TYPE 400, SINGLE-POSITION, GENERAL-PURPOSE O3D3-RT REVB MOUNTING

INSTALLATION GUIDE

CLEI™ Code SOM1200G

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Figure 1: O3D3-RT REVB (Front and Rear Views)

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1 INTRODUCTION

This technical manual provides installation instructions for the Pulsecom® Type 400, Single-Position, General-Purpose O3D3-RT REVB Mounting, shown in Figure 1. Engineering references are included.

1.1 Reason for Reissue

This mounting is released to full production.

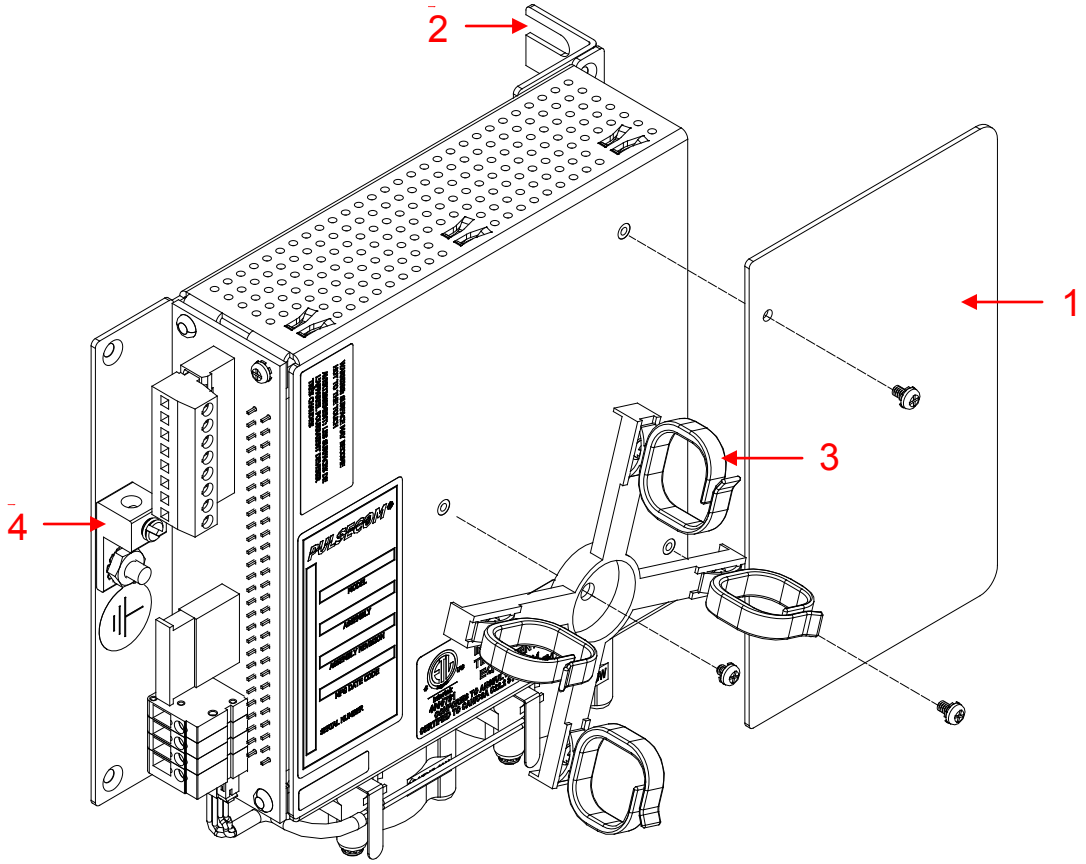
1.2 Description

The O3D3-RT REVB and its optional parts are described in Table 1. The O3D3-RT REVB mounts to a rack or on a wall and houses one Type 400 or 200 Mechanics® module such as those described below:

- O3-12D1D or O3-12D1i modules derive twelve DS1 circuits from an OC3 synchronous optical network (SONET) optical facility.
- O3-4D1B modules derive four DS1 circuits from an OC3 SONET optical facility.
- O3-12D1G uses a bookend configuration to derive twelve DS1 circuits and four 500Mb Ethernet circuits from an optical facility.
- SuperG modules are deployed to derive twelve DS1 circuits and four GigE circuits from an optical facility.
- O3D3-MO modules are designed to derive one DS3 circuit from an OC3 SONET optical facility.
- O3-3D3D modules are designed to derive three DS3 circuits from an OC3 SONET optical facility.
- The Program Channel Access Unit (PCAU) derives a high-fidelity audio circuit from a 64 kbps or 128 kbps data link transported over a twisted pair to a standard two binary one quaternary (2B1Q) U-Interface line card.

