



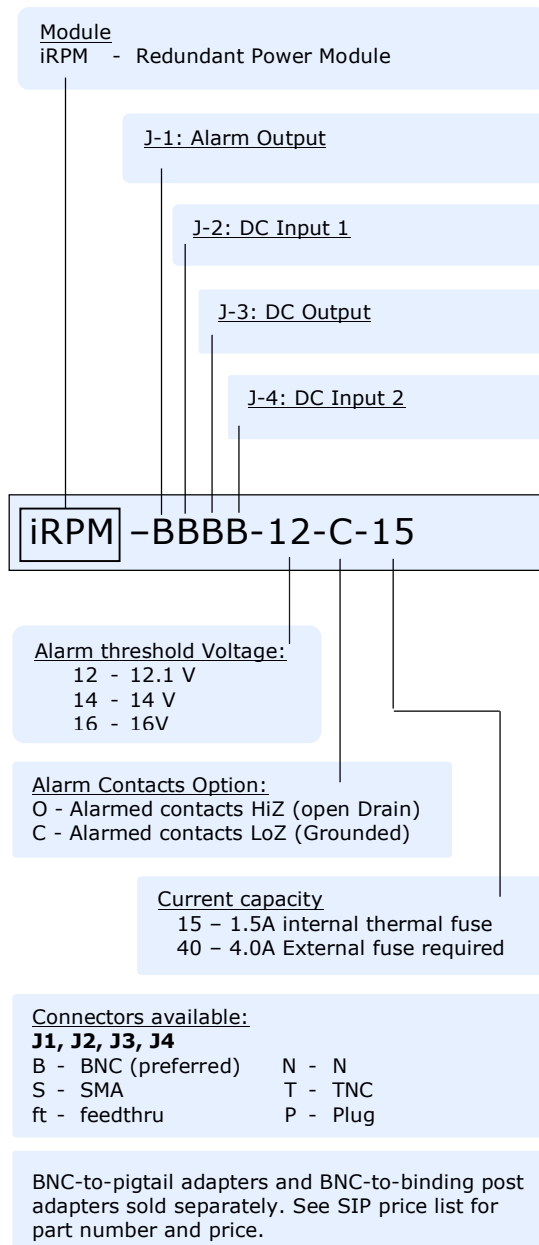
## System Interface Products

### iRPM – intelligent Redundant Power Module



## Redundant Power Inputs, LED indicators

### How to order an iRPM – Redundant Power Module



#### **Orbital Design:**

While modern power supplies are sophisticated designs with superlative performance, they remain the device with the shortest MTBF. To mitigate this threat, Orbital Research introduces the iRPM (Intelligent Redundant Power Module), to provide one for one (1:1) DC power redundancy. This simple low cost module provides an extremely reliable passive method of providing automatic backup power for the majority of satellite system devices. It has two inputs, one for each power supply.

Since the iRPM uses our standard SIP chassis, it integrates easily into stacks, plates or rackmountable chassis with our other modules.

#### **Switch Mechanism**

The Orbital iRPM uses *Ideal Diode FETs* to switch between the primary and backup power supplies. The *Ideal Diodes* have very low resistance and thus have little or no voltage drop from the input to the output.

#### **Alarm**

Alarm output and Status LEDs are used to indicate the stated of the Output Power. The Alarms indicate which voltage input has failed, therefore, allowing replacement of failed power supplies in live systems, avoiding the need to take the entire system off line.

#### **Orbital Features:**

##### **Functional**

- Will operate with Orbital SIP modules, LNBS, BDCs, BUCs, Receivers and Modems
- O-ring sealed connectors and Hylomar sealed enclosure

##### **Structural**

- The system mounts on the back of the rack, out of the way. This makes this product ideal for flyaway systems.
- Diode protection to prevent accidental reverse polarity DC.
- Solid billet milled box and lid.
- Blue Anodized finish, MIL-STD-595
- RoHS & REACH compliant

