

FirstCall™ Medical Gas Alarm Retrofit Installation Manual

This manual is only intended to detail the physical installation of Powerex FirstCall™ Retrofits. For more detail on Powerex FirstCall™ Alarm Panels, including features/benefits, setup and installation programming, wiring schematics, operating instructions, parts list, maintenance schedules, and troubleshooting guide, please see the original Powerex FirstCall™ Medical Gas Alarm Operating & Maintenance Manual.



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Responsibilities

Installer Responsibilities

The alarm should be handled, installed, and tested per the recommended practice as described within this manual. Should any repair or replacement become necessary, contact Powerex for original equipment or replacement parts.

User Responsibilities

The alarm should be tested and examined periodically according to facility codes. Any parts which are found to be damaged, corroded, contaminated, etc. should be replaced.

Introduction

Safety Guidelines

Installation of the Powerex FirstCall™ retrofit alarm involves installing the transducers (if it is an area alarm or combination alarm) and front panel and making the necessary conduit, plumbing and electrical connections. All installation and testing should be done in accordance with NFPA 99.

⚠ WARNING Electrical power intended for the alarm to be installed should be disconnected prior to installation. *Attention: l'alimentation électrique a l'intention de faire installer l'alarme devrait déconnecter avant l'installation.*

⚠ WARNING This device should only be installed by qualified personnel. Installation should not be attempted by anyone not having general experience with the installation of devices of this nature. *Attention: cet appareil ne devrait installer que le personnel qualifié. L'installation ne devrait pas tenter par une personne n'ayant pas d'expérience générale avec l'installation d'appareils de cette nature.*

Product Line Overview

The Powerex FirstCall™ Alarm Panel Retrofit is designed to be installed into existing competitor rough-in assemblies in order to minimize disruption of the healthcare facility. The systems monitor the status of medical gases in Category 1 healthcare facilities. The alarm systems comply with the latest edition of NFPA 99. All alarm systems provide audible and visible indications of NFPA 99 medical gas alarm conditions.

Configurations

- Area Alarm Retrofit panels are available from 1 through 8 gases
- Master Alarm Retrofit panels are available in either 23 or 39 signal inputs
- Combination Alarm Retrofit panels are available in 1 through 4 gases, and 23 signal inputs

Powerex FirstCall™ Alarm Panel Retrofit is compatible with the following alarm panels:

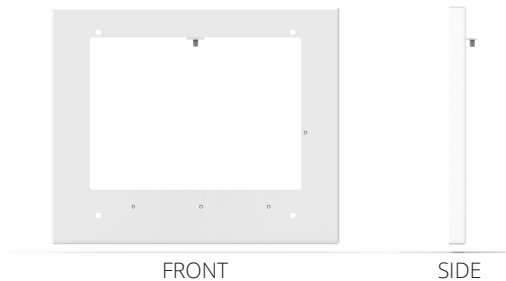
- Amico Alert-2 (3 through 7 gang back box only)
- Amico Compact Alert-2 (3 through 7 gang back box only)
- Amico Alert-3
- Amico Alert-4
- Beacon Medaes MEGA 2
- Beacon Medaes MEGA 3
- Beacon Medaes TotalAlert Infinity
- Ohio/Ohmeda/Medaes "Black Front"*
- Hill-Rom/Beacon "Tan Front"*
- Chemetron Series 74 Impact Alarm System
- Chemetron Digi I
- Chemetron Digi II
- Tri-Tech Medical DU/DC
- Tri-Tech Med Touch
- * The Ohio/Ohmeda/Medaes Multi Module Line Pressure Alarm and the Hill-Rom/Beacon Area Line Pressure Alarm both require Hansen fittings for the transducers, so this must be indicated at the end of the part number with "-BTF"

The Powerex FirstCall™ Alarm Panel Retrofit should consist of the following components:

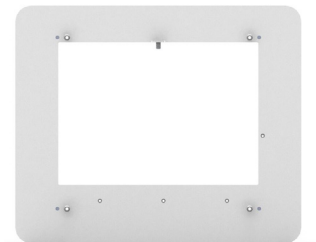
- Front cover with HMI screen and PLC with attached hinge and screws for hinge



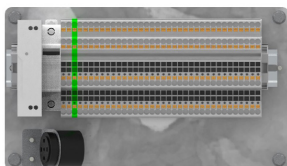
- Spacer frame with holes for mounting on cover plate and threaded holes for mounting cover hinge



- Cover plate



- Mounting flat plate with installed electrical components (power supply, circuit breaker, terminal blocks, and horn)



- Transducers (area and combo only)



- Hansen fittings (only for Ohio/Ohmeda/Medaes Multi Module Line Pressure "Black Front" Area Alarms and Hill-Rom/Beacon "Tan Front" Area Alarms)



Removing Existing Alarm Components

Open the old, existing alarm panel and make sure the number of digital signal inputs and/or analog gas sensor inputs match up to the FirstCall™ Alarm Panel Retrofit to be installed.

