

ORBIT 60 SERIES Power Input Module

Datasheet

Bently Nevada Machinery Condition Monitoring

163M5233 Rev. A




Description


The Power Input Modules (PIM) always reside in a special-purposed slot located in the first slot of the chassis. This slot accommodates two PIMs for redundancy. At least one PIM must power every chassis, and every chassis requires its own PIMs and power sources. Redundant PIMs and power sources are strongly recommended.


The PIM is a half-height module that connects an external power source to the system. Each Orbit 60 Series chassis supports two stacked redundant power input modules. Failure of one power source does not affect the operation if the system uses both power inputs. The PIM employs out-of-range protection for miswiring, overvoltage, and overcurrent protection for the input power sources.




Power Input Module


Power Input Module (PIM)	
Electrical	
Voltage Input	+21 to +32 Vdc
Current Draw	
6U 19" full load	10.5 Amps @ 24 Vdc
3U 19" full load	7.1 Amps @ 24 Vdc
Out of Range Protection	An undervoltage does not harm the PIM. An overvoltage causes the fuse to open.
Physical	
Width	0.8" (2.03 cm)
Height	5.2" (13.21 cm)
Depth	9.67" (24.56 cm)
Environmental Limits	
Chassis Operating Temperature Range (indoor use only)	3U Chassis: -30°C to +70°C (-22°F to 158°F)  6U Chassis: -30°C to +65°C (-22°F to 149°F) 
Module Temperature Rating - Certification	-30°C to +70°C (-22°F to 158°F) <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">  You must still meet the Chassis Operating Temperature Range defined above. </div>
Storage Temperature Range	-40°C to +85°C (-40° F to 185° F)
Relative Humidity	0% to 95% rH non-condensing operating and storage

Environmental Limits	
Vibration	Without Isolators: 0 g to 0.35 g @ 57-500 Hz With Isolators: 0 g to 5 g @ 57-500 Hz.
Shock	2" Incline Drop
Altitude	< 2000 m (6,562 ft) <div style="border: 1px solid black; padding: 10px; margin-top: 10px;">  Higher altitudes are possible but are site specific applications. Contact Bently Nevada support if you require higher altitudes. </div>
Pollution Degree	Pollution Degree 2
Installation Category	Category II

 Verify that temperature ratings on the wiring cables match the operating temperature range.



CAUTION



LOCATION TEMPERATURE AND HUMIDITY

If you install the hardware in a location where temperatures may exceed 40° C (104° F) or in excessive humidity, you should consider supplying environmental controls. High temperatures will reduce the operational life of the system.

Compliance and Certifications

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

EMC

European Community Directive:
EMC Directive 2014/30/EU

Standards:

EN 61000-6-2; Immunity for Industrial Environments
EN 61000-6-4; Emissions for Industrial Environments

Electrical Safety

European Community Directive:
LV Directive 2014/35/EU

Standards:

EN 61010-1;
EN 61010-2-201;

RoHS

European Community Directive:
RoHS Directive 2011/65/EU

Cyber Security

Designed to meet IEC 62443-4-2

*Maritime

ABS Rules for Condition of Classification, Part 1

- Steel Vessels Rules
- Offshore Units and Structures

* Approvals pending

Functional Safety

This component is non-interfering with the safety system. The system SIL 2 certification does not require this component be SIL certified.

Hazardous Area Approvals



For the detailed listing of country and product-specific approvals, refer to the [Approvals Quick Reference Guide \(108M1756\)](#).

For additional technical documentation, please log in to bntechsupport.com and access the Bently Nevada Media Library.

cNRTLus

Class I, Zone 2: AEx/Ex ec nC IIC T4 Gc;
Class I, Zone 2: AEx/Ex nA nC IIC T4 Gc;
Class I, Division 2, Groups A, B, C, D T4;
Class I, Division 2, Groups A, B, C, D T4 (N.I.);

T4 @ Ta= -30°C to +70°C (-22°F to +158°F)

ATEX/IECEx



Ex II 3 G
Ex ec nC IIC T4 Gc
Ex nA nC IIC T4 Gc

T4 @ Ta= -30°C to +70°C (-22°F to +158°F)

Ordering Information



For the detailed listing of country and product-specific approvals, refer to the [Approvals Quick Reference Guide \(108M1756\)](#).

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Two PIM modules are included with the Orbit 60 Chassis.



Specific PIM modules are exclusively used with either the 3U or 6U chassis. The 3U and 6U PIMs are not interchangeable.

3U Power Input Module

Ordering Option	Description
60R/PIM01-AAA-B • Power Input Module	
AAA – Hazardous Area Certifications	
00	No Hazardous Area
01	CSA/NRTL/C (Class I, Div 2)
02	Multi (CSA, ATEX, IECEx)
XXX	Country Specific Approvals
B – SIL Level	
0	No SIL

6U Power Input Module

Ordering Option	Description
60R/PIM02-AAA-B • Power Input Module	
AAA – Hazardous Area Certifications	
00	No Hazardous Area
01	CSA/NRTL/C (Class I, Div 2)
02	Multi (CSA, ATEX, IECEx)
XXX	Country Specific Approvals
B – SIL Level	
0	No SIL

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