

RF-500P SERIES

SINGLE OUTPUT SWITCHERS

500 WATT U-Channel & Enclosed

FEATURES

- ◆ Compact Format
- ◆ Universal AC Input
- ◆ Outputs from 12VDC to 57VDC
- ◆ Active Power Factor Correction
- ◆ Class B EMI
- ◆ 5V @ 1A Standby Output
- ◆ 12V @ 1A Aux. Fan Output
- ◆ Remote Inhibit
- ◆ Current Share

TWO YEAR WARRANTY

SAFETY CERTIFICATIONS

UL60950-1 2nd Edition
 CSA22.2, No. 60950-1 2nd Edition
 EN60950-1 2nd Edition



STANDARD MODELS

Model Number	Output Voltage	Output Current ^{1,2}	Output Power ^{1,2}	Output Current ³	Output Power ³
RF-500P-S12-U	12V	41.67A	500W	30.00A	360W
RF-500P-S24-U	24V	20.84A	500W	15.00A	360W
RF-500P-S30-U	30V	16.67A	500W	12.00A	360W
RF-500P-S36-U	36V	13.89A	500W	10.00A	360W
RF-500P-S48-U	48V	10.42A	500W	7.50A	360W
RF-500P-S54-U	54V	9.26A	500W	6.67A	360W
RF-500P-S57-U	57V	8.78A	500W	6.32A	360W

NOTES:

1. Maximum output current/power for U-Channel models with 30cfm forced cooling at 40°C.
2. Maximum output current/power for models with cover/fan at 50°C.
3. Maximum output current/power for U-Channel models with free air convection at 40°C.

OPTIONS

Cover with end-mounted fan: Replace -U with -E.
 Cover with top mounted fan: Replace -U with -T.

SPECIFICATIONS

Typical at Nominal Line, Full Load and 25°C Unless Otherwise Noted. Subject to change without notice.

INPUT SPECIFICATIONS

Input Operating Range90-264VAC
 Power Factor, full load>0.95 @ 115VAC, > 0.9 @ 230VAC
 Input Frequency47-63Hz
 Input Current, RMS.....<6.0A @115VAC, <3.0A @ 230VAC
 Inrush Current, cold start @ 25°C<25A Peak @ 115VAC
<50A Peak @ 230VAC
 Input EMI Filter.....EN55022 Curve B, FCC20780 pt. 153 Curve B
 Input Protection.....Internal Fuse
 Leakage Current<300µA @ 264VAC

OUTPUT SPECIFICATIONS

Total Output Power, Continuous, Max.....500 Watts
 Total Regulation¹.....±1%
 Ripple & Noise, Pk-Pk².....±1%
 Holdup Time, 360W @ 115VAC.....>20ms
 Dynamic Response³.....300µs
 Temperature Coefficient.....±0.04%/°C
 Minimum Load.....0A
 Overload Protection.....110-150% Full Load, Auto Recovery
 Overvoltage Protection<130% Vnom, Shutdown, Latch Off
 Short Circuit ProtectionAuto Recovery
 Current Share error.....<10%, 4 units max.

AUXILIARY OUTPUTS

Standby Output
 Natural Convection+5VDC @ ¼A
 Fan Cooled.....+5VDC @ 1A
 Fan Output.....+12VDC @ 1A

GENERAL SPECIFICATIONS

Efficiency>83% typical at Full Load, 115VAC
 MTBF100,000 Hours
 Immunity.....EN61000-4-2, 3, 4, 5, 6, 8, 11
 Safety Standards.....UL60950-1 2nd Ed., CSA22.2 No.60950-1 2nd Ed.,
EN60950-1 2nd Ed.

