

2500W 1U Industrial Power Supplies

Features

- ◆ 1U High
- ◆ Internal ORing FETs & Current Share
- ◆ High Efficiency
- ◆ I²C, PMBus Communication Option



Key Market Segments & Applications



Specifications

Model		RFE2500
Input Voltage Range	VAC	85 - 265VAC, 47 - 63Hz. See model selector for power derating ⁽²⁾
Input Current (Max) 115/230VAC	A	15 / 12A
Inrush Current	A	<50A
Power Factor Correction	-	Meets EN61000-3-2, PF > 0.98 at full load
Temperature Coefficient	%/°C	<0.02%/°C
Overcurrent Protection	%	115VAC: >110%; 230VAC: 105 - 120%
Overvoltage Protection	%	110% (Tracking). Cycle AC to reset or utilize Remote On/Off ⁽¹⁾
Overtemperature Protection	-	Shutdown with automatic reset. Warning signal provided ⁽¹⁾
Hold up time	ms	>10ms, 100/230VAC Input, 80% loading
Leakage Current	mA	< 0.8 / 1.6mA, 115 / 230VAC, 60Hz
Remote Sense Compensation	-	12V: 0.25V/wire; 24V: 0.5V/wire; 48V: 1V/wire
Indicators	-	AC OK: Green LED, DC OK / Fail: Green / Red LED
Remote On/Off	-	Yes, inhibit & enable
Parallel Operation	-	Yes, single wire current share, 5% accuracy of max current, up to 8 units
AC Fail Signal	-	Open Collector, ON when AC is within 85 - 270VAC
DC Good Signal	-	Open Collector, ON when output is above 85 to 95% of setpoint (tracking)
Remote Adjust	-	By either external 0 - 5V signal or 1k potentiometer ⁽¹⁾
I ² C Interface	-	Isolated from output, Add suffix /S, PMBus compatible ⁽¹⁾
Auxiliary Output	-	11.2 - 12.5V, 0.5A, 240mV ripple and noise
Operating Temperature	°C	-10 to +70°C, derate 2%/°C from 50 to 60°C, 2.5%/°C from 60 to 70°C
Storage Temperature	°C	-30 to +85°C
Humidity (Non condensing)	%RH	Operating: 10 - 90%RH, Storage: 10 - 95%RH
Cooling	-	Two variable speed internal fans, airflow exits across input/output connector
Withstand Voltage	-	Input to Output 3kVAC, Input to Ground 2kVAC, Output to Ground: RFE2500-12, -24V 500VAC, RFE2500-48 2250VDC 1 min. (POE)
Isolation Resistance	MΩ	>100MΩ at 25°C & 70%RH, Output to Ground 500VDC
Vibration (Basic transportation)	-	Meets IEC61068-2-64 (Basic transportation)
Shock (Basic transportation)	-	Meets IEC61068-2-27 (Basic transportation) 20G
Safety Agency Certifications	-	UL60950-1, EN60950-1 (2nd Edition), CE Mark
Conducted and Radiated EMI	-	EN55022 & FCC part 15; Conducted class B, Radiated class A
Immunity	-	IEC61000-4-2 (lv 2,3), -3 (lv 2), -4 (lv2), -5 (lv3,4), -6 (lv2), -8 (lv 4), -11
Size (W x H x D) (Excluding busbars)	in	4.21 x 1.61 x 13.6"
	mm	107 x 41 x 345mm
Weight	g	2500
Warranty	yrs	Three Years

