

M457 SERIES

AC+DC/DC POWER SUPPLY



PRODUCT HIGHLIGHTS

- MINIATURE, HIGH DENSITY
- HEX OUTPUT
- AC + DC/DC POWER SUPPLY
- UP TO 125 W



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Applications

**Military, Ruggedized, Telecom,
Industrial**

Special Features

- Six (6) DC outputs
- High efficiency
- Wide input range
- Input / Output isolation
- Fixed switching frequency (200 kHz)
- EMI filters included

Protections

Current limiting (Foldback):

Continuous protection for unlimited time.

Over Voltage Protection:

Passive tranzorb on outputs.

Over Temperature Protection:

Shutdown at baseplate temperature above $+105\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$. Automatic recovery at baseplate temperature below $+95\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$.

Environmental Conditions

Meets or exceeds MIL-STD-810D

Temperature:

Operating $-40\text{ }^{\circ}\text{C}$ to $+90\text{ }^{\circ}\text{C}$ (baseplate)

Storage $-55\text{ }^{\circ}\text{C}$ to $+125\text{ }^{\circ}\text{C}$

Reliability

150,000 hours, calculated per MIL-STD-217F Notice 2 at $+85\text{ }^{\circ}\text{C}$ baseplate, ground fixed.

Electrical Specifications

INPUTS

DC Input range: 18 to 70 V_{DC}

AC Input range:

$90\text{--}265\text{ V}_{\text{AC}}$, 50/60/400 Hz Single-Phase

Power Factor: 0.99

Operates from either or both AC and DC inputs

(if both are applied, the AC input is selected)

Input transient protection:

All models meet or exceed (no damage)

MIL-STD-1275A (100 V for 50 ms) and

MIL-STD-704A, MIL-STD-704D (80 V for 0.1 s)

Efficiency: up to 75% (DC input) & 70% (AC input)

EMC: Designed to meet MIL-STD-461F*

CE101, CE102, CS101, CS114, CS115,

CS116, RE101, RE102, RS101, RS103

Isolation:

AC Input to Outputs: $1\text{ }000\text{ V}_{\text{DC}}$

AC Input to Case: $1\text{ }000\text{ V}_{\text{DC}}$

DC Input to Outputs: 200 V_{DC}

DC Input to Case: 200 V_{DC}

DC OUTPUTS (floating from each other)

Line/Load regulation:

Up to $\pm 1\%$ (no load to full load, $-40\text{ }^{\circ}\text{C}$ to $+90\text{ }^{\circ}\text{C}$)

Ripple and Noise: $50\text{ mV}_{\text{p-p}}$, typical (max. 1%)

Isolation:

Outputs to Case: 100 V_{DC}

*Compliance achieved with shielded harness and static resistive load. Depending on actual configuration, an external filter may be required for full compliance.

Pin Assignment**Input Connector (P1):****Connector type:** M24308/24-38F or eq.**Mates with:** M24308/2-2F or eq.

Pin No.	Function
1	DC INPUT RTN
2	DC INPUT RTN
3	DC INPUT
4	DC INPUT
5	N.C.
6	AC INPUT NEUTRAL
7	N.C.
8	AC INPUT PHASE

Pin No.	Function
9	DC INPUT RTN
10	DC INPUT RTN
11	DC INPUT
12	DC INPUT
13	N.C.
14	N.C.
15	N.C.