ENVIRONMENTAL SPECIFICATIONS

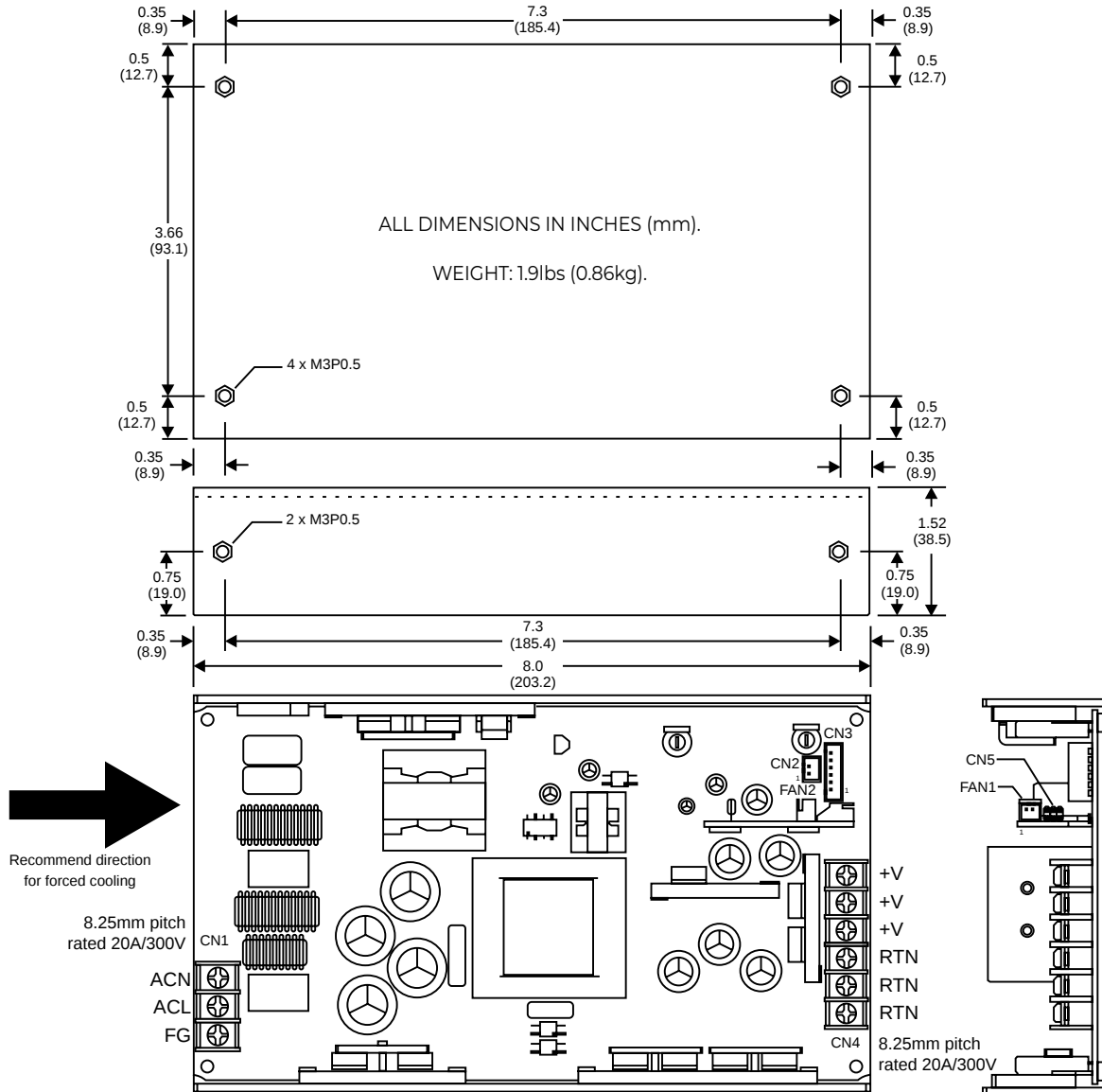
Operating Temperature.....0°C to 70°C Ambient
 Derating.....see derating charts
 Storage Temperature.....-10°C to 70°C
 Humidity.....10% to 95%, non-condensing
 Cooling.....Natural Convection or Single Fan

PHYSICAL SPECIFICATIONS

FormatU-Channel or Enclosed with Top or End Fan
 Dimensions.....see outline drawings
 Weightsee outline drawings

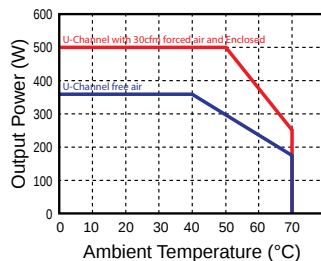
- NOTES:
1. No load to full load, including line regulation and load regulation.
 2. 20MHz bandwidth. Measure with 0.1µF ceramic and 10µF tantalum capacitors in parallel across the output.
 3. <4% deviation recovering to within 1% for 25% load change.

