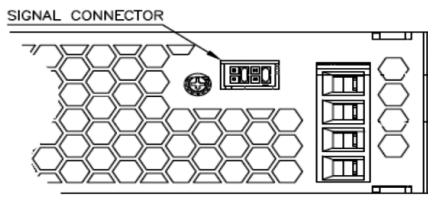
Model	Output Voltage	Output Adjust Range (V)	Max Output Current (A)	Peak Current	Max Output Power (W)	Peak Power	Efficiency at 115/230VAC (%)
DRF120-24-1	24	24 - 28	5	7.5	120	180	89 / 91
DRF240-24-1	24	24 - 28	10	15	240	360	93 / 94
DRF480-24-1	24	24 - 28	20	30	480	720	93 / 94
DRF960-24-1	24	24 - 28	40	60	960	1440	- / 95

## 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 example\*

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

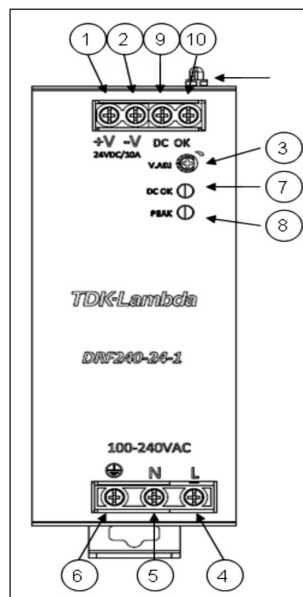


\*Signal connectors are found on the topside of the unit.  
See product outline drawings for locations

