## SYMBOL DEFINITIONS

The following table lists the symbols used in this document to denote certain conditions:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>![i]</td>
<td>ATTENTION: Identifies information that requires special consideration</td>
</tr>
<tr>
<td>![&gt;][2]</td>
<td>TIP: Identifies advice or hints for the user, often in terms of performing a task</td>
</tr>
<tr>
<td>![参考]</td>
<td>REFERENCE _ INTERNAL: Identifies an additional source of information within the bookset.</td>
</tr>
<tr>
<td>![注意]</td>
<td>CAUTION: Indicates a situation which, if not avoided, may result in equipment or work (data) on the system being damaged or lost, or may result in the inability to properly operate the process.</td>
</tr>
<tr>
<td>![注意]</td>
<td>Indicates a situation where users must observe precautions for handling electrostatic sensitive devices.</td>
</tr>
<tr>
<td>![警告]</td>
<td>CAUTION: Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.</td>
</tr>
<tr>
<td>![警告]</td>
<td>WARNING: Indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.</td>
</tr>
</tbody>
</table>
OP8640 SAFETY PANEL

INTRODUCTION

The OP8640 is an emergency shutoff safety panel that allows immediate shutoff of any device connected to it. Up to three devices can be connected to the OP8640. The standard configuration includes a breaker interface for 2 devices; the third connection interface is optional.

It is designed to fit into any standard rack, with connectors at the back and the interface in the front.

The OP8640 Safety Panel is equipped with an interface that makes fast response easier.

![Diagram of OP8640 safety panel, front view](image)

Figure 1: OP8640 safety panel, front view

FRONT INTERFACE

A. ON/OFF switch; allows you to power the OP8640 on or off.
B. 24V breaker: internal power supply breaker that provides a reset function in case of internal short circuit.
C. POWER ON: when this LED is on when the OP8640 is powered up and functioning.
D. Breakers and LEDs: breakers trip in case of any short-circuit. LED for each breaker shows the condition for the connected device (L1 or L2).
   *The OP8640 can control up to 3 devices, however the standard configuration contains only L1 and L2. L3 is optional and must be requested at time of order.
E. EMERGENCY STOP: this button allows operators to interrupt power to all connected devices immediately. Once pressed, the button can be reset simply by twisting it to release.
BACK INTERFACE

There is no specific connection order to respect when connecting device to the OP8640. However, if only one device is connected, it must be connected to L1 OUT.

The back of the OP8640 Safety Panel is equipped with a connection interface that makes it easy to connect devices under test and other cables:

A. Lx OUT: numbered 1 through 3, these allow operators to plug the units under test to the OP8640.
B. EXTERNAL SWITCHES: lets operators connect a remote switch to the device (useful when working at a distance from the device while needing to maintain control in emergency situations) or to connect a switch to rack doors for safety reasons.
C. AUX CONTACTS: screw terminals allow operators to connect to external monitoring devices. An "contact" signal indicates the line is open and the equipment under test is powered off, a "not connected" signal indicates the line is closed and the connected unit is powered up.
D. Lx IN: numbered 1 through 3, these connect the OP8640 to a wall (or other) power outlet. Switches above each plug let operators control power input directly on the OP8640, rather than unplugging from the power outlet.

CONNECTION AND OPERATION

There is no specific sequence to respect for connecting devices to the OP8640. The following connections may be performed in any order:

- Connect all applicable devices to the L1, L2 or L3 OUT plugs (if there is only one device, it must be plugged into L1 OUT).
- Plug power cables into corresponding to Lx OUT connections used (if a device is plugged into L1 OUT, then a power cable must be connected to L1 IN) and to a power outlet (wall or other).
- Connect the ground wire to the ground connector (see item C in Figure 2).
- If applicable, connect the remote control cable to the EXTERNAL SWITCHES terminal and turn the Bypass switch to on.
- If applicable, connect external monitoring devices to AUX CONTACTS terminals.
While in use, if the operator fears that the external devices may be damaged or that fault conditions exist, they need simply to press on the EMERGENCY STOP button to interrupt all power to the devices that are connected.

When conditions return to normal, the breakers must be reset and the EMERGENCY STOP button must be twisted to release the button.

