

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.

Description

Powerex Sleep Lab Panel components are cleaned for use with oxygen. Each inlet and outlet DISS assembly is tested for leakage. Each unit is designed and built in accordance with the National Fire Protection Association and Compressed Gas Association guidelines.

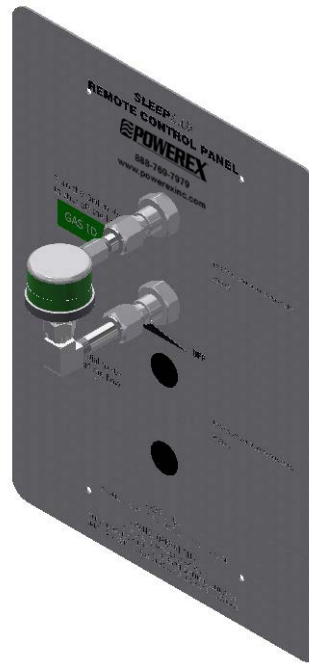
The installation and maintenance should be conducted in accordance with NFPA 99 or CSA Z7396.1.

Features & Benefits

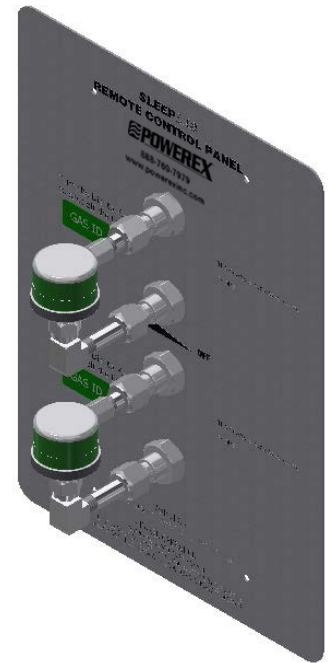
- Five year parts and one year labor warranty
- Provides 50 psi (3.4 bar) – Oxygen Source
- Check Valve Risers – allow easy service
- Sleep Lab Panels meet or comply with NFPA 99 Standards – simplifying connections and reducing cost
- Easy to service layout/design
- Flowmeter control panel incorporates dial adjustment
- Ease of maintenance
- DISS gas specific connections
- Single flowmeter panel
- Dual flowmeter panels

Contents

Features & Benefits	1
Introduction	2
Major components	3
Installation	5
Installation of Inlet & Outlet DISS	5
Sleep Lab Panel Installation	5
Maintenance	6
Flowmeters	7
Operating Instruction	7
Cleaning/Maintenance	7
Troubleshooting Guide	8
Appendix A Technical Specifications	10
Terms & Warranty	11
Technical Assistance	1-888-769-7979



PX-SLP-1 Sleep Lab Panel



PX-SLP-2 Sleep Lab Panel

Safety Guidelines

This manual contains information that is very important to know and understand. This information is provided for SAFETY and to PREVENT EQUIPMENT PROBLEMS. To help recognize this information, observe the following symbols.

⚠ DANGER Danger indicates an imminently hazardous situation which, if not avoided, WILL result in death or serious injury.

⚠ WARNING Warning indicates a potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

⚠ CAUTION Caution indicates a potentially hazardous situation which, if not avoided, MAY result in minor or moderate injury.

NOTICE Notice indicates important information, that if not followed, may cause damage to equipment.

NOTE: Note indicates information that requires special attention.

Installation

Installation of the Inlet & Outlet DISS Assemblies

Inlet and outlet DISS assemblies must be installed in accordance with NFPA 99 or CSA Z7396.1. An internal nitrogen purge must be used during the brazing operation. The purge gas should flow away from the DISS body. Brazing alloys per appropriate standards must be used. Before brazing, wet rags must be wrapped around the tube extensions next to the DISS body to prevent overheating and possible damage to the DISS O-ring seals. Direct the flame away from the DISS body. The DISS body temperature must not exceed 300°F to prevent damaging the O-ring seals.

The system must be tested (per appropriate standards) to ensure that no cross-connections have been made.