## Optional Models available (DRF120-480 only)

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

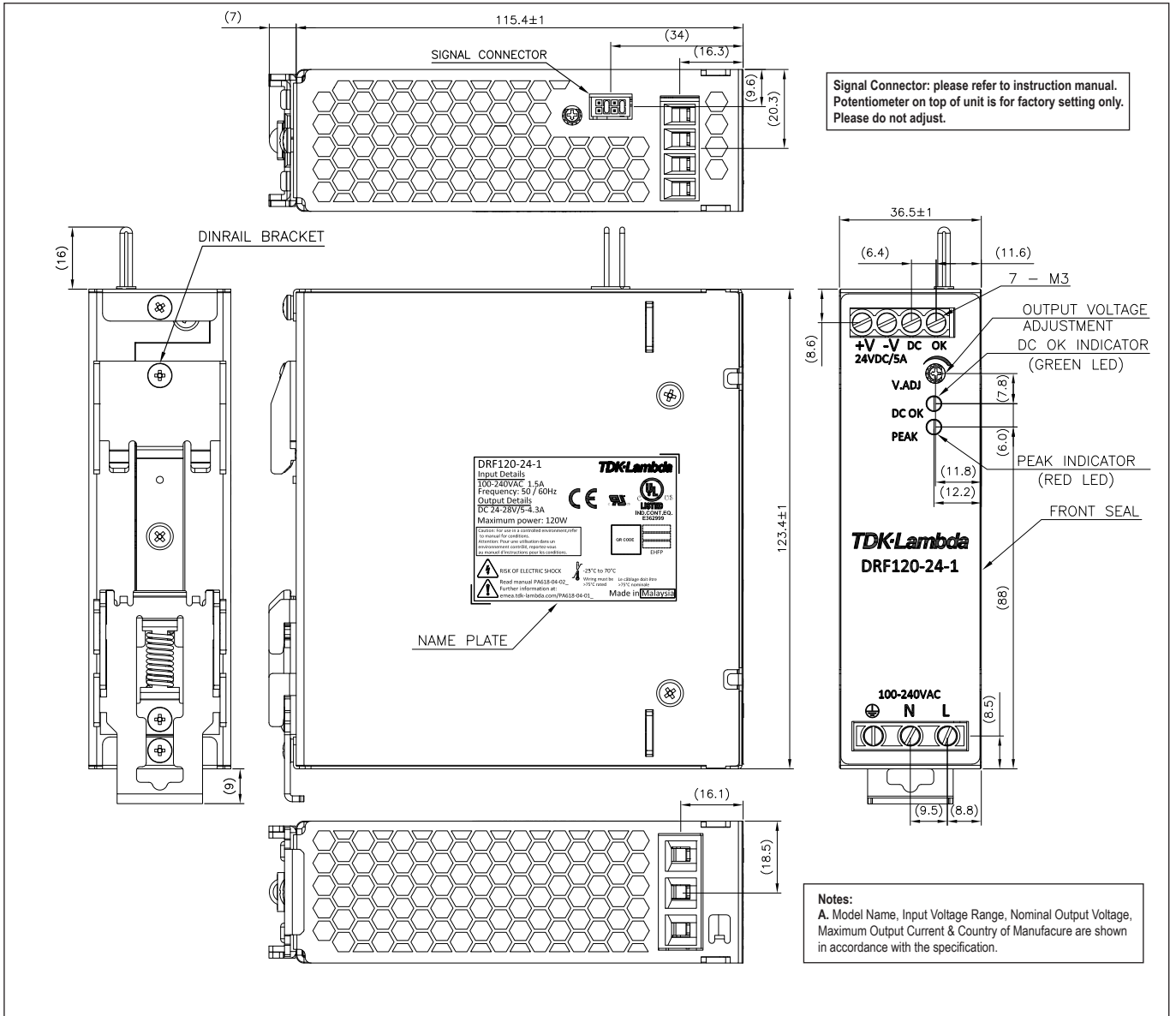
## Terminal Explanation



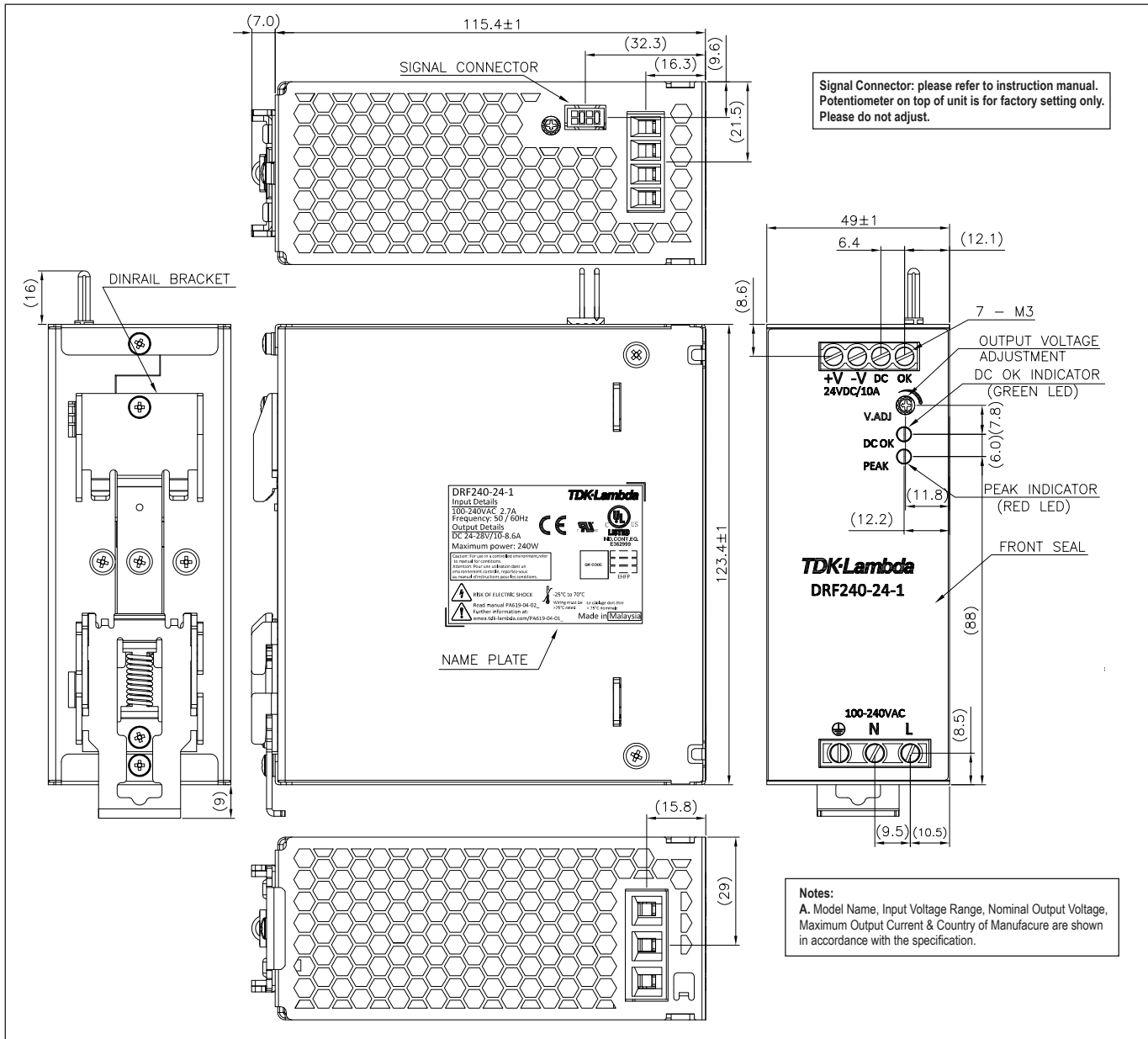
## Connection

- 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  $\perp$ : 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