MECHANICAL SPECIFICATIONS & CONNECTION DETAILS - U-CHANNEL



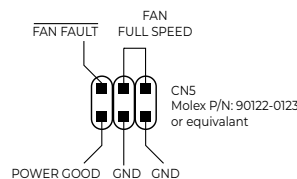
CONNECTOR PINOUTS		MATING CONNECTORS
CN2	Pin 1: 5Vsb Pin 2: GND	JST XHP-2 or equivalent
CN3	Pin 1: Sense +ve Pin 2: Sense -ve Pin 3: 5V standby Pin 4: GND Pin 5: INHIBIT Pin 6: Current Share	JST XHP-6 or equivalent
FAN 1 & 2	Pin 1: 12V FAN + Pin 2: 12V FAN -	JST XHP-2 or equivalent

A kit containing one each housing and indicated number of pins is supplied with each unit as standard.



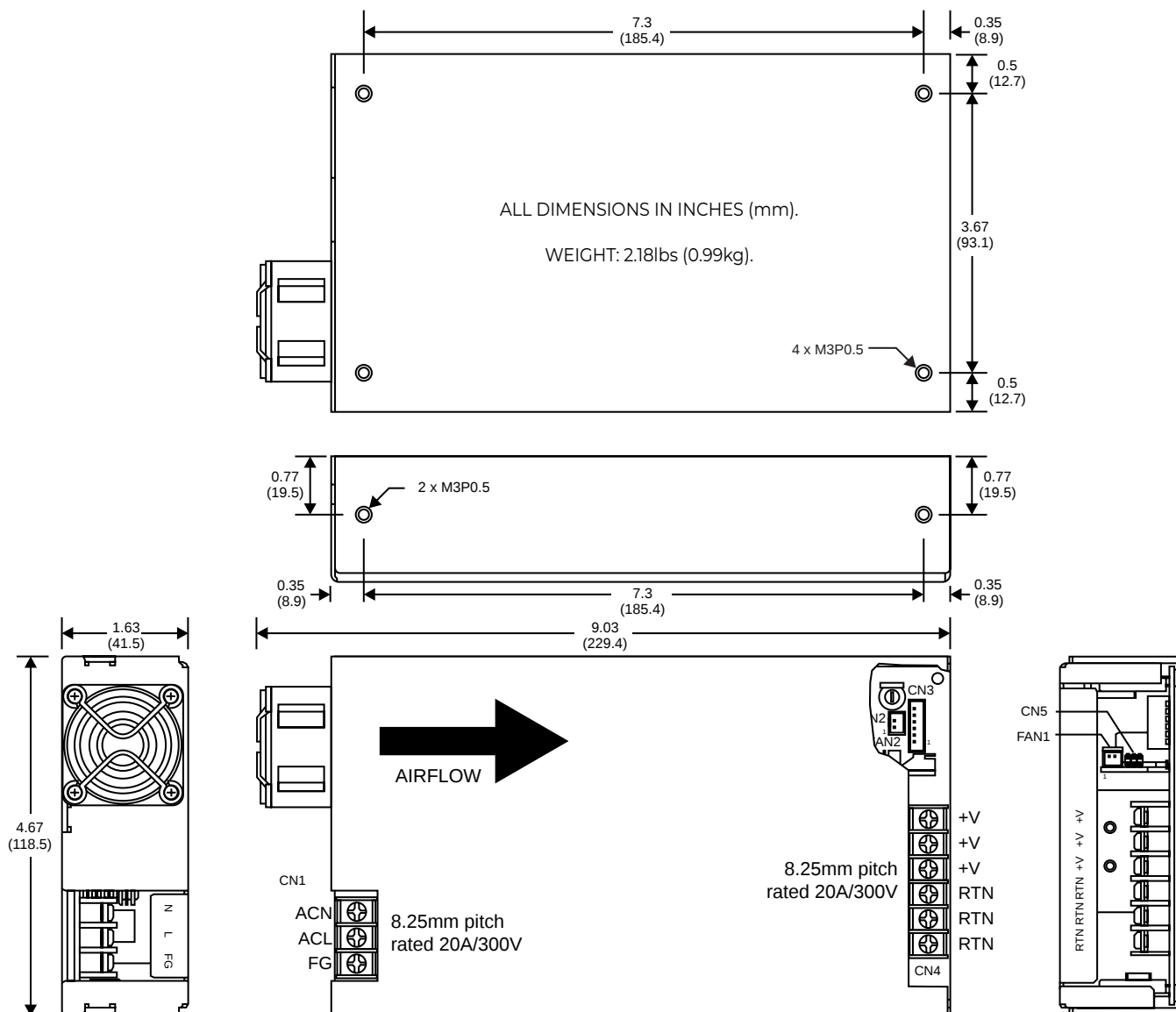
LOGIC FUNCTIONS		
Function / State	HIGH	LOW
Remote Control (input)	Output Enabled	Output Disabled
Power Good (output)	DC Output good and within regulation	DC Output below UV threshold
Fan 2 Fault (output)	Fan operating normally	Fan fault