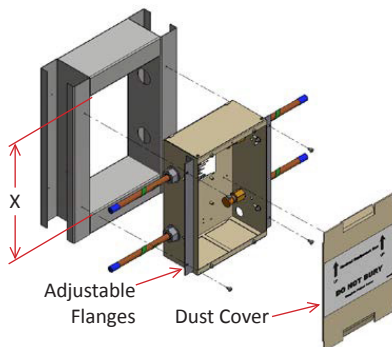
The system must be tested (per appropriate standards) for leaks.

Note: Pressure in the system will increase or decrease with temperature rise or fall.

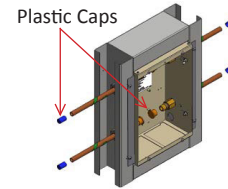
⚠ WARNING *Miss-connection of the gases could lead to serious or fatal injury to patients. Following installation, DISS connections must be tested for cross-connection (per appropriate standards) to ensure that the intended services are correctly connected to the appropriate service lines.*

Sleep Lab Panel Installation

1. Powerex Sleep Lab Panels may be plumbed in either direction – with the patient (use) side on the left or the right. This saves the plumber time and money.
2. The rough-in (back box) is shipped with a cardboard dust cover installed. You will need to remove the dust cover to install the rough-in and perform the pressure test. The dust cover should be re-installed after the pressure test to protect the DISS connections until the wall covering (drywall, paint etc.) is complete.
3. The DISS risers are shipped loose and must be installed in the back box.
4. Adjustable depth mounting flanges (top & bottom) should be utilized to align front edge of box to be flush with the drywall surface.



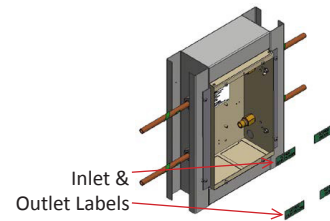
5. The center of the rough-in box should be 60" in height above the finished floor. Fasten the back box to horizontal braces installed between the studs so that the front edge of the rough in box will be flush or slightly recessed with the finished wall covering.
6. Before brazing, remove the plastic tube caps from the DISS assembly (risers) copper extensions. DISS assemblies must be installed in accordance with "Installation of Inlet and Outlet DISS Assemblies" above.



7. The system must be tested (per appropriate standards) to ensure that no cross-connections have been made. The system must be tested (per appropriate standards) for leaks.

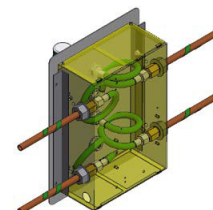
Note: Pressure in the system will increase or decrease with temperature rise or fall.

8. After the system passes the leak test, install the labels provided in the back box paying careful attention to the direction of the gas flow (left to right, or right to left). The direction of flow affects where you place Inlet and Outlet Labels in the back box.

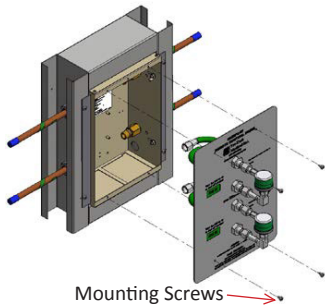


9. After the wall covering is complete, the dust cover may be removed from the rough-in box and the hose assemblies and front panel may be installed.
10. Make sure the hose assemblies are attached to the appropriate inlet/flow meter connection point, and outlet/flow meter connection point. Failing to do so may affect the patient and the sleep lab test results.

Note: Sleep Lab Panels may be plumbed in either direction – with the patient (use) side on left or the right.



- When all connections are complete and leak tested with an oxygen compatible leak test solution, fasten the sleep lab front panel to the back box with the four #8-32 x 3/4" screws provided.



