MILPOWER SOURCE

FIELD-PROVEN COTS, MOTS AND CUSTOM MILITARY POWER SOLUTIONS

M9518 SERIES

POWER DISTRIBUTION UNIT

MILPDU

PRODUCT HIGHLIGHTS

- **MODULAR**
- **MINIATURE**
- **SINGLE INPUT**
- **32 ECB OUTPUTS**
- **UP TO 200A TOTAL**

AS9100D CERTIFIED ISO 9001

NIST 800-171 Compliant

Milpower Source, Inc. • Belmont, NH, USA • P: (603) 267-8865 • sales@milpower.com • www.milpower.com
SBA Certified Small Business • **CAGE:** 0B7R6 • **NAICS:** 335999, 334513, 334413, 334416, 334511, 335314, 336419, 336413

Applications

Military (Airborne, ground-fix, shipboard, vehicle), Ruggedized, Telecom, Industrial

Special Features

- Adjustable overcurrent trip point.
- Adjustable short circuit current limit - enables selectivity, prevent short circuit spread.
- I^2T breaking curve - enables short period high current draw while protecting system wiring.
- Soft turn-on to ease inrush current demand from power source.
- CAN and RS-485 communication
- Outputs can be paralleled
- True reverse battery protection
- Surge and spike suppression

Electrical Specifications

DC Input

6 to 33 V_{DC} Steady-State
Fully compliant with MIL-STD-1275E
Compliance with MIL-STD-1275A-D optional
Maximum total load of 200A

Control

- CAN and RS-485 Interface
- Discrete input signals:
  - 4 general-purpose control inputs
  - 3 CAN address selection inputs
- Discrete open-drain output signals:
  - 1 Fault indication

DC Output

- Input-to-Output impedance: Less than 4 mΩ @ 25 °C
- Max load capacitance per channel: 30 mF (can be modified per customer request)
- Max load inductance per channel: 200 µH (including line inductance)
- Parallel operation capability

EMC

Designed to meet MIL-STD-461F

Protections (Thresholds and protections can be modified / removed – please consult factory).

Input

- **Surges and Spikes Protection**
  IAW MIL-STD-1275A-E.
  DEF STAN 61-5 Part 6 Issue 6 optional.
- **Reverse Polarity Protection**
  Device *and loads* protected on occasion of reverse voltage application.
- **Under Voltage Lockout**
  Device and outputs turn off when input voltage drops below 5.5 V. Device turns back on when input voltage rises above 6 V

Output

- **Overload Breaking Current**
  Adjustable from 2A to 25 A according to I^2T curve.
- **Short Circuit Current Limit**
  Adjustable from 10 A to 125 A according to SCL curve.

Environmental Conditions

Designed to meet MIL-STD-810F

Temperature
Operating: –55 °C to +105 °C (at unit's edges)
Storage: –55 °C to +125 °C

Altitude
Method 500.4, Procedure I & II, 40,000 ft. and 70,000 ft. Operational

Salt Fog
Method 509-4

Humidity
Method 507.4 - Up to 95% RH.

Vibration and Shock
Shock: Saw-tooth, 40 g peak, 11 ms.
Vibration: Figure 514.5C-17. General minimum integrity exposure. (1 hour per axis)

Reliability
150,000 hours, calculated per MIL-STD-217F at +50 °C at wedge lock edge, Ground Mobile

Environmental Stress Screening (ESS)

Including random vibration and thermal cycles is also available. **Please consult factory for details.**

Signals

Input Signals

There are 5 configurable discrete inputs available. Initial configuration of inputs is as follows:

RAT	/ GPIN2	- Reset Trips
DCI_N	/ GPIN1	- Selected Outputs On
BATTLE_SHORT_N	/ GPIN0	- Battle Short mode (Prevents tripping due to overcurrent)
BR1, BR2	/ GPIN3, GPIN4	- Communication baud rate selection

Fault Indication

Active when one channel or more have tripped

Shutdown

Turns the unit OFF.
At this state, current consumption from the power source decreases to less than 300µA.

Pin Assignment

Input Connector P1

Connector type: Positronic CBM24W7M570000/AA or eq.

Mates with: Positronic CBC24W7S00000/AA (crimp removable contacts) or eq.

Pin No.	Function
A1	VIN
A2	VIN
A3	VIN
A4	VIN
A5	VIN
A6	VIN
A7	VIN_RTN
1	CAN_L
2	CAN_H
3	BATTLE_OVERRIDE_N
4	DCI_N
5	BR1

Pin No.	Function
6	BR2
7	ADDR _RTN
8	ADDR_1
9	DigitalOut (TSO)
10	ADDR_2
11	DigitalIn(RAT)
12	ADDR_3
13	SHUTDOWN_N
14	28VDC_RTN
15	IS_COM_GND
16	RS_485_P
17	RS_485_N