Note: HIGH = 3.5-5.35V, LOW = 0-0.5V



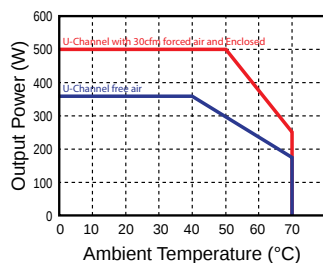
PLEASE SEE [APPLICATION NOTE](#) FOR IMPORTANT INFORMATION ABOUT THE USE OF EXTERNAL FANS.

MECHANICAL SPECIFICATIONS & CONNECTION DETAILS - END FAN



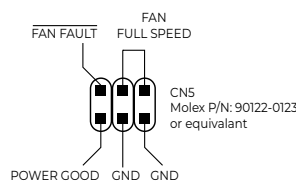
CONNECTOR PINOUTS			MATING CONNECTORS
CN2	Pin 1: 5Vsb	Pin 2: GND	JST XHP-2 or equivalent
CN3	Pin 1: Sense +ve Pin 3: 5V standby Pin 5: INHIBIT	Pin 2: Sense -ve Pin 4: GND Pin 6: Current Share	JST XHP-6 or equivalent
FAN 1 & 2	Pin 1: 12V FAN +	Pin 2: 12V FAN -	JST XHP-2 or equivalent

A kit containing one each housing and indicated number of pins is supplied with each unit as standard.