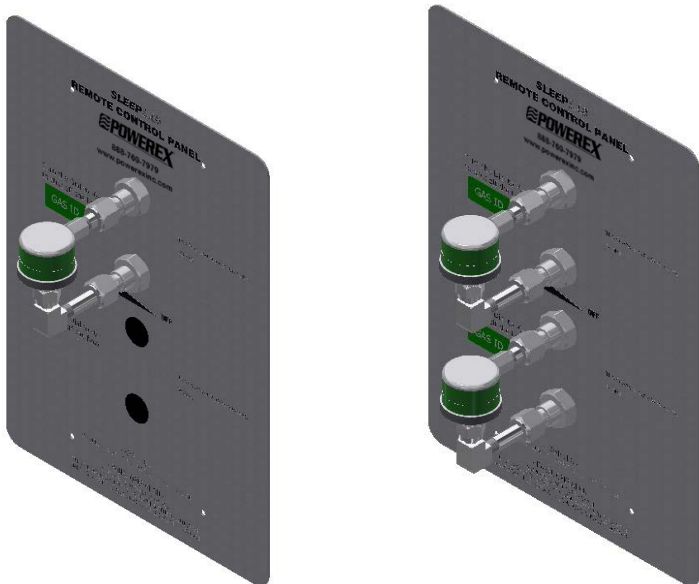
- On the front panel, label each flowmeter in the space provided with the sleep room it controls (label not provided). See Appendix A.

⚠ WARNING *Miss-connection of the gases could lead to serious or fatal injury to patients. Following installation, DISS connections must be tested for cross-connection (per appropriate standards) to ensure that the intended services are correctly connected to the appropriate service lines.*

⚠ WARNING *Make certain the labeling coincides with the gas service, and areas controlled by the Sleep Lab Panel and that it is easily read.*

Maintenance

- Clean the exterior of the stainless steel Sleep Lab Panel with a glass cleaner. Strong solvents will damage the etched screened printing on the sleep lab panel.
- Never use glass cleaner on the flowmeters.
- If it is necessary to clean the flowmeters wipe them clean with a cloth dampened with water
- Wipe dry with a clean dry cloth.



Flowmeters

Accuracy: ± 10% of the indicated flow.
 Operating Temperature: 69°F (20.6°C) to 71°F (21.6° C)
 Storage Temperature: -40°F (40°C) to 140°F (60° C)
 Max Humidity: 95 %

Note: Storage / Transport outside the specified range may cause damage to the flow meter.

Specifications are subject to change without notice.

Operating Instructions

Note: Tri-Tech Medical, Inc. recommends the use of kink proof patient tubing.

- Be sure Dial Flowmeter is in the "OFF" position.
- Connect the Dial Flowmeter to a 50 psi (3.4 bar) Oxygen Source.
- Set the flow by aligning the Indicating Pointer ▼ to the desired flow.

Note: The accuracy of flow will be adversely affected by any variation of inlet pressure, ambient temperature or outlet resistance from rated values.

⚠ WARNING *Read this user manual before installing or operating the Dial Flowmeter. There is NO FLOW between settings. The Indicating Pointer ▼ must point to a specific number on the dial to obtain flow.*

⚠ CAUTION *ONLY use appropriate indexed fittings to connect the Dial Flowmeter to appropriate source. Use Oxygen connections for oxygen flowmeters and use Air connections for Air flowmeters.*

Cleaning/Maintenance

- Disconnect all connections before cleaning.
- Clean exterior surfaces of the Dial Flowmeter with a cloth dampened with water.
- Wipe dry with a clean cloth.
- Store the Dial Flowmeter in a clean area free from grease, oil and other sources of contamination.

⚠ CAUTION *DO NOT immerse the Dial Flowmeter in any kind of liquid. This will cause damage to the Dial Flowmeter and will void the warranty.*

This Dial Flowmeter is not field serviceable.

Troubleshooting

If the Dial Flowmeter fails to function, consult the Trouble Shooting Guide below. If the problem cannot be solved, consult your provider.

