

M199 SERIES

MINIATURE, HIGH DENSITY
HIGH EFFICIENCY
QUAD OUTPUT
UP TO 460W
AC/DC CONVERTERS

APPLICATIONS

Military, Ruggedized, Telecom, Industrial
Designed to support full system requirement

SPECIAL FEATURES

Miniature size
High efficiency
Wide input range
Input / Output isolation
Fixed switching frequency
Logic Inhibit
EMI/RFI filters included
Limited Inrush Current
Indefinite short circuit protection with auto-recovery
Over temperature shutdown with auto-recovery

ENVIRONMENTAL

Meets or exceeds MIL-STD-810D
High vibration level per MIL-STD-810D
Method 514.3
Procedure I category 7B Fig D

Frequency	PSD (g ² /Hz)	Remarks
15 to 120	0.04	
120 to 300	Rise to 0.04	4db/oct
300 to 1000	0.14	
1000 to 2000	Decrease 6db/oct	

Temperature:
Operating -55°C to +85°C (baseplate)
Storage -55°C to +85°C

RELIABILITY

100'000 hours, calculated per
MIL-STD-217F at +85°C baseplate,
ground fixed.



ELECTRICAL SPECIFICATIONS

AC INPUT

AC input range: 115 ±10%VAC, 400Hz, 3 Phase

Efficiency: up to 82%

EMI/RFI:

Design to meet or exceed MIL-STD-461D
CE102, CS101, CS114, CS115, RS102, RS103

Input Transient Protection :

Meets or exceeds MIL-STD-704A

Isolation:

500V between Input and Output
500V between Input and Case

DC OUTPUT (floating)

Line /load regulation:

Less than 1.5% (no load to full load, -55°C to +85°C)

Ripple and noise: 50mVp-p, typical (max. 1% of typical output voltage)

Current limiting:

Continuous protection for unlimited time.

Passive transzorb on outputs.

Isolation:

500V between Output and Input
100V between Output and Case

OTHER FUNCTIONS

Inhibit floating from inputs and outputs for integration in an airborne system.

Turn On sequence option

BIT signal report

Sense compensation for low output voltages

SELECTION GUIDE

Unit is available in the output voltage range. For new revisions, consult factory for minimum QTY order.	Output #1	Output #2	Output #3	Output #4
	2V ÷ 12V	2V ÷ 12V	5V ÷ 18V	5V ÷ 18V

Note: For current options – please consult factory.

PIN ASSIGNMENT

J1 9PIN DTYPE MALE M24308/24-37F OR EQ.

Pin No.	No. of Pins	Pin Designation
3, 7	2	PHASE A
4, 8	2	PHASE B
5, 9	2	PHASE C
1, 6	2	CHASSIS
2	1	N.C.

J2 37PIN DTYPE FEMALE M24308/24-40F OR EQ.

Pin No.	No. of Pins	Pin Designation
1-8, 20-27	16	+5V OUT
12-19, 30-37	16	5V RTN
11	1	+5V SENSE
9	1	5V SENSE RTN
10, 28, 29	3	N.C.