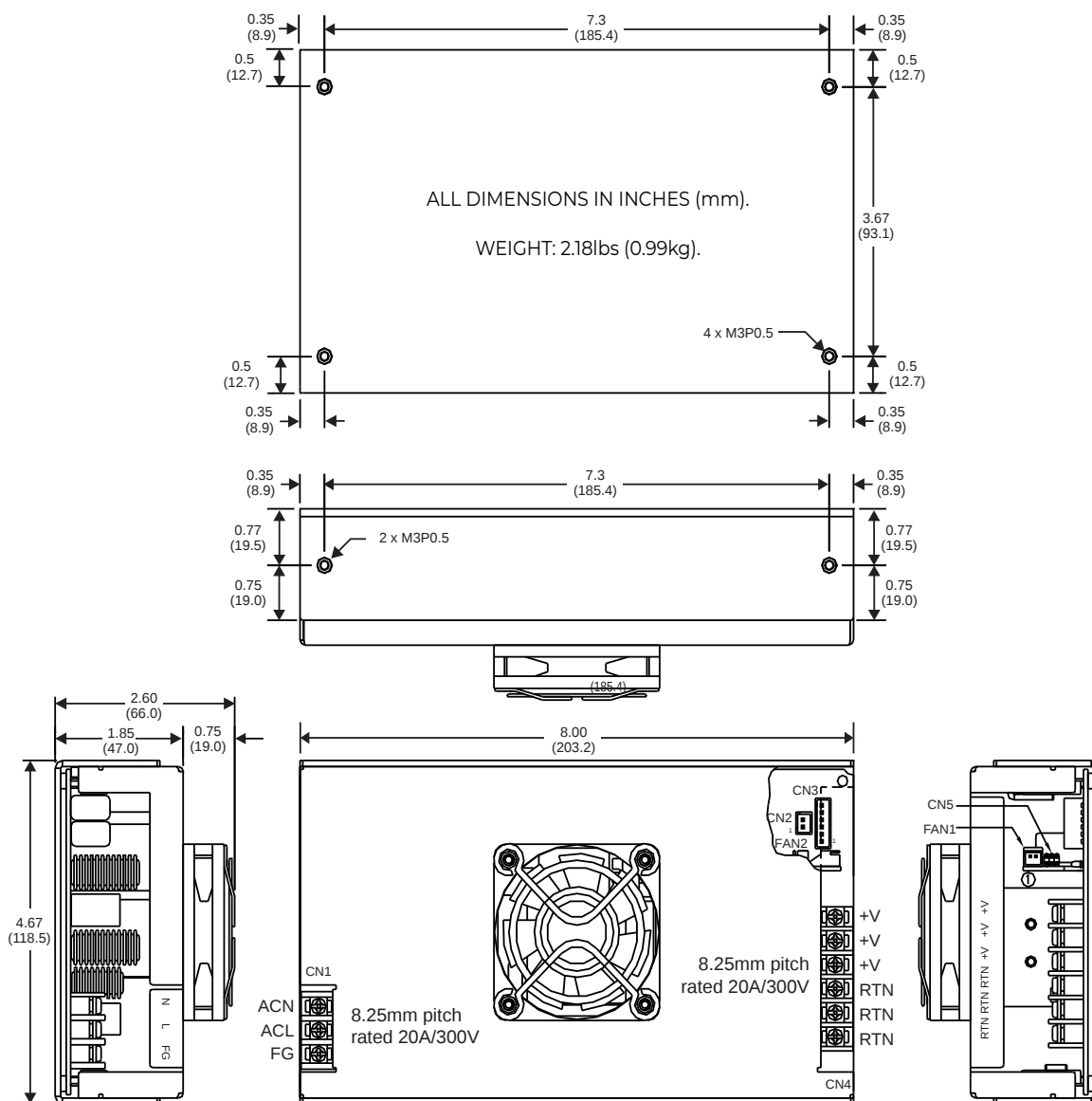
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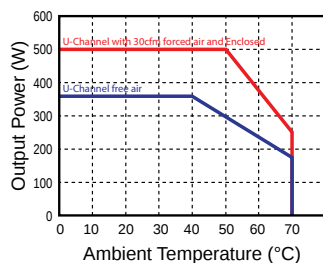
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MECHANICAL SPECIFICATIONS & CONNECTION DETAILS - TOP FAN



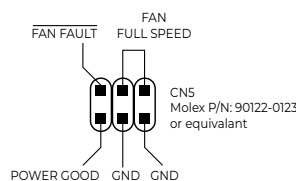
CONNECTOR PINOUTS			MATING CONNECTORS
CN2	Pin 1: 5Vsb	Pin 2: GND	JST XHP-2 or equivalent
CN3	Pin 1: Sense +ve Pin 3: 5V standby Pin 5: INHIBIT	Pin 2: Sense -ve Pin 4: GND Pin 6: Current Share	JST XHP-6 or equivalent
FAN 1 & 2	Pin 1: 12V FAN +	Pin 2: 12V FAN -	JST XHP-2 or equivalent

A kit containing one each housing and indicated number of pins is supplied with each unit as standard.



LOGIC FUNCTIONS		
Function / State	HIGH	LOW
Remote Control (input)	Output Enabled	Output Disabled
Power Good (output)	DC Output good and within regulation	DC Output below UV threshold
Fan 2 Fault (output)	Fan operating normally	Fan fault

Note: HIGH = 3.5-5.35V, LOW = 0-0.5V



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