For Master Alarms, test the alarm signals to validate wiring and document all signal wires coming into the box with alarm type and locations prior to disconnecting the front panel.

Turn off the supply power to the alarm.

Remove and discard the front panel from the existing alarm.

Remove and discard all components from the alarm rough-in box.

Remove all existing regulatory compliance labels from inside the rough-in box.

Make sure there are no fasteners or other objects that extend out beyond the rough-in box.

Clean any debris out the inside of the rough-in box.

Sensor Installation

CAUTION Before removing transducers or other components from the pipeline connection, make sure that the pressure on the pipeline in the alarm area has been relieved.

NOTE: Powerex transducers come with a gas-specific DISS female nut and corresponding male DISS demand check fitting. DISS demand check fittings must be used to be compliant with NFPA 99.

NOTE: Ohio/Ohmeda “Black Front” alarms and Hill-Rom/Beacon “Tan Front” alarms use Hansen fittings to connect the transducers to the gas risers. Powerex provides the male end of Hansen fittings with Retrofit kits for these alarms, but they are shipped loose. If you want to keep the Hansen connection for the transducers, the existing fittings must be removed from the transducer and replaced with the Hansen fitting.



Remove the old existing transducers, fittings, and adapters inside the rough-in box for local installation or directly to the pipeline outside of the rough-in box.

Install the gas-specific male DISS demand check valve(s) into the correct gas riser(s) (use Teflon tape to prevent leaks).

Install the corresponding Powerex gas-specific transducer(s).

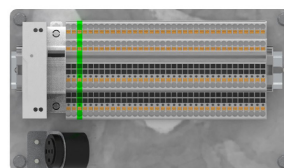
Return the pressure to each transducer and check for leaks.

NOTE: If the facility has Powerex Zone Valve Boxes installed, the transducers can also be remotely mounted inside the zone valve box using Powerex Sensing Kits (sold separately).

Cover Plate, Spacer Frame, & Electronics Flat Plate Installation

Powerex offers 2 different standard size cover plates – 15”H x 18”W and 15”H x 26”W. Custom-sized plates can be provided by special request.

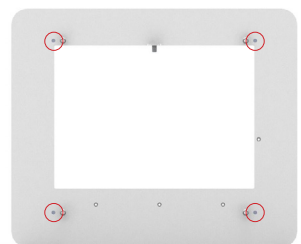
The power supply, circuit breaker, terminal blocks, PLC expansion module (if applicable), and horn are all mounted to the electronics bracket and wired from the factory.



The electronics flat plate is able to be positioned in the existing rough in box as needed. Four 1/4” self-tapping screws are included for mounting the plate to the rough in box.

Position the cover plate. The cover plate must cover the rough-in and any gap in the drywall around it, and the electronics flat plate must be fully recessed into the rough-in.

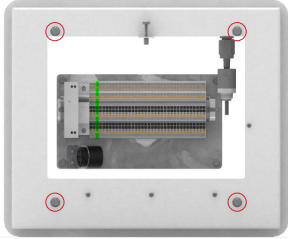
Once the desired position is chosen, mark the four mounting holes onto the wall, then set the assembly to the side.



Drill holes in all 4 locations and install the insert portion of the drywall anchors – drill bit size and anchor inserts should all be done per the drywall anchor manufacturer specifications. Powerex does not provide fasteners or drywall anchors as part of Retrofit kits.

Fasten the cover plate assembly to the wall using drywall anchor screws.

If additional depth is required to accommodate the flat plate electronics and the back of the PLC in the rough in box, the spacer frame included may be attached to the mounted cover plate using the 4 rivet nuts on the cover plate using the included 4 1/4"-20 bolts. The spacer plate allows an adds 1 inch of depth the rough in. Holes for mounting the cover are included on both the spacer frame and the cover plate.

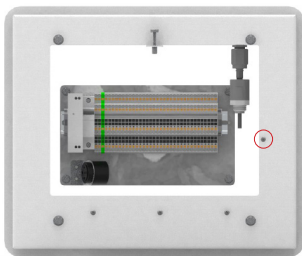


NOTE: The spacer frame may be installed without the trim plate if the frame covers the existing rough in box.

Front Panel, Screen, & PLC Installation

Position the hinge of the front panel over the corresponding threaded holes in the cover plate or spacer frame. Using the screws provided, fasten the hinge to the plate.

Fasten the other end of the steel lanyard to the right side of the cover plate assembly using the provided screw and installing it through the eyelet and into the PEM nut.



Connect the wiring harnesses on the electronics assembly to the back of the PLC.

Wiring & Programming

Please reference the Powerex FirstCall™ Medical Gas Alarm Operating & Maintenance Manual for detailed instructions on wiring and programming.

Notes

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 twenty-four (24) 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 shall be free of Defects for a period of sixty (60) months from the date of shipment by Powerex, 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 twenty-four (24) 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.