Problem	Probable Cause	Remedy
No Flow	<ul style="list-style-type: none"> •Flowmeter set in OFF position •Dial set between settings •Internal failure •Hoses are not properly connected between the DISS inlet and Flowmeter 	<ul style="list-style-type: none"> •Turn to desired setting •Move Dial to flow setting •Return to Powerex •Remove Front Panels and check connections
Dial will not turn / Hard to turn	<ul style="list-style-type: none"> •Dial seized 	<ul style="list-style-type: none"> •Return to Powerex
Will not shut off	<ul style="list-style-type: none"> •Flowmeter not in OFF position 	<ul style="list-style-type: none"> •Turn Dial to the OFF position

⚠ WARNING To prevent risk of burns, fire, or injury to person(s):

- ALWAYS confirm prescribed flow before administering to patient and monitor flow on a frequent basis.
- Always follow ANSI and CGA standards for Medical Gas Products and Flowmeters and Oxygen Handling.
- DO NOT use oils, greases, organic lubricants or any combustible materials on or near this Dial Flowmeter.
- DO NOT use near any type of flame or flammable/explosive substances, vapors or atmosphere.
- DO NOT smoke in an area where oxygen is being administered.
- This Dial Flowmeter contains magnetic, ferrous material that may affect the results of an MRI.
- NO FLOW is delivered when the Indicating Pointer ▼ is pointing to OFF.
- Flow is available only at the listed increments. There is NO FLOW between increments.