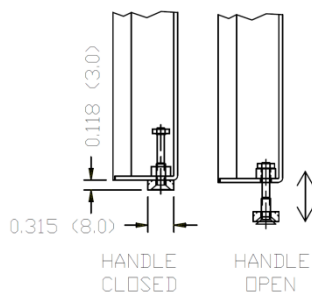
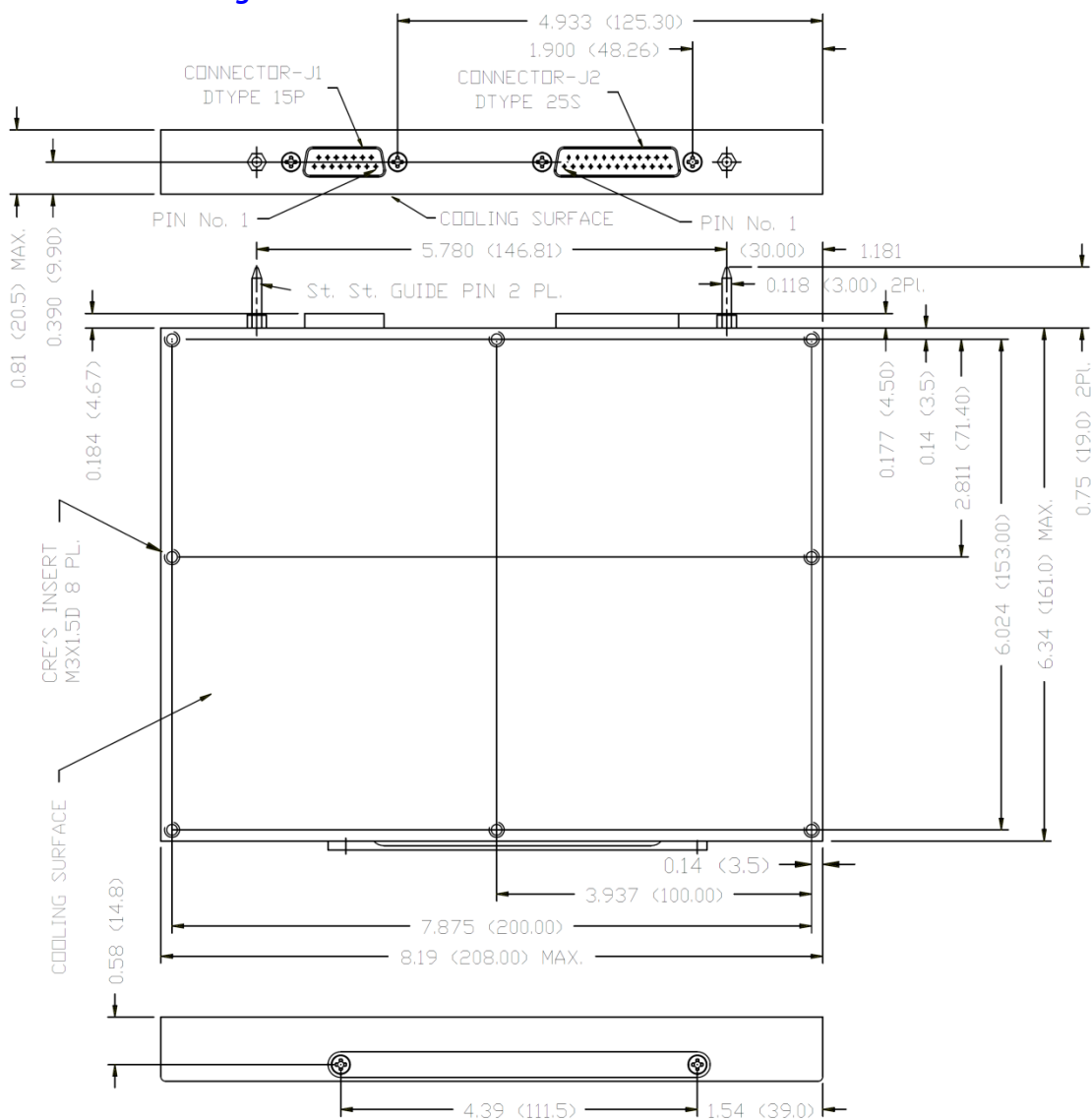
Output Connector (J2):**Connector type:** M24308/23-39F or eq.**Mates with:** M24308/4-3F or eq.

Pin No.	Function
1	OUT #3 RTN (-)
2	OUT #2 RTN (-)
3	OUT #2 (+)
4	OUT #1 RTN (-)
5	OUT #1 (+)
6	OUT #6 (+)
7	OUT #6 (+)
8	OUT #6 RTN (-)
9	OUT #6 RTN (-)
10	OUT #5 (+)
11	OUT #5 (+)
12	OUT #5 RTN (-)
13	OUT #5 RTN (-)

Pin No.	Function
14	OUT # 3 (+)
15	OUT #4 (+)
16	OUT #4 RTN (-)
17	N.C.
18	OUT #6 (+)
19	OUT #6 (+)
20	OUT #6 RTN (-)
21	OUT #6 RTN (-)
22	OUT #5 (+)
23	OUT #5 (+)
24	OUT #5 RTN (-)
25	OUT #5 RTN (-)

Note: All pins with identical function/designation should be connected together for best performance.

Outline Drawing



Notes

1. Dimensions are in inches [mm]
2. Tolerance is:
 .XX ± .02 in
 .XXX ± .01 in
3. Weight: 37.3 oz (1075 g)

Note: Specifications are subject to change without prior notice by the manufacturer