### OP8640 SPECIFICATIONS

<table>
<thead>
<tr>
<th>Product name</th>
<th>OP8640 Safety Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>120/240 VAC</td>
</tr>
<tr>
<td></td>
<td>50-60 Hz</td>
</tr>
<tr>
<td>Circuit breakers</td>
<td>Standard 15 A breakers</td>
</tr>
<tr>
<td>24 V breaker</td>
<td>Maximum 24 V input capacity breaker</td>
</tr>
<tr>
<td>Power connectors</td>
<td>NEMA 5-15 P/NEMA 5-15R</td>
</tr>
<tr>
<td>Monitoring connectors</td>
<td>Screw terminal</td>
</tr>
<tr>
<td>Dimensions (HxWxD)</td>
<td>13.5 x 48.26 x 33 cm (5.25” x 19” x 13”)</td>
</tr>
<tr>
<td>Weight</td>
<td>9 to 14 kg, depending on options installed.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>10 to 40 °C (50 to 104°F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-55 to 85°C (-67 to 185°F)</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 to 90% non-condensing</td>
</tr>
<tr>
<td>Maximum altitude</td>
<td>2000 m (6562 ft.)</td>
</tr>
</tbody>
</table>
LIMITED WARRANTY

Limited Warranty

OPAL-RT Technologies Inc. warrants to the original purchaser and/or ultimate customer (“Purchaser”) of OPAL-RT products (“Product”) that if any part thereof proves to be defective in material or workmanship within one (1) year, such defective part will be repaired or replaced, free of charge, at OPAL-RT Technologies’ discretion, if shipped prepaid to OPAL-RT Technologies Inc. at 1751 Richardson, suite 2525, Montreal, Quebec, Canada, H3K 3G6, in a package equal to or in the original container. The Product will be returned freight prepaid and repaired or replaced if it is determined by OPAL-RT Technologies Inc. that the part failed due to defective materials or workmanship. Otherwise, the fees will be charged to the client (see article “Warranty Limitation and Exclusion”). The repair or replacement of any such defective part shall be OPAL-RT Technologies’ sole and exclusive responsibility and liability under this limited warranty.

Purchaser must request an RMA number before shipping any Product for repair:

1. Access the OPAL-RT website (www.opal-rt.com/support/return-merchandise-authorization-rma-request), click on support and select Return Merchandise (RMA).
2. Fill out the online form and submit.
3. OPAL-RT’s Support department will evaluate the return and either issue an RMA number via email
   - If the Product is returned for repair more than 12 months after purchase, the Purchaser is responsible for the cost of repair. OPAL-RT will assess the repair and prepare a quote. The RMA number will be sent with the quote.
4. Only when the Purchaser receives the RMA number, may they ship the Product, prepaid, to OPAL-RT.

Return Policy

The following fees will apply when customers return products for credit:

A full credit, less a 15% fee and less return fee will only be issued if the product is in perfect working condition and if the product is returned within 1 month following the shipping date. If repairs are required on the returned product, the cost of these repairs will be deducted from the credit to be issued.

No credits will be issued beyond the one month period.

Exclusions

If third party products are part of the Product, OPAL-RT will honor the original manufacturer’s warranty.

This limited warranty does not cover consumable items, such as batteries, or items subject to wear or periodic replacement, including lamps, fuses or filter elements.
Warranty Limitation and Exclusion

OPAL-RT Technologies will have no further obligation under this limited warranty. All warranty obligations of OPAL-RT Technologies are void if the Product has been subject to abuse, misuse, negligence, or accident or if the Purchaser fails to perform any of the duties set forth in this limited warranty or if the Product has not been operated in accordance with instructions, or if the Product serial number has been removed or altered.

Disclaimer of Unstated Warranties

The warranty printed above is the only warranty applicable to this purchase. All other warranties, express or implied, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose are hereby disclaimed.

Limitation of Liability

It is understood and agreed that OPAL-RT Technologies' liability, whether in contract, in tort, under any warranty, in negligence or otherwise shall not exceed the amount of the purchase price paid by the purchaser for the product and under no circumstances shall OPAL-RT Technologies be liable for special, indirect, or consequential damages. The price stated for the product is a consideration limiting OPAL-RT Technologies' liability. No action, regardless of form, arising out of the transactions under this warranty may be brought by the purchaser more than one year after the cause of actions has occurred.