Table 1 — Mounting Information

Model	Description	CPR
O3D3-RT REVB	Single-Position, General-Purpose Housing	201617
O3D3-RT SPOOL	Optional Cable/Fiber Management Spool Kit	099999



Number	Component Locations
1	Fiber Guard
2	Rack Mounting Bracket
3	Optional Fiber Spool (see Table 1)
4	Frame Ground Lug

Figure 2: O3D3-RT REVB (Shown with Fiber Guard, Rack Mounting Bracket, and Optional Fiber Spool)

1.3 Features

The mounting provides the following features:

- Standard support for Type 400 or 200 Mechanics plug-ins to provide inexpensive installation in digital loop carrier (DLC) remote terminal (RT) or customer premises equipment (CPE) applications
- GR-3108 Class 3 climate-hardened for unrestricted deployment in outside plant (OSP) cabinets
- Universal configuration that provides for simple card installation on a wall or 19" or 23" rack, with 1" or 1.75" mounting hole spaces and left or right mounting
- Integral mechanical cable/fiber management (see Table 1 for optional fiber spool)
- Integral fuse protection
- 24 VDC or –48 VDC redundant power inputs
- Operating temperature: –40° to 70°C (–40° to 158°F)

2 INSTALLATION

WARNING

This mounting includes components that are susceptible to damage from static electricity. DO NOT handle without protection from electrostatic discharge.

AVERTISSEMENT

Ce montage inclut les composants qui sont susceptible pour endommager de l'électricité statique. Ne manipulez (traitez) pas sans protection de la décharge électrostatique.

Per GR-1089-CORE May 2011, Section 9.8, battery return (BR) of the O3D3-RT REVB does not have any internal connection to the frame and, therefore, can be used in either DC-C (common bonding and grounding systems) or DC-I (isolated bonding and grounding systems). The chassis ground wire must be at least as large as the wire used for the BR.

The O3D3-RT REVB can be mounted on a wall or in a rack.

Whether rack- or wall-mounted, the Fiber Guard included with the O3D3-RT REVB should be installed as shown in Figure 2 to help prevent violation of fiber bend radius guidelines. Be sure to use the supplied screws. The fiber guard and rack mounting ears can be reversed to permit mounting on either side of a cabinet or rack.

An optional Fiber Spool Kit (see Table 1) is available to manage excess fiber jumper slack. If ordered, it should also be mounted using the special short screw supplied with the kit as shown in Figure 2.

2.1 Wall Mount

Follow Procedure 1 to mount the O3D3-RT REVB on a wall. See Figure 3.

Procedure 1. Mounting the O3D3-RT REVB on a Wall

STEP	ACTION
1	Select a mounting location near a suitable power source.
2	Obtain four #6–32 flathead screws for mounting to a backboard or, if required, mounting directly to a wall. (Wall mounting hardware is not supplied.)
3	If already installed, remove the fiber guard and retain the two screws for use in Step 9.
4	Remove the rack mounting bracket and hold the O3D3-RT REVB against the wall in the desired mounting position. ***NOTE**: The supplied rack mounting bracket is not used for wall installation.*
5	Trace the outline of the mounting holes with a pencil.
6	Temporarily set the O3D3-RT REVB aside.
7	Drill holes for the appropriate mounting hardware. ***WARNING:** Avoid hitting pipes or wires in the wall when drilling.*
8	Fasten the O3D3-RT REVB to the wall.
9	Reattach the fiber guard using the two screws from Step 3. ***NOTE**: For ease of access, re-attachment of the fiber guard can be delayed until plug-in card has been installed and turn-up is complete.*