Notes

(1) See installation manual for detailed specifications & test methods

(2) Derate linearly 1.3%/VAC from 100VAC to 85VAC input

Model Selector

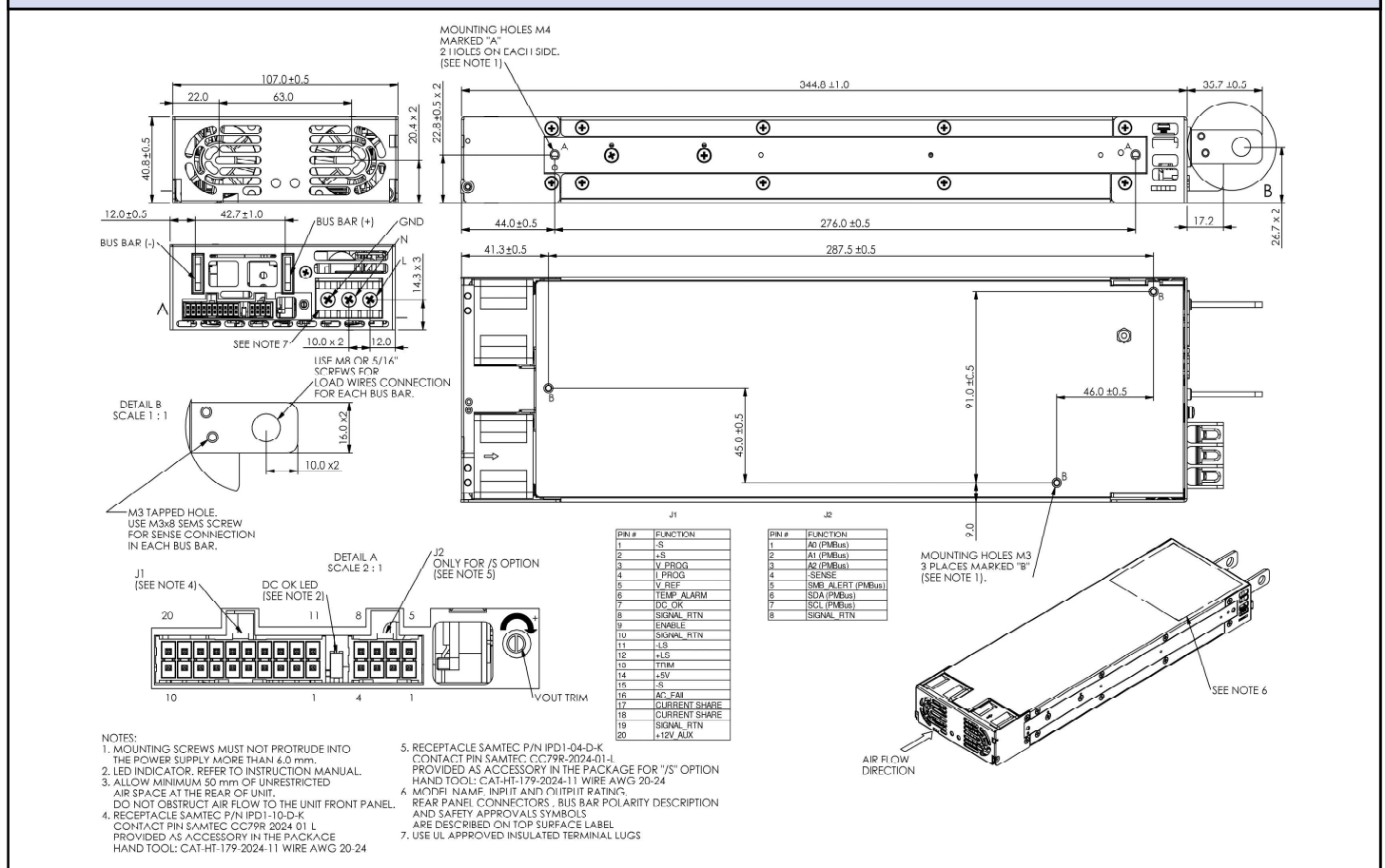
Model	Output Voltage	Adjust. Range ⁽¹⁾	Max Current (Vin>180VAC) ⁽²⁾	Max Power (Vin>180VAC) ⁽²⁾	Max Current (100<Vin<170VAC) ⁽²⁾	Max Power (100<Vin<170VAC) ⁽²⁾
RFE2500-12	12V	9.6 - 13.2V	200A	2400W	125A	1500W
RFE2500-12/S	12V	9.6 - 13.2V	200A	2400W	125A	1500W
RFE2500-24	24V	19.2 - 29V	96A	2304W	62.5A	1500W
RFE2500-24/S	24V	19.2 - 29V	96A	2304W	62.5A	1500W
RFE2500-48	48V	38.4 - 58V	52A	2496W	31.25A	1500W
RFE2500-48/S	48V	38.4 - 58V	52A	2496W	31.25A	1500W

Model	Load Reg	Line Reg	Ripple & Noise	Efficiency ⁽³⁾	I ² C
RFE2500-12	60mV	30mV	240mV	90 / 92%	-
RFE2500-12/S	60mV	30mV	240mV	90 / 92%	Yes
RFE2500-24	120mV	60mV	240mV	90 / 92%	-
RFE2500-24/S	120mV	60mV	240mV	90 / 92%	Yes
RFE2500-48	240mV	120mV	480mV	91 / 93%	-
RFE2500-48/S	240mV	120mV	480mV	91 / 93%	Yes

Notes:

(3) At 75% load, 115 / 230VAC input

Outline Drawing



Other Related Products

RFE1000-1600	1U 1000W and 1600W
FPS1000	1U 1000W (3 per rack)
HWS1500	1500W Limited lifetime warranty
HFE1600	1U 1600W (5 per rack)
HFE2500	1U 2500W (4 per rack)

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



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