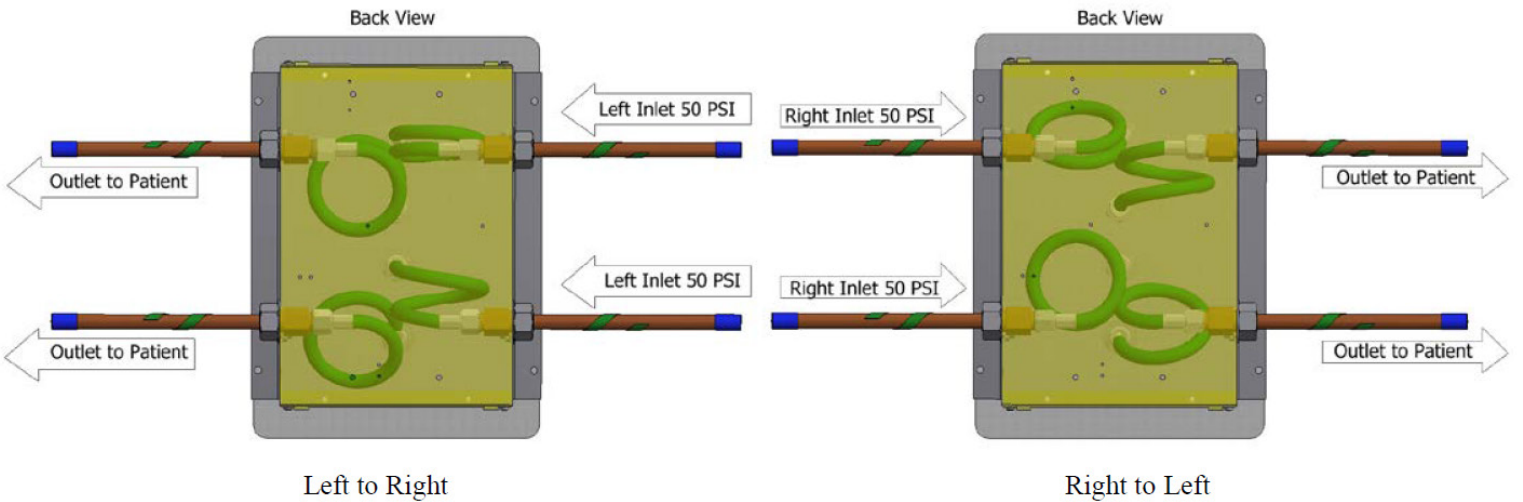
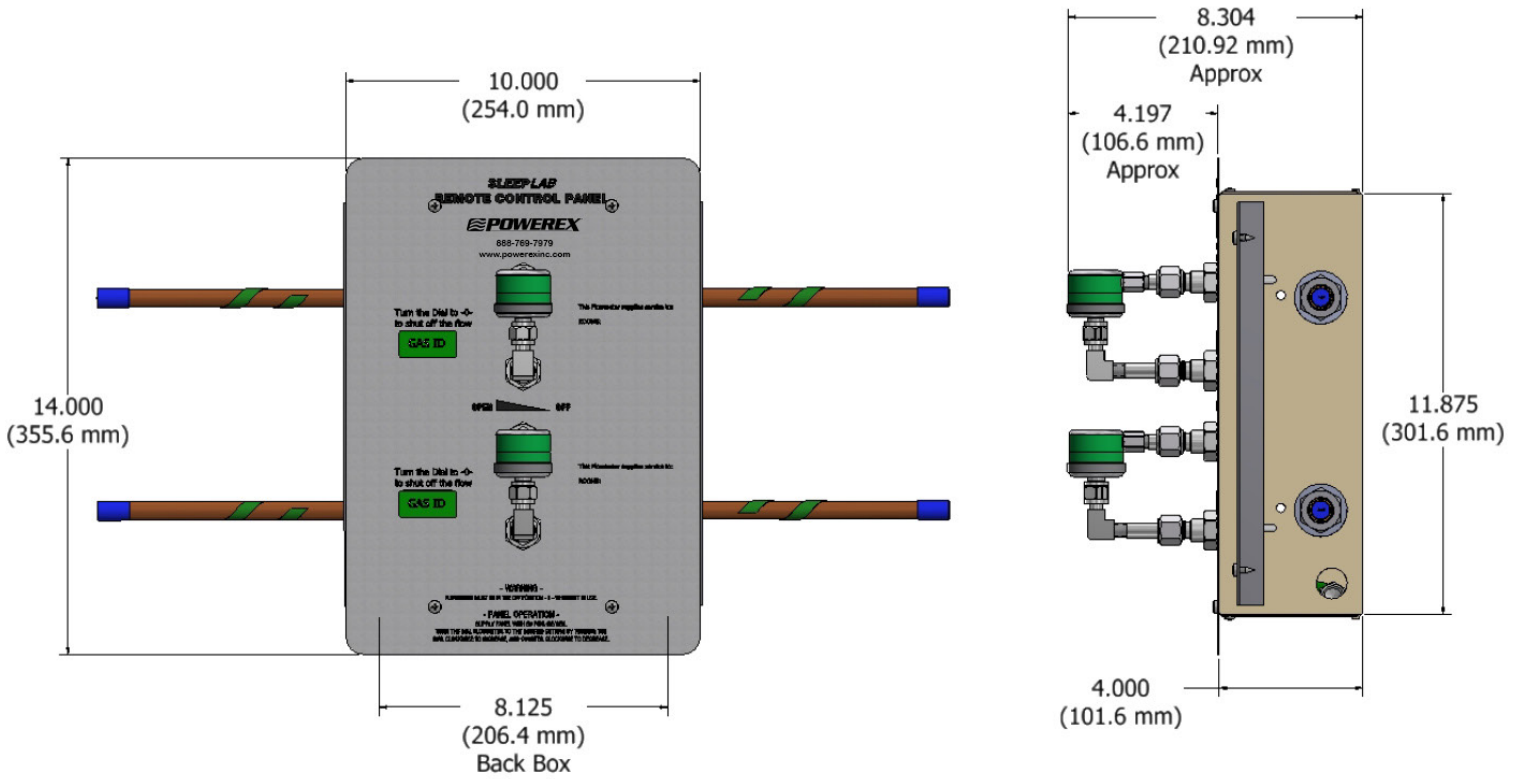
⚠ CAUTION • Only personnel instructed and trained in its use should operate this Dial Flowmeter.

- Be sure all connections are tight and leak free.
- Only use oxygen-safe leak detector to test for leaks.
- DO NOT autoclave.
- DO NOT gas sterilize with (EtO) Ethylene Oxide.
- DO NOT clean with aromatic hydrocarbons.
- DO NOT immerse Dial Flowmeter in any kind of liquid. This will void the warranty.
- DO NOT attempt to repair the Dial Flowmeter.
- Store the Dial Flowmeter in a clean area when not in use.