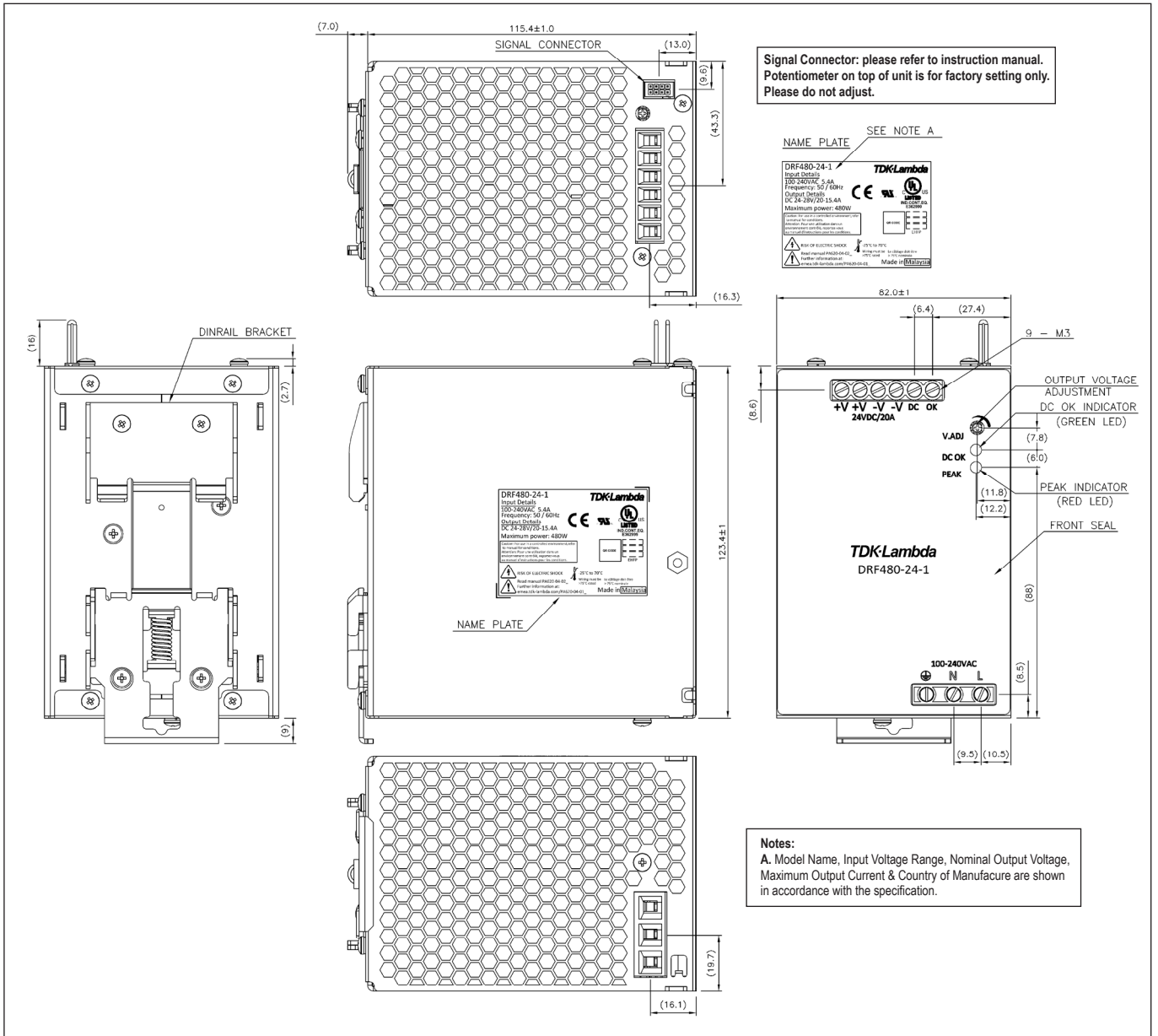
## DRF120-24-1 Outline Drawing



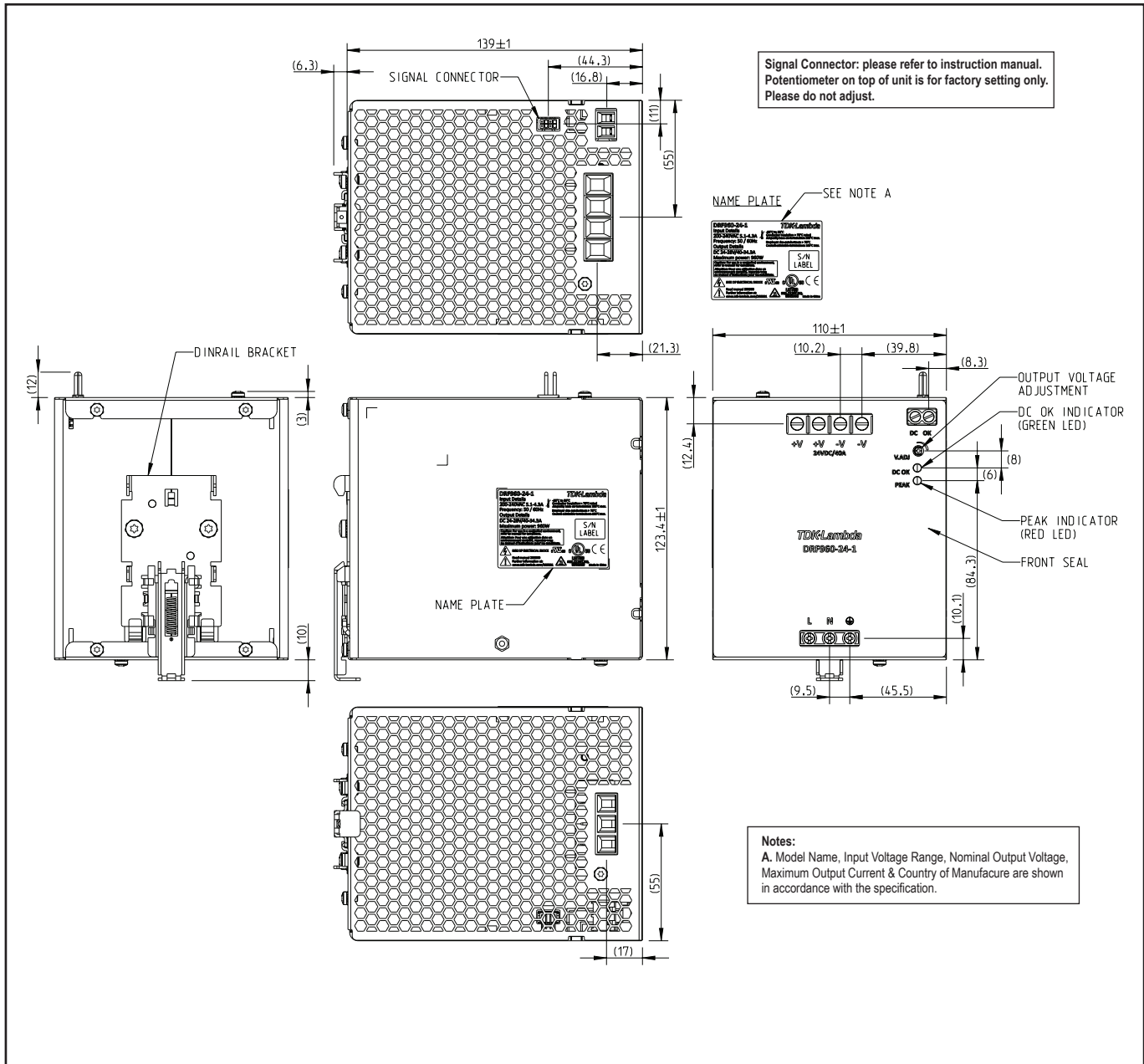
## DRF240-24-1 Outline Drawing



## DRF480-24-1 Outline Drawing



## DRF960-24-1 Outline Drawing





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