

M4061 SERIES

HOLDUP UNIT



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.



Cham, Switzerland
www.enercon-europe.com
enercon@enercon-europe.com
+41-41-740-4554

Global Headquarters

Netanya, Israel
www.enercon.co.il
sales@enercon.co.il
+972-73-246 9200



Gurgaon, India
www.mpsindia.in
sales@mpsindia.in
+91-124-651 0010



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

Environmental¹

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.**



Protections ¹

Input

• **Inrush Current Limiter**

Peak value of $5 \times I_{IN}$ for initial inrush currents lasting more than $50\mu\text{Sec}$.

• **Under Voltage**

Unit shuts down when input voltage drops below $11 \pm 0.5V_{DC}$.
Automatic restart when input voltage returns to 12V Line.

General

• **Over Temperature Protection**

Automatic shutdown at internal temperature of $95 \pm 5^\circ\text{C}$.

Automatic recovery when temperature drops below $90 \pm 5^\circ\text{C}$.

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

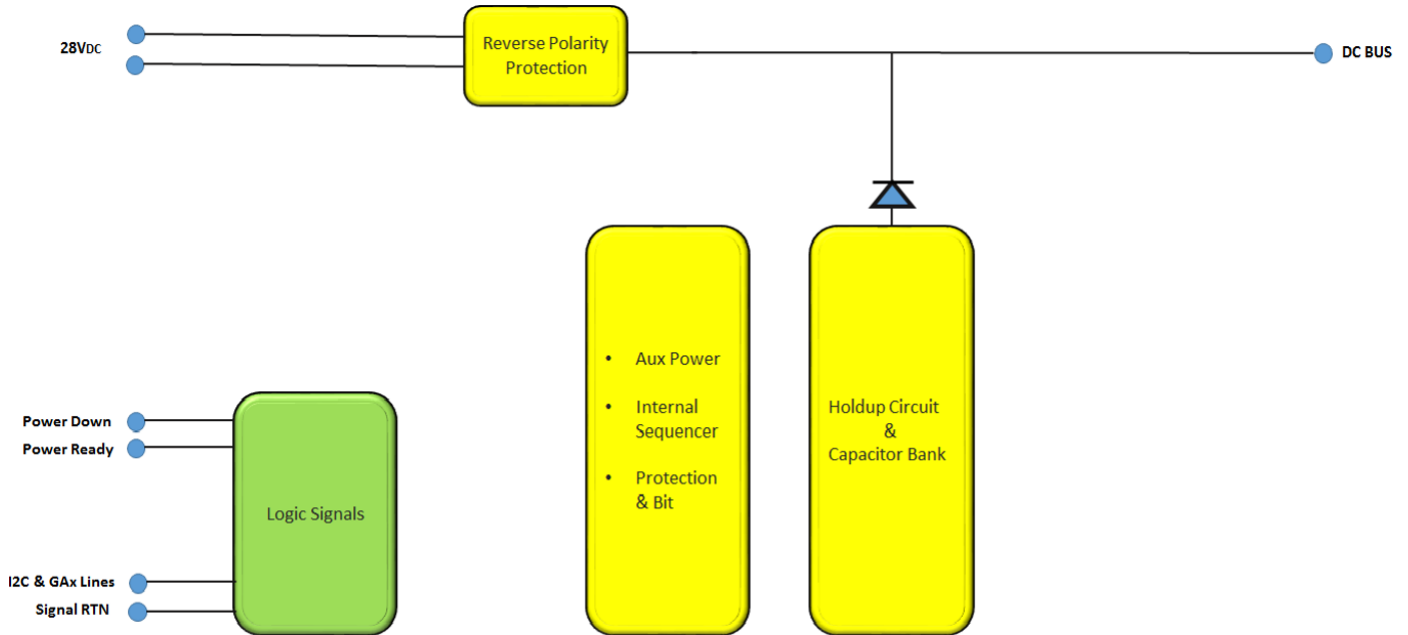


Functions and Signals - According to VITA 62

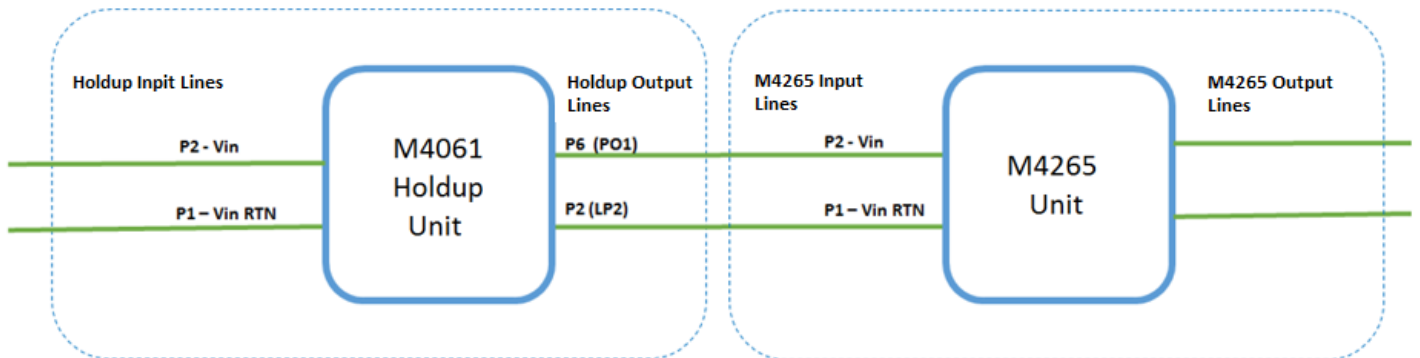
Signal No.	Signal Name	Type	Description	Pin No
1	Power Down	Output	Indicates that Holdup event has occurred. Open Drain. Normally Open, goes low during Holdup time.	A3
2	Power Ready	Input	Indicates to other modules that Holdup capacitor bank is Fully charged. Open Drain. Normally Open, goes low when 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