NOTE: The medical oxygen outlet you are connecting to in the patient room must be labeled “Not For Use With A Flowmeter”. Flow regulation is controlled by the Dial Flowmeter that is on the Sleep Lab Panel.

Appendix A

Technical Specifications



NOTE: Sleep Lab Panels may be plumbed in either direction – with the patient (use) side on left or the right.

Powerex Limited Warranty

Warranty and Remedies. (a) Standard Period of Warranty – Parts and Labor. Powerex warrants and represents all Products shall be free from Defects for the first twelve (12) months from the date of shipment by Powerex. During such warranty period, Powerex shall be fully liable for all Defects in the Products (the “Product Defects”), i.e., all costs of repair or replacement, which may include “in and out” charges, so long as the Products are located in the United States or Canada, and the Products are reasonably located and accessible by service personnel for removal. “In and out” charges include the costs of removing a Product from buyer’s equipment for repair or replacement.

(b) Additional Period of Warranty – Parts Only (No Labor). In addition to the above, Powerex warrants the products described herein to be free from defects in material and workmanship for forty-eight (48) months from end of Standard Period of Warranty with the exception of any components which are recommended to be replaced in less than sixty months in our Installation/Operation manuals. Within said period Powerex will repair or replace any part or component which is proven to be defective in either material or workmanship. This warranty covers parts only. Labor is not included. This warranty is valid only when the product has been properly installed according to Powerex specifications, used in a normal manner and serviced according to factory recommendations. This warranty does not cover failures due to damage which occurs in shipment or failures which result from accidents, misuse, abuse, neglect, mishandling, alteration, misapplication or damage due to acts of nature.

(c) General. Powerex warrants each Powerex branded Pipeline Accessory (collectively “Products”, individually each a “Product”) to be free from defects in material and workmanship (“Defects”) at the date of shipment. EXCEPT AS SET FORTH BELOW, NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF SUCH PRODUCTS. TO THE EXTENT PERMITTED BY LAW, ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. All warranty claims must be made in writing and delivered to Powerex in accordance with the procedures set forth on its website (www.powerexinc.com), or such claim shall be barred. Upon timely receipt of a warranty claim, Powerex shall inspect the Product claimed to have a Defect, and Powerex shall replace any Product which it determines to have had a Defect; provided, however, that Powerex may elect, upon return of the Product, to refund to buyer any part of the purchase price of such Products paid to Powerex. Freight for returning Products to Powerex for inspection or for shipping warranty parts shall be paid by buyer where permitted by applicable law. Powerex is not responsible for any import fees, taxes, duties, licenses or other fees imposed by any governmental authority upon the production, sale, shipment and/or use of Products covered hereunder. The warranties and remedies herein are the sole and exclusive remedy for any breach of warranty or for any other claim based on any Defect, or non-performance of the Products, whether based upon contract, warranty or negligence.

(d) Coverage. The warranty provided herein applies to Powerex pipeline products only.

(e) Exceptions. Notwithstanding anything to the contrary herein, Powerex shall have no warranty obligations with respect to Products:

(i) That have not been installed in accordance with Powerex’s written specifications and instructions;

(ii) That have not been maintained in accordance with Powerex’s written instructions;

(iii) That have been materially modified without the prior written approval of Powerex; or

(iv) That experience failures resulting from operation, either intentional or otherwise, in excess of rated capacities or in an otherwise improper manner.

The warranty provided herein shall not apply to: **(i)** any defects arising from corrosion, abrasion, use of insoluble lubricants, or negligent attendance to or faulty operation of the Products; **(ii)** ordinary wear and tear of the Products; or **(iii)** defects arising from abnormal conditions of temperature, dirt or corrosive matter; **(iv)** any OEM component which is shipped by Powerex with the original manufacturer’s warranty, which shall be the sole applicable warranty for such component.