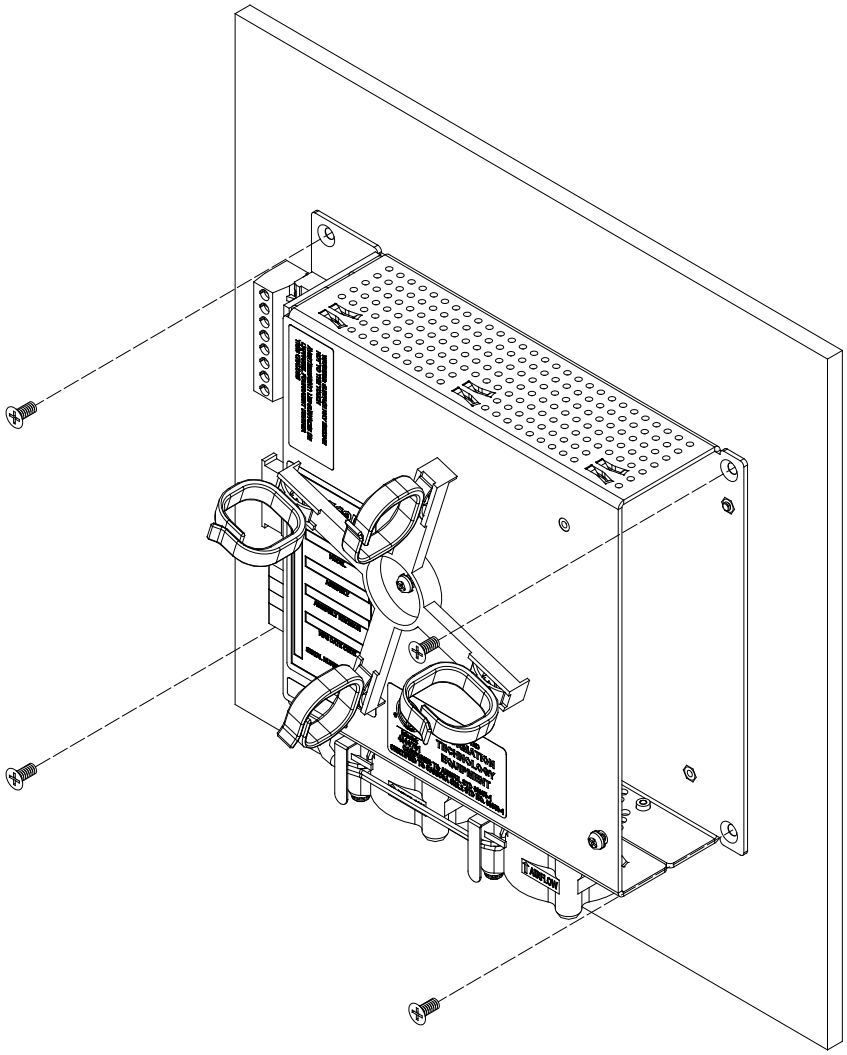


Figure 3: O3D3-RT REVB Installation on a Wall
(Shown with Optional Fiber Spool)

2.2 Rack Mount

Follow Procedure 2 to mount the O3D3-RT REVB in a rack. See Figure 4.

Procedure 2. Mounting the O3D3-RT REVB on a Rack

STEP	ACTION
1	Obtain two #12–24 machine screws, two #12 lock washers, and two #12 flat washers for rack mounting. (Rack mounting hardware is not supplied.)
2	The O3D3-RT REVB is equipped with a movable rack mounting bracket to permit placement on the left or right side of a 19" or 23" rack. If required, remove screws to reposition the rack mounting bracket, the fiber guard, and fiber spool. ***WARNING:*** *To prevent possible damage to module installed in the housing, use only the supplied screws.*
3	Put a #12 lock washer and then a flat washer on each rack mounting screw.
4	Hold the O3D3-RT REVB in the desired position. Allow a minimum of 1" above and below the mounting for optimum heat dissipation.
5	Line up two holes in the O3D3-RT REVB rack mounting brackets with holes in the equipment rack. Then use two screws with lock and flat washers to secure the mounting bracket to the equipment rack.
6	Tighten the screws.