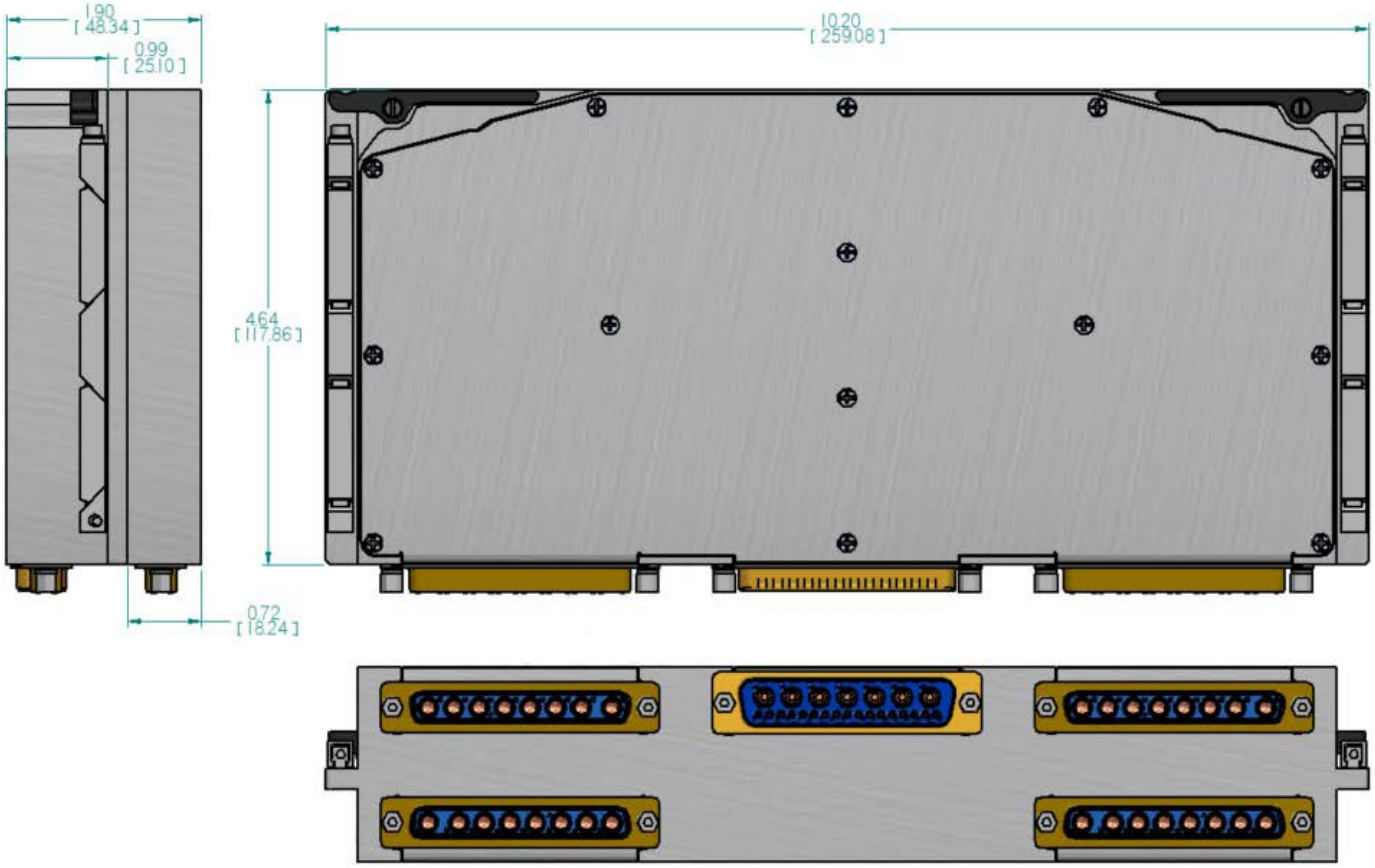
Output Connector P2

Connector type: CBM8W8S570000/AA or eq.

Mates with: CBC8W8M00000/AA (crimp removable contacts) or eq.

Pin No.	Function P2	Function P3	Function P4	Function P5
A1	CH7_OUT	CH15_OUT	CH23_OUT	CH31_OUT
A2	CH6_OUT	CH14_OUT	CH22_OUT	CH30_OUT
A3	CH5_OUT	CH13_OUT	CH21_OUT	CH29_OUT
A4	CH4_OUT	CH12_OUT	CH20_OUT	CH28_OUT
A5	CH3_OUT	CH11_OUT	CH19_OUT	CH27_OUT
A6	CH2_OUT	CH10_OUT	CH18_OUT	CH26_OUT
A7	CH1_OUT	CH9_OUT	CH17_OUT	CH25_OUT
A8	CH0_OUT	CH8_OUT	CH16_OUT	CH24_OUT

Outline Drawing



Notes

1. Dimensions are in inches [mm]
2. Tolerance is:
   .XX ±0.01 in
   .XXX ±0.005 in
3. Weight: Approx. 6.6 lb [3 kg]

General Notice: *Specifications are subject to change without prior notice by the manufacturer.*