

M191 SERIES

MINIATURE, HIGH DENSITY
HIGH EFFICIENCY
FIVE OUTPUT
UP TO 300W
AC/DC CONVERTERS

APPLICATIONS

Military, Ruggedized, Telecom, Industrial
Designed to support full system requirements.



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

INPUT

AC input range: 115 ±10%VAC, 400Hz, 3-Phase
DC input range: steady state 220VDC to 350VDC
Minimum transient 160VDC for 100ms
Maximum transient 440VDC for 100ms

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

All outputs are isolated and floating.

PIN ASSIGNMENT (INPUT) – CONNECTOR J1

Pin Function	Pin No.
PHASE A	2, 10
PHASE B	4, 12
PHASE C	6, 14
CHASSIS	8

PIN ASSIGNMENT for 191-1 (OUTPUT)

Pin Function	Pin No.
+OUTPUT 1	17, 18, 36, 37
- OUTPUT 1	15, 16, 34, 35
+SENSE OUTPUT 1	19
- SENSE OUPUT 1 RTN	33
BIT	5
RTN BIT	24

Pin Function	Pin No.
OUTPUT 2	12, 13, 31, 32
RTN OUTPUT 2	10, 11, 29, 30
+SENSE OUTPUT 2	14
- SENSE OUTPUT 2 RTN	9

Pin Function	Pin No.
OUTPUT 3	1, 20
RTN OUTPUT 3	2, 21
OUTPUT 4	3, 22
RTN OUTPUT 4	4, 23

Pin Function	Pin No.
OUTPUT 5	8, 27
RTN OUTPUT 5	7, 26
INHIBIT	25, 6
N.C.	28

OUTPUT3 AND OUTPUT4 ARE NOT CONNECTED INSIDE THE UNIT

INHIBIT PINS ARE FLOATING FROM INPUT AND OUTPUTS :

INHIBIT PINS SHORTED = ON

INHIBIT PINS OPEN = OFF

PIN ASSIGNMENT for 191-2/3/4 (OUTPUT)

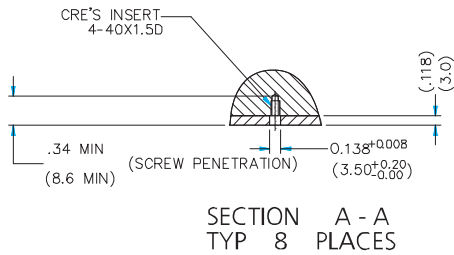
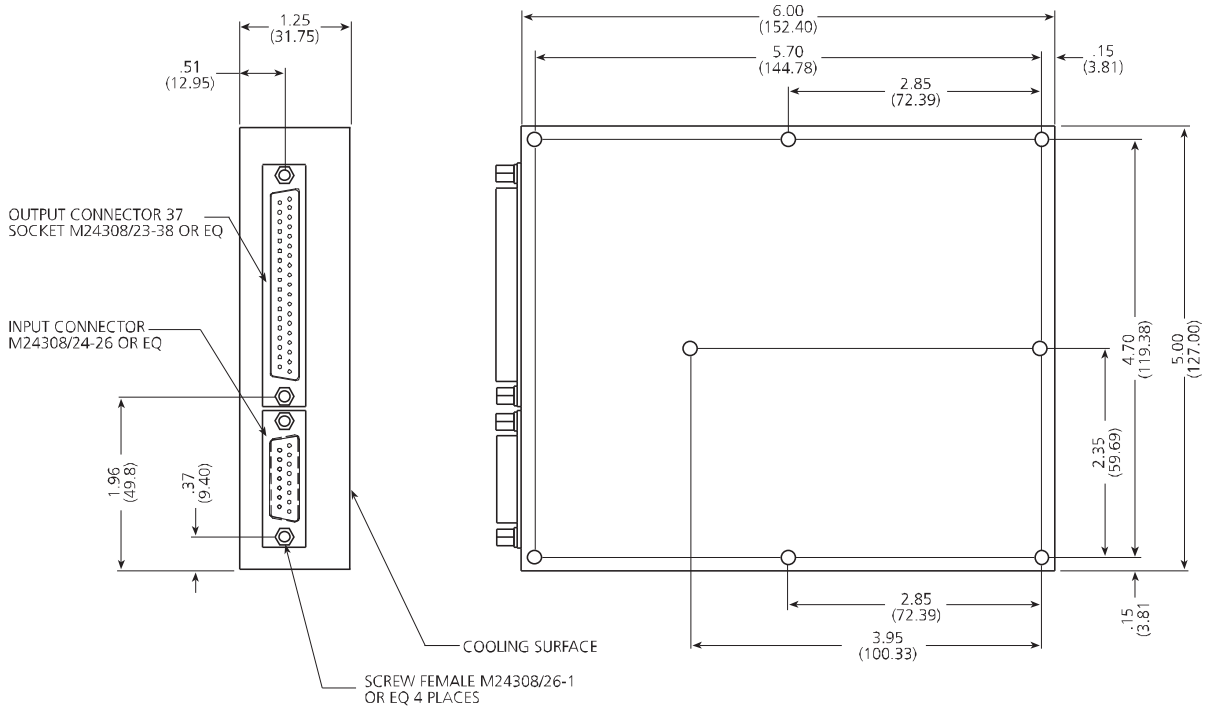
Pin Function	Pin No.
OUTPUT 1	17, 18, 36, 37
RTN OUTPUT 1	15, 16, 34, 35
+SENSE OUTPUT 1	19
- SENSE OUPUT 1 RTN	33
BIT	5
RTN BIT	24

Pin Function	Pin No.
OUTPUT 2	13, 31, 32
RTN OUTPUT 2	11, 12, 30
+SENSE OUTPUT 2	14
- SENSE OUTPUT 2 RTN	10

Pin Function	Pin No.
OUTPUT 3	1, 20
RTN OUTPUT 3	2, 21
OUTPUT 4	3, 22
RTN OUTPUT 4	4, 23

Pin Function	Pin No.
OUTPUT 5	8, 9, 28
RTN OUTPUT 5	7, 26, 27
INHIBIT	6
INHIBIT RTN	25
N.C.	29

OUTLINE DRAWING



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

Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
 .XX ±.02 IN
 .XXX ±.01 IN
3. Weight: 4.4 lb (2 Kg)