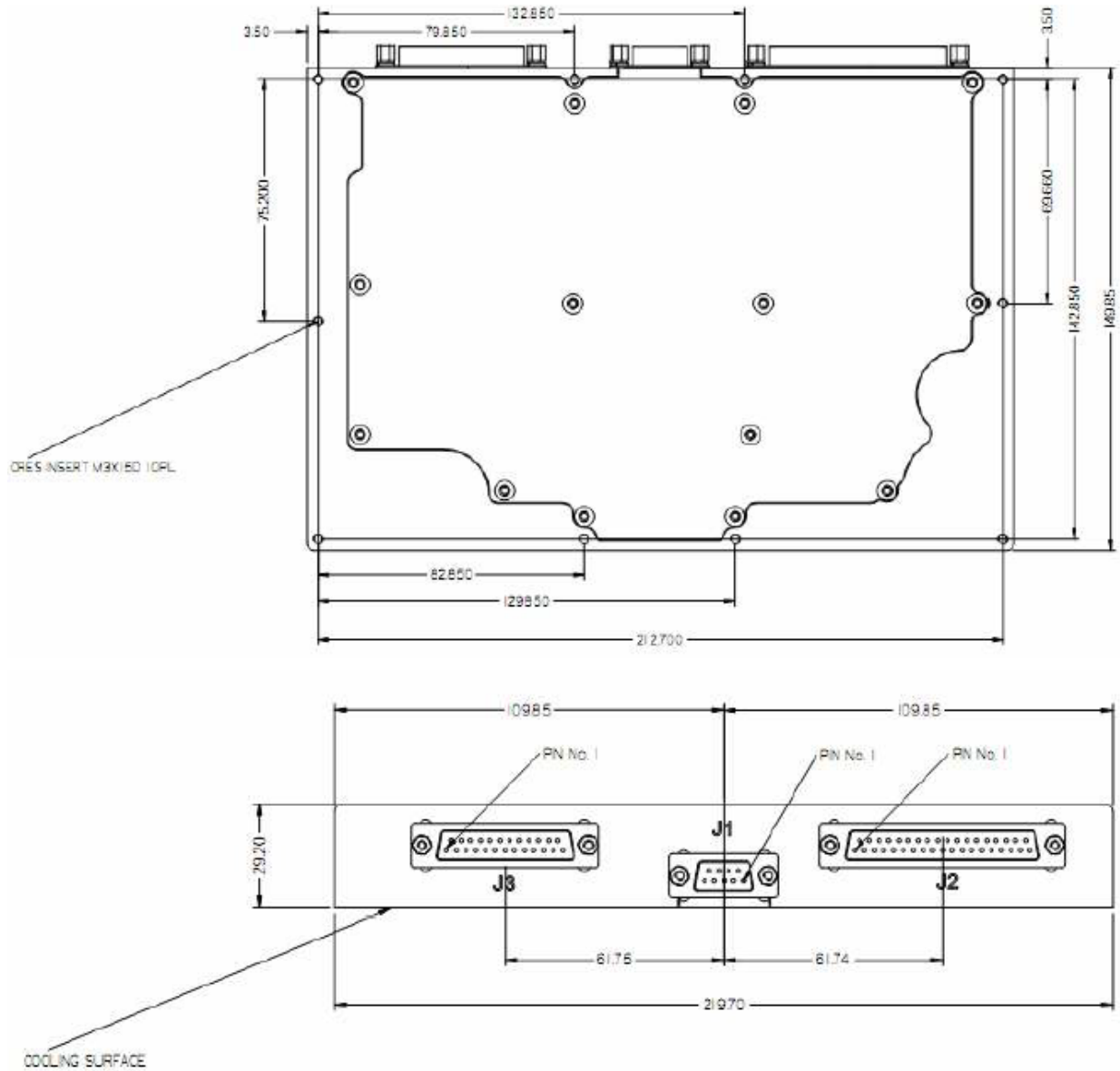
J3 25PIN DTYPE FEMALE M24308/24-39F OR EQ.

Pin No.	No. of Pins	Pin Designation
5,6,17,18,19	5	+3.3V
2,3,14,15,16	5	+3.3V RTN
4	1	+3.3V SENSE
1	1	3.3V SENSE RTN
7,20	2	+12V OUT
8,21	2	+12V OUT RTN
10,23	2	-12V OUT
9,22	2	-12V OUT RTN
11	1	INHIBIT
12	1	SYN
25	1	VGOOD
13	1	SIGNAL RTN
24	1	N.C.

INHIBIT PINS ARE FLOATING FROM INPUT AND OUTPUTS :

INHIBIT PINS SHORTED = OFF
INHIBIT PINS OPEN = ON

OUTLINE DRAWING



*Specifications are subject to change without prior notice by the manufacturer

Notes

1. Dimensions are in mm
2. Tolerance is:
 .XX \pm .04 mm
 .XXX \pm .025mm
3. Weight: 1250gr (2.75lb)