Limitation of Liability. NOTWITHSTANDING ANYTHING TO THE CONTRARY HEREIN, TO THE EXTENT ALLOWABLE UNDER APPLICABLE LAW, UNDER NO CIRCUMSTANCES SHALL POWEREX BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECULATIVE OR INDIRECT LOSSES OR DAMAGES WHATSOEVER ARISING OUT OF OR IN ANY WAY RELATED TO ANY OF THE PRODUCTS OR GOODS SOLD OR AGREED TO BE SOLD BY POWEREX TO BUYER. TO THE EXTENT ALLOWABLE UNDER APPLICABLE LAW, POWEREX’S LIABILITY IN ALL EVENTS IS LIMITED TO, AND SHALL NOT EXCEED, THE PURCHASE PRICE PAID. In the event of breach of any warranty hereunder, Powerex’s sole and exclusive liability shall be at its option either to repair or to replace any defective product, or to accept return, transportation prepaid, of such product and refund the purchase price; in either case provided that written notice of such defect is given to Powerex within twelve (12) months from date of shipment to Buyer, that the product is found by Powerex to have been defective at the time of such shipment, that the product has been installed and/or operated in accordance with Powerex’s instructions, that no repairs, alterations or replacements have been made by others without Powerex’s written approval, and that Buyer notifies Powerex in writing within fifteen (15) days after the defect becomes apparent and promptly furnishes full particulars in connection therewith; and provided further that in no event shall the aggregate liability of Powerex in connection with breach of any warranty or warranties exceed the purchase price paid for the product purchased hereunder. Powerex may, at its option, require the return of any product, transportation and duties prepaid, to establish any claim of defect made by Buyer. Unless otherwise agreed in writing

(a) Powerex will not accept and shall have no responsibility for products returned without its prior written consent, and (b) Powerex will not assume any expense or liability for repairs to products made outside of its plant by third parties. In the event Powerex elects to replace a defective product, costs of installation, labor, service, and all other costs to replace the product shall be the responsibility of Buyer.

Powerex shall not, except as set forth above, be otherwise liable to Buyer or to any person who shall purchase from Buyer, or use, any products supplied hereunder for damages of any kind, including, but not limited to, indirect, special or consequential damages or loss of production or loss of profits resulting from any cause whatsoever, including, but not limited to, any delay, act, error or omission of Powerex. Supplier's repair or replacement of any Product shall not extend the period of any warranty of any Product.

Warranty Disclaimer. Powerex has made a diligent effort to illustrate and describe the Products in its literature, including its Price Book, accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the Products are merchantable, or fit for a particular purpose, or that the Products will necessarily conform to the illustrations or descriptions.

Product Suitability. Many jurisdictions have codes and regulations governing sales, construction, installation, and/or use of Products for certain purposes, which may vary from those in neighboring areas. While Powerex attempts to assure that its Products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a Product, please review the Product applications, and national and local codes and regulations, and be sure that the Product, installation, and use will comply with them.

Claims. Any non-warranty claims pertaining to the Products must be filed with Powerex within (6) months of the invoice date, or they will not be honored. Prices, discounts, and terms are subject to change without notice or as stipulated in specific Product quotations. Powerex shall not be liable for any delay or failure arising out of acts of the public enemy, fire, flood, or any disaster, labor trouble, riot or disorder, delay in the supply of materials or any other cause, whether similar or dissimilar, beyond the control of Company. All shipments are carefully inspected and counted before leaving the factory. Please inspect carefully any receipt of Products noting any discrepancy or damage on the carrier's freight bill at the time of delivery. Discrepancies or damage which obviously occurred in transit are the carrier's responsibility and related claims should be made promptly directly to the carrier. Returned Products will not be accepted without prior written authorization by Powerex and deductions from invoices for shortage or damage claims will not be allowed. **UNLESS OTHERWISE AGREED TO IN WRITING, THE TERMS AND CONDITIONS CONTAINED IN THIS LIMITED WARRANTY WILL CONTROL IN ANY TRANSACTION WITH POWEREX.** Any different or conflicting terms as may appear on any order form now or later submitted by the buyer will not control. All orders are subject to acceptance by Powerex.