#### **Sales contact:**

**David Zuvic**

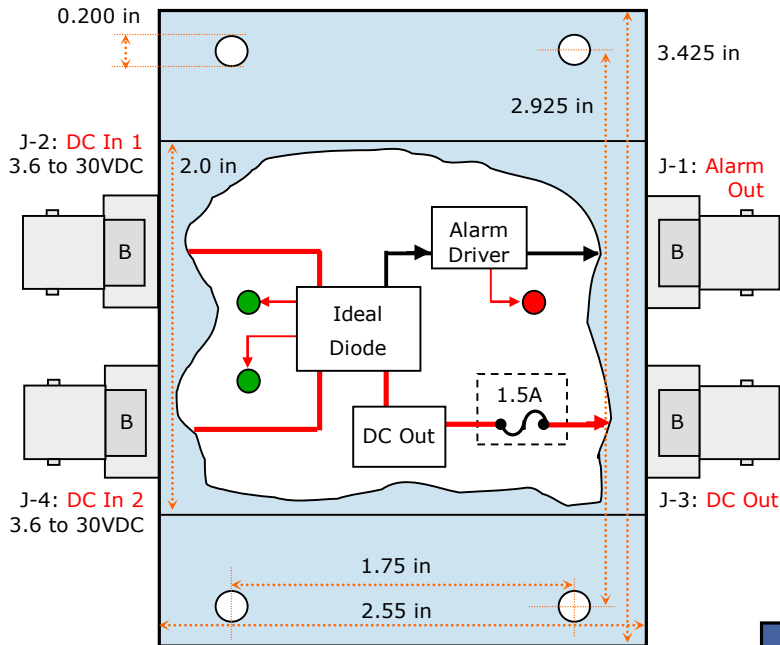
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# SIP: iRPM – Redundant Power Module Specifications

## Orbital iRedundant Power Module Mechanical Dimensions + Functional Block Diagram Viewed from the top



### Electrical Specifications

Power Capacity: 3.6 to 30 VDC,  
1.5 A (standard)  
4.0 A (optional)

Voltage Threshold: 12.1 VDC  
14 VDC, or  
16 VDC

### Operational ALARM Contacts Options:

O: Alarmed contacts HiZ (Open Drain)  
C: Alarmed contact LoZ (Grounded)

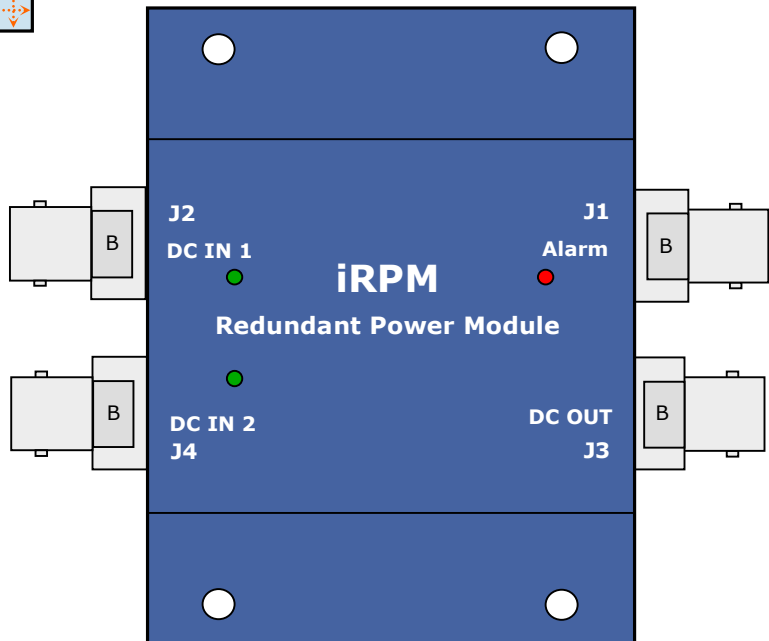
**See Reference Manual for full  
information on Alarm output  
specification and installation.**

### Environmental Specifications

Operating Temp: -40 to +85° Celsius  
Relative Humidity: Up to 100% condensation  
and frost

### Mechanical Specifications

Measurements: Tolerance  $\pm 0.005$  in.  
Size (case): 3.425l x 2.55w x 0.88h in.  
Size (with conn): 3.425l x 3.8w x 0.88h in.  
Weight: 5 oz  
Paint / Color: Blue Anodized finish  
MIL-STD-595  
Mounting holes: 0.200" (5mm)  
Accepts standard  
rackmounting screws:  
10/32 or 10/34  
Compliances: RoHs & REACH Compliant



### Switching Power Supplies

See PS1 or PS2 brochure for ordering  
information

### LED Indicators

Green: Power supply is functioning properly.  
Red – Single Flash Primary power supply is not  
functioning properly (below threshold)  
Red – Double Flash Secondary Power supply is not  
functioning properly (below threshold)