Simplified Block Diagram



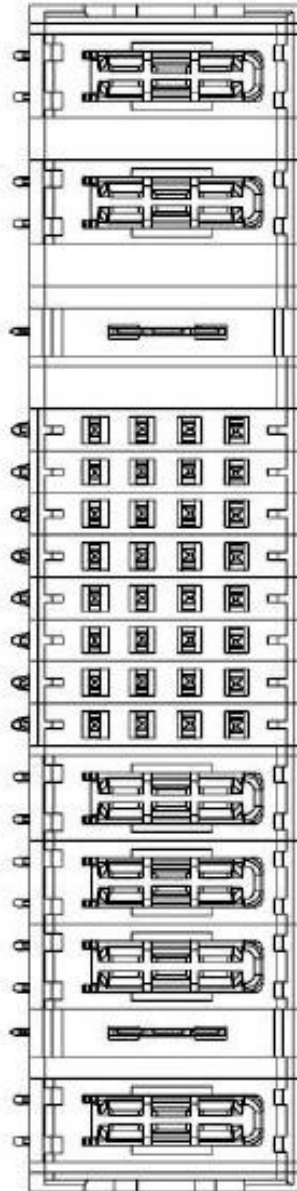
Typical Application



Note: Please consult factory for details.



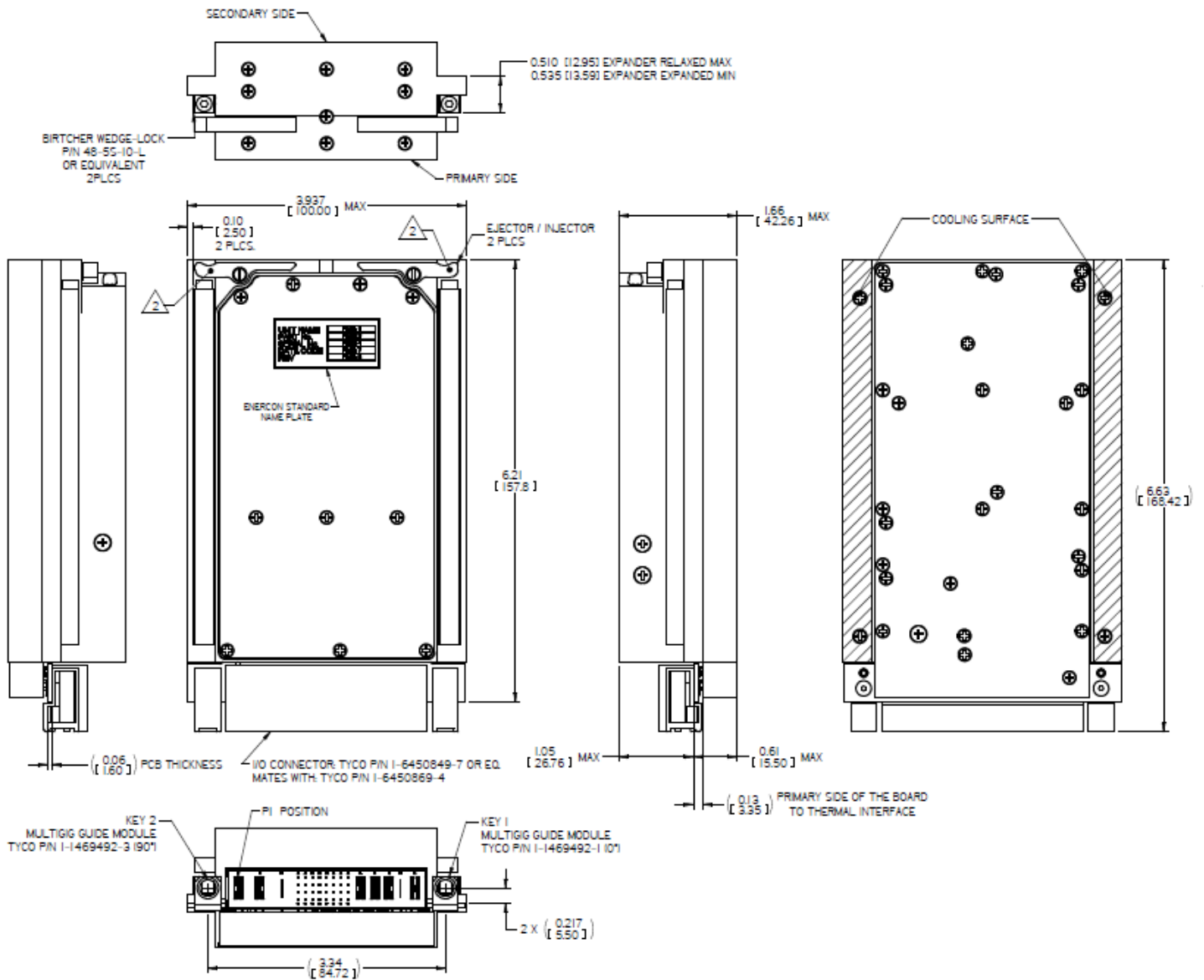
Pin Assignment



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					Y5	Y5	Y5	Y5	Y5	Y5	Y5	Y5						
	B	TT	TT	LT		R5	R5	R5	R5	R5	R5	R5	R5	TT	TT	TT	LT	TT	
	A					05	05	05	05	05	05	05	05						
2ACP+ILP+32S+3HDP+ILP+IHDP																			



Outline Drawing



Notes

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

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