

1000W 1U Front End Power Supplies

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Industrial



Test



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The RFE1000 series industrial AC-DC power supplies offer output power up to 1,000W in a low profile 1U 41mm package. Features include remote on/off, remote sense, a standby supply, current share with built in ORing diodes and a wide operating temperature range of 0°C to +70°C.

Features	Benefits
• 1U High (41mm)	• Utilizes Less System Space
• Internal Oring Diode	• Suitable for N+1 Redundancy
• Current Share	• Can be Paralleled for Higher Power Requirements
• Full Array of Signals	• Simplified System Monitoring

Model Selector (Full Systems)				
Model	Nominal Output Voltage (V)	Adjustment Range (V)	Maximum Current (A)	Maximum Power (W)
RFE1000-24-Y	24	21.5 - 29	40	960
RFE1000-32-Y	32	28.8 - 38.4	31	992
RFE1000-48-Y	48	43 - 58	21	1008

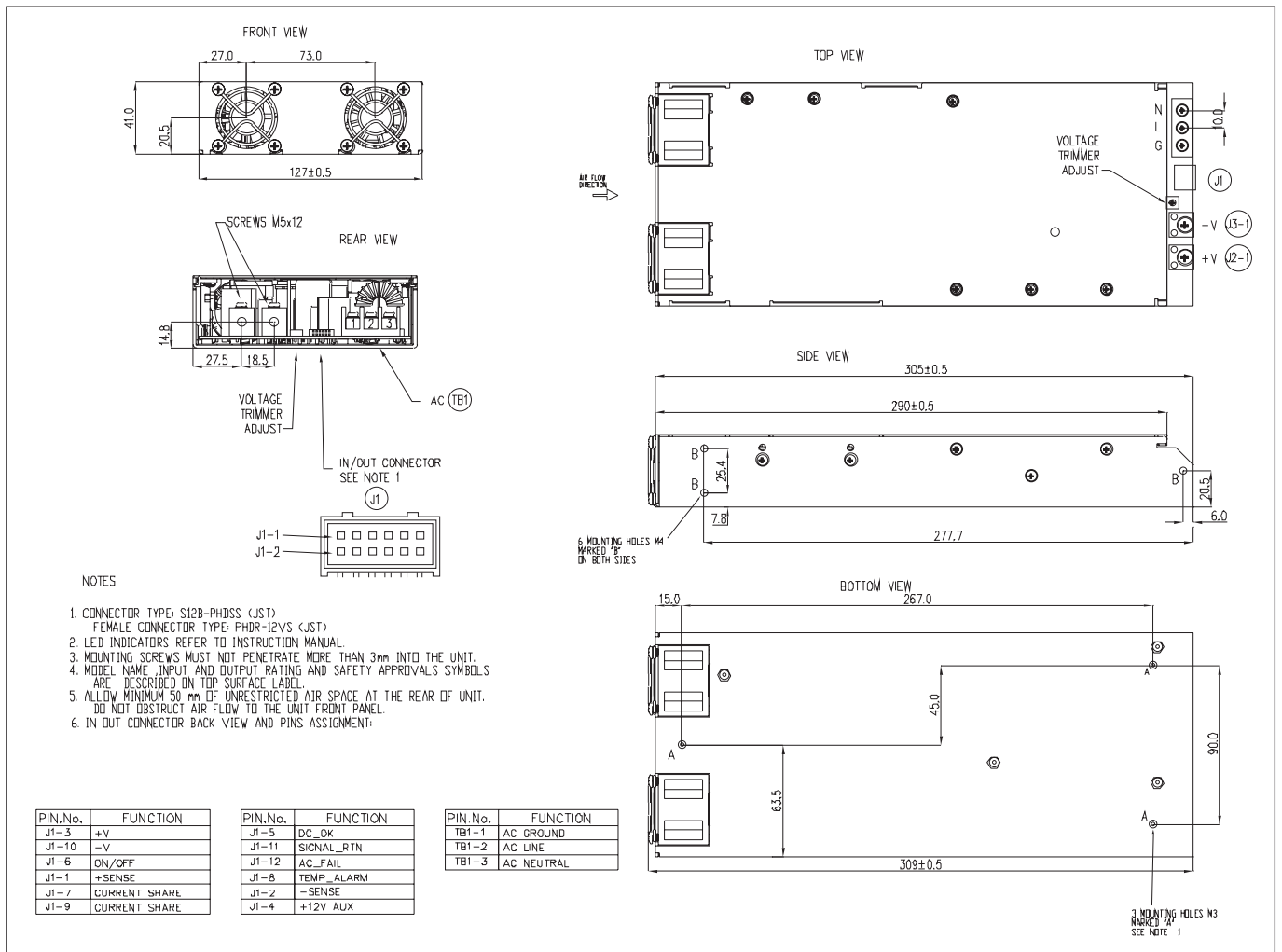
Specifications				
Model		RFE1000-24-Y	RFE1000-32-Y	RFE1000-48-Y
Input				
Input Voltage range	Vac	85 - 265		
Input Frequency	Hz	47 - 63		
Input Current (100 / 200Vac)	A	12 / 6		
Inrush Current	A	<40		
Leakage Current	mA	<1.1 at 230Vac input		
Power Factor Correction	-	EN61000-3-2 class A (20-100% load), >0.98 at full load		
Hold Up Time (typ) at 100Vac Input	ms	20 at <80% of rated current, nominal output voltage		
Efficiency (Typical) (100 / 200Vac)	%	84 / 86	84 / 86	85 / 88
Conducted & Radiated EMI	-	Designed to meet EN55032-B, FCC part 15J-B, VCCI-B		
Immunity	-	See Immunity table		
Safety Certifications and Markings	-	IEC/UL/CSA/EN62368-1, 60950-1, CE Mark and UKCA Mark		

