ENERCON
TECHNOLOGIES LTD

FIELD-PROVEN COTS, MOTS AND CUSTOM MILITARY POWER SOLUTIONS

M4061 SERIES

HOLDUP UNIT

MIL VPX

PRODUCT HIGHLIGHTS

- *VITA 62 Compliant, 3U Form Factor
- 366 W @ 55mSec Holdup
- Wide Input Range
- Fully Operating: –55°C to +85°C (measured at unit edge)
- Pass Through Power During Normal Line
- Fixed Switching Frequency (250khz)
- Early Warning Bits & IPMI Communication
- Compliant: MIL-HDBK-454, MIL-STD-461, MIL-STD-704, MIL-STD-1275, MIL-STD-810

***Unit does not comply with VITA width / pitch requirement. All other dimensions comply.**

NON ITAR

AS9100D CERTIFIED ISO 9001

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Electrical Specifications

DC Input

18 to 48 V_{DC}
Continuous work during
MIL-STD-704 transients

DC Output

VS1: Power
VS2: Power rtn

Isolation

Over 20 MΩ at test voltage:
200V between Input & output to case

Line/Load regulation

Less than 1% for
(No load to full load, –55°C to 85°C)

Efficiency

Up to 90 % at Low Line
Up to 98 % at Normal Line

EMC

Complies with MIL-STD-461F (5µH LISN):
CE101, CE102, CS101

Ripple and Noise

Communication

IPMI protocol available for voltages

Environmental [1]

Design to Meet MIL-STD-810G

Temperature

Operating: –55°C to +85°C at unit edge
Storage: –55°C to +125°C

Altitude

Method 500.5, Procedure I & II
Storage/Air Transport: 40 Kft
Operation/Air carriage: 70 Kft

Salt Fog:

Method 509.5

Fungus

Does not support fungus growth, in accordance with the guidelines of MIL-HDBK-454, Requirement 4.

Humidity

Method 507.5, Up to 95% RH

Shock

Method 516.6
40g, 11msec saw-tooth (all directions)

Vibration

Shock: Saw-tooth, 20g peak, 11mS.
Vibration: Figure 514.6E-1. General minimum integrity exposure. (1 hour per axis.)

Note 1: ***Environmental Stress Screening (ESS)*** Including random vibration and thermal cycles is also available. **Please consult factory for details.**

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Protections [1]

Input

- **Inrush Current Limiter**
  Peak value of 5 x I_{IN} for initial inrush currents lasting more than 50µSec.
- **Under Voltage**
  Unit shuts down when input voltage drops below 11± 0.5V_{DC}.
  Automatic restart when input voltage returns to 12V Line.

General

- **Over Temperature Protection**
  Automatic shutdown at internal temperature of 95 ± 5°C.
  Automatic recovery when temperature drops below 90 ± 5°C.

Note 1: Thresholds and protections can be modified / removed (please consult factory)

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Functions and Signals - According to VITA 62

Signal No.	Signal Name	Type	Description	Pin No
1	Power Down	Output	Indicates that Holdup event has occurred. Open Drain. Normally Open, goes low during Holdup time.	A3
2	Power Ready	Input	Indicates to other modules that Holdup capacitor bank is Fully charged. Open Drain. Normally Open, goes low when Holdup energy under 90%.	D1
5	GA0, GA1	Input	Used for geographical addressing. GA1 is the most significant bit and GA0 is the least significant bit.	A5,B5
6	SCL, SDA	Bidirectional	I2C bus Clock and Data respectively. Through this bus the voltage and temperature readouts can be shared.	C5,D5