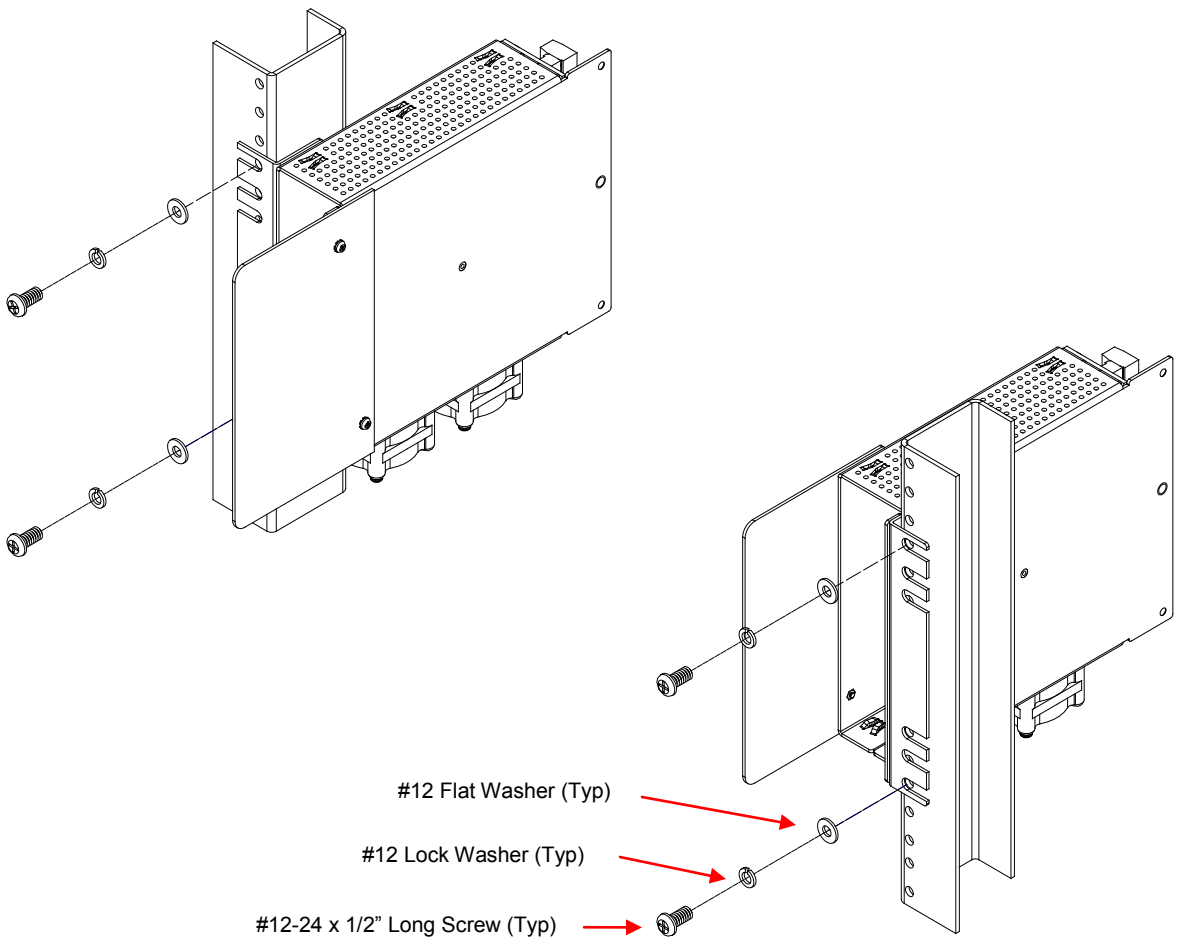


Figure 4: O3D3-RT REVB Installation in a Rack
(Left and Right Rack Mounting Positions Shown)

2.3 Ground, Power, and Optional Alarms

Follow Procedure 3 to connect power, ground, and optional alarms as shown in Table 2 and Figure 5.

Procedure 3. Making Ground, Power, and Optional Alarm Connectors

STEP	ACTION
1	Be sure the mounting does not have power. ***NOTE**: Power to the O3D3-RT REVB can be removed by disconnecting the power source or by removing the fuse for the lead that will power the mounting.*
2	Connect a frame ground lead to the frame ground stud using 6 AWG. The frame ground lug accepts from 14 to 6 AWG. See Figure 2.
3	Referring to Figure 5, connect the negative side of the 24 VDC or 48 VDC supply to the – A PWR terminal (TB1), and connect the positive side of the supply to the + A PWR terminal. 22 AWG wire is recommended (22 AWG minimum, 14 AWG maximum).
4	If a redundant supply is used, connect the negative side of the 24 VDC or 48 VDC supply to the – B PWR terminal (TB1), and connect the positive side of the supply to the + B PWR terminal.
5	If desired, make DC alarm connections to the T/R and the T1/R1 P3 terminals. 22 AWG wire is recommended (22 AWG minimum, 14 AWG maximum). See Table 2. Refer to the plug-in unit's manual for alarm definition or, in the case of the PCAU, audio and facility connections.
6	Be sure that a 1.5A GMT™ fuse is installed before applying power. See Figure 5.
7	Apply power. ***NOTE**: Power to the mounting can be restored by reconnecting the power source or by re-inserting the fuse.*

Table 2 — Connections

Connection			Function
⏚			#6 Ground wire connection.
TB1	A PWR	–	Screw terminal for negative input A-side power connection.
		+	Screw terminal for positive input A-side power connection.
	B PWR	–	Screw terminal for negative input B-side power connection.
		+	Screw terminal for positive input B-side power connection.
P3		T – 55	PCAU analog program audio input. Refer to plug-in Practice.
		R – 49	
		T1 – 41	Low speed DC alarm contacts; PCAU network 2B1Q. Refer to plug-in Practice.
		R1 – 47	
		T1 – 5	PCAU analog program audio output. Refer to plug-in Practice.
		R1 – 15	
		T – 7	Optical facility DC alarm contacts. Refer to plug-in Practice.
		R – 13	
J2			Connector for twin fans.
F1			1.5 Amp GMT fuse.