Immunity				
Test	Standard	Test Level	Criteria	Notes
ESD	EN61000-4-2	±8kV air discharge, ±4kV contact discharge	B	See test report on website
Radiated Susceptibility	EN61000-4-3	3V/m from 80-1000 MHz (80% AM at 1kHz)	B	
Electrical Fast Transient Burst	EN61000-4-4	Power line pulses of ±1 kV; I/O line pulses of ±0.5 kV	B	
Surge	EN61000-4-5	±2kV common mode, ±1kV differential mode	B	
Conducted Susceptibility	EN61000-4-6	3Vrms, 150kHz - 80MHz 1kHz 80% AM	B	
Magnetic fields	EN61000-4-8	Inductive loop at 50 Hz, to 30A/m (rms) & 300A/m (rms)	A	
Voltage Dips and Input Interruptions	EN61000-4-11	Voltage Dips of 30% and >95%; Interruptions of >95%.	B	

Specifications				
Model		RFE1000-24-Y	RFE1000-32-Y	RFE1000-48-Y
Output				
Line Regulation	mV	96	128	192
Load Regulation	mV	192	256	384
Temperature Stability	%	0.1 of rated Vout for 8hrs after 30min warmup. Constant line, load, & temp.		
Temperature Coefficient	ppm/°C	200		
Output Noise	mV	200	250	300
Minimum Load	A	none		
Overcurrent Protection	%	105 - 125% , Non foldback type		
Overvoltage Protection (Latching)	V	31 - 34	41.5 - 45.5	62 - 66
Overtemperature Protection	-	Yes, automatic reset		
Remote Sense	-	Compensates for up to 1V on each load wire		
Remote On/Off	-	ON: 0 - 0.6V or short, OFF: 2 - 15V or open		
DC OK signal	-	Open Collector, maximum sink current 10mA, 15Vdc maximum, On when Vout > 80% ±5%		
AC fail signal	-	Open Collector, maximum sink current 10mA, 15Vdc maximum; ON when AC input is >85Vac		
Standby Supply	-	12V, 0.25A bias voltage, (11.2 to 12.5V). Built in Oring diode.		
Indicators	-	Green LED indicates DC is OK; ON Vout >80% ±5% of rated Vo, OFF < 80% ±5% of rated Vo.		
Parallel Operation / Current Share	-	Single wire current sharing, up to 8 units		
Environmental				
Operating Temperature	°C	0 to +70, derate 2%/°C from 50 to 60, 2.5%/°C from 60 to 70		
Storage Temperature	°C	-30 to +85		
Humidity (non condensing)	%RH	Operating: 10 - 90, Storage: 10 - 95		
Cooling	-	Two variable speed internal fans, airflow exits across input/output terminals		
Altitude	m	3,000		
Withstand Voltage (For 1 minute)	Vac/Vdc	Input to Ground 2,000Vac, Input to Output 3,000Vac, Output to Ground 500Vdc		
Isolation Resistance	MΩ	>100 at 25°C, 70%RH, Output to Ground 500Vdc		
Vibration	-	Built to meet ETS 300 019		
Shock	-	Built to meet ETS 300 019		
Other				
Weight (Typ)	g	2,000		
Size (WxHxD)	mm	127 x 41 x 305		
Size (WxHxD)	Inches	5 x 1.61 x 12		
MTBF - Bellcore	Hours	430,880 hours Method 1, Ground Benign, 25C, nominal input		
Warranty	Years	2		

Notes:
See website for detailed specifications, test methods and installation manual

Outline Drawing



PIN.No.	FUNCTION
J1-3	+V
J1-10	-V
J1-6	ON/OFF
J1-1	+SENSE
J1-7	CURRENT SHARE
J1-9	CURRENT SHARE

PIN.No.	FUNCTION
J1-5	DC_OK
J1-11	SIGNAL_RTN
J1-12	AC_FAIL
J1-8	TEMP_ALARM
J1-2	-SENSE
J1-4	+12V_AUX

PIN.No.	FUNCTION
TB1-1	AC GROUND
TB1-2	AC LINE
TB1-3	AC NEUTRAL



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