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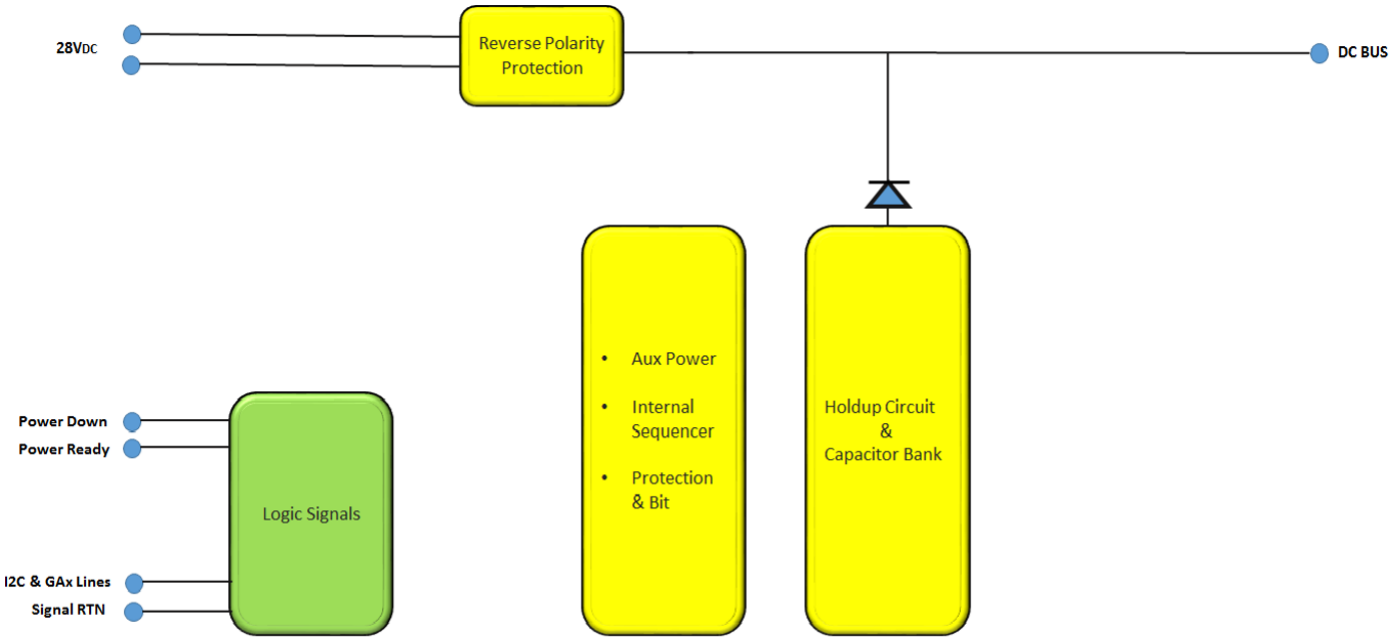
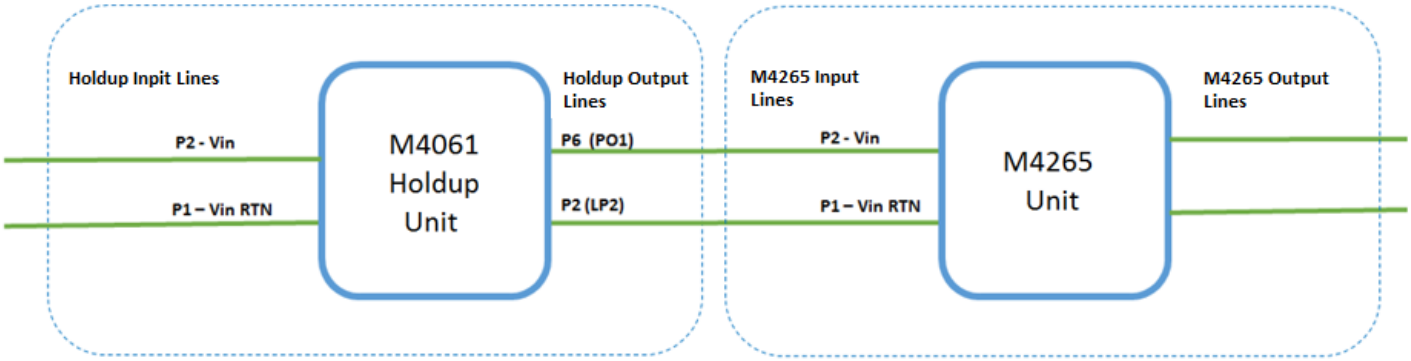
Simplified Block Diagram



Typical Application



Note: Please consult factory for details.

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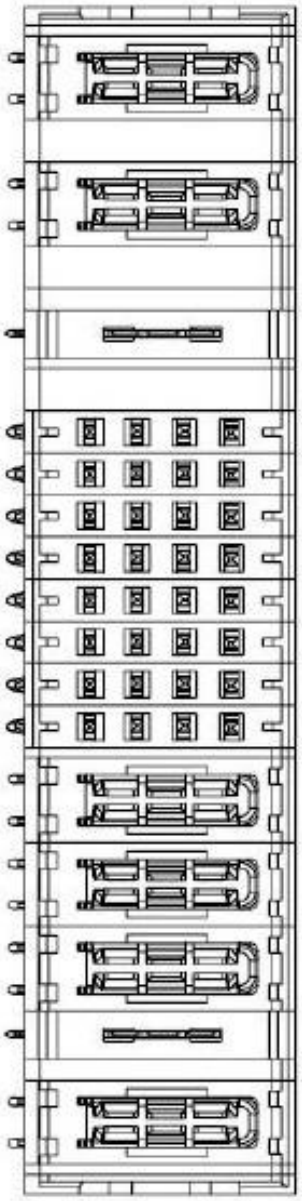
Pin Assignment