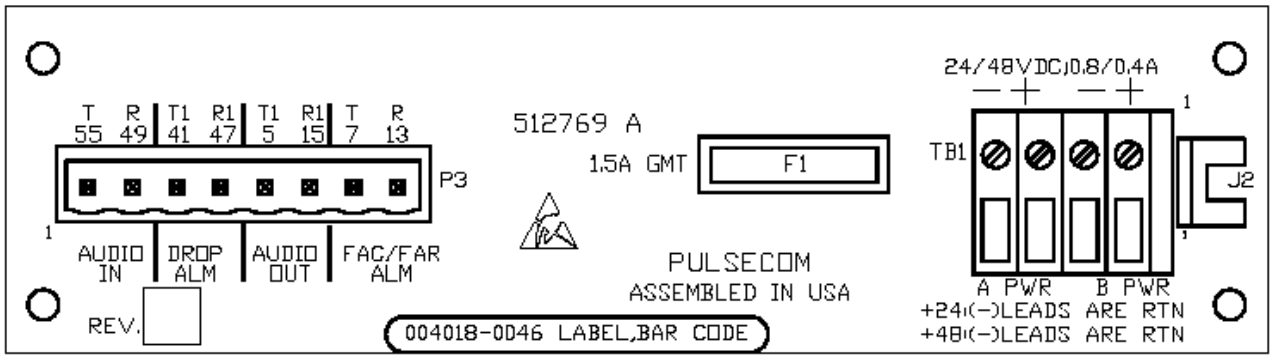


Figure 5: O3D3-RT REVB Connections

2.4 Install Plug-In Card

Follow the steps in Procedure 4 to install the plug-in card and complete the installation.

Procedure 4. Installing the Plug-In Card

STEP	ACTION
1	Refer to the appropriate Practice for specific module installation instructions.
2	Plug in the module and connect cables as required. ***WARNING:*** *When connecting fibers, use care to avoid violating fiber bend radius guidelines.*

DANGER

As the ambient temperature rises to the O3D3-RT REVB maximum operating temperature of 70 degrees C, outside surfaces of the O3D3-RT REVB may become too hot to the touch.

AVERTISSEMENT

Quand la température ambiante atteint 70 dégrée Celsius, les surfaces de l'O3D3-RT REVB pourrait devenir trop chaudes pour toucher avec les mains.

3 SPECIFICATIONS

Table 3 lists the electrical and physical specifications for the O3D3-RT REVB.

Table 3 — O3D3-RT REVB Specifications

Description	Specification
A. Power Requirement	
Input Power a) Maximum current b) Voltage range	 700 mA −42.0 VDC to −56.7 VDC or 21 to 28.5 VDC
Alarm Contact Ratings a) Nominal (resistive) b) Maximum (resistive)	 1A at 30 VDC 100 VDC
B. Environmental	
Temperature Range, Operating and Storage	−40° to +70°C (–40° to 158°F)
Relative Humidity, No Condensation	95% maximum
Size a) Height b) Width (excluding rack mount bracket) 1) Without spool 2) With spool c) Length 1) Without fiber guard 2) With fiber guard	 6.7 inches 1.7 inches 3.2 inches 6.9 inches 9.7 inches
Weight a) Unit with fiber guard b) Optional spool	 1 pound 1 ounce
C. Fan Operation	
Fan ON	40°C ± 5°C (104°F ± 9°F)
Fan OFF, Minimum	20°C ± 1°C (68°F ± 2°F)

4 MAINTENANCE

No routine maintenance is required.

To obtain replacement parts, see Table 4.

Table 4 — Replacement Parts

Part Number	Description
003337-0150	Fuse, 1.5A GMT
O3D3-RT REVB FAN	Replacement Fan Assembly

5 CUSTOMER SERVICE

Direct any questions concerning the operation of the mounting to Pulsecom Technical Support.

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