PART NUMBER	ROWS	POWER			SIGNAL								POWER				
		P1	P2	LP1	1	2	3	4	5	6	7	8	P3	P4	P5	LP2	P6
6450849-7	D				Z5	Z5	Z5	Z5	Z5	Z5	Z5	Z5					
	C	TT	TT	LT	Y5	Y5	Y5	Y5	Y5	Y5	Y5	Y5	TT	TT	TT	LT	TT
	B				R5	R5	R5	R5	R5	R5	R5	R5					
	A				O5	O5	O5	O5	O5	O5	O5	O1					
2ACP+1LP+32S+3HDP+1LP+1HDP																	

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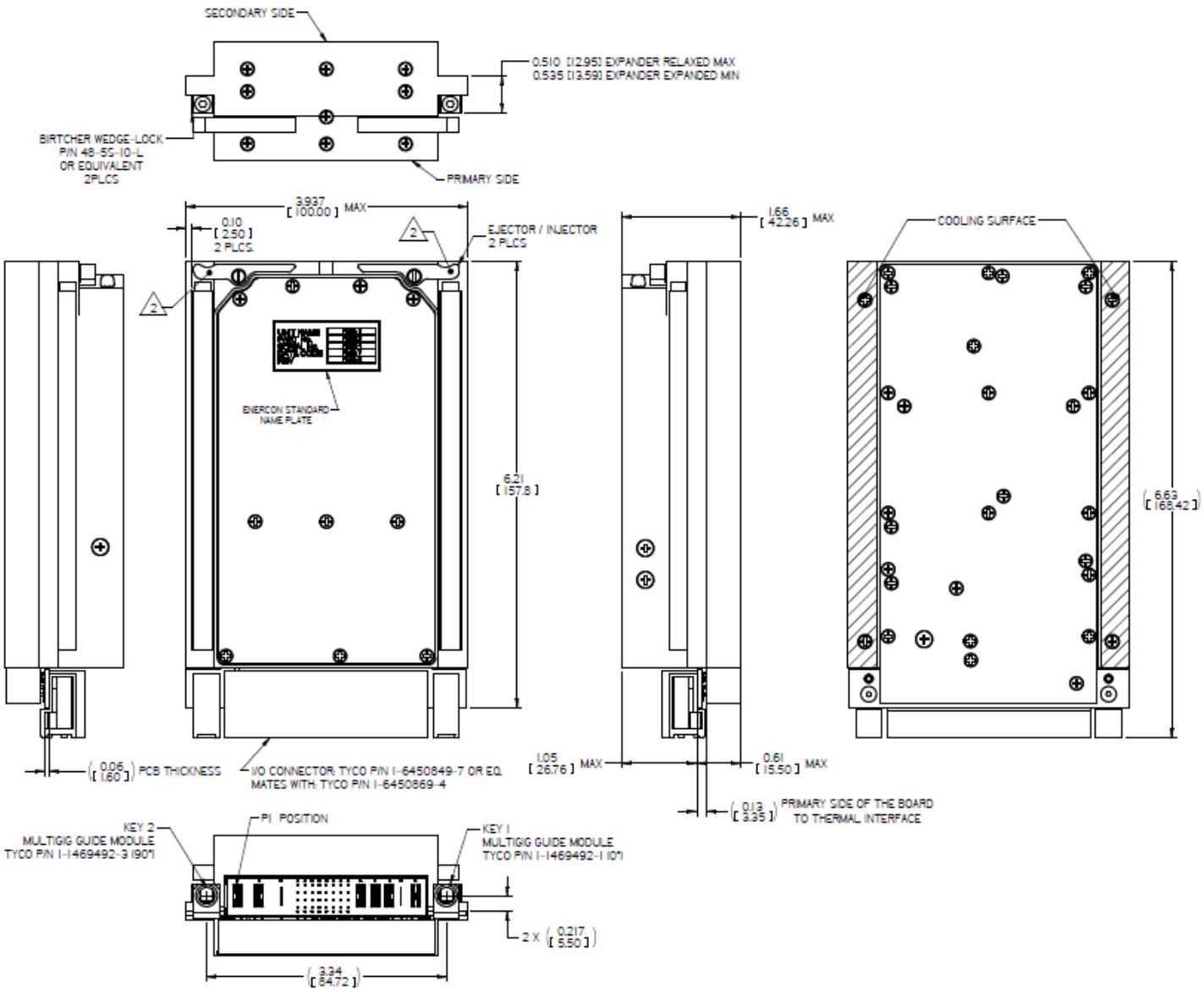
Outline Drawing



Notes

1. Dimensions are in Inches [mm]
2. Tolerance is:
   .XX ± 0.02 IN
   .XXX ± 0.008 IN
3. Weight: Approx. 27 oz [773 g]
4. 3D model available

***Unit does not comply with VITA width / pitch requirement. All other dimensions comply.**

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