

PROFIRE



EPX SERIES ENCLOSURE

EPX4-075 | EPX4-075CL

PRODUCT MANUAL

**WARNING:**

All EPX4-075 installations must follow the installation, commissioning, operation, and maintenance procedures outlined in this manual. Failure to comply with the instructions and warnings in this manual may result in death, serious injury, electrocution, property damage, product damage, and/or government fines. All EPX4-075 installations must be performed in accordance with local electrical code(s) by a capable electrician and must be field inspected by the Authority Having Jurisdiction to ensure compliance with local electrical codes.

Explosion hazard - do not disconnect equipment while the circuit is live or unless the area is known to be free of ignitable concentrations.

Open circuit before removing cover.

This equipment is suitable for use in Class I, Division 1, Groups B,C and D, Class I, Division 2, Groups B,C and D or non-hazardous locations only.

Caution – Use supply wire rated for a minimum of 120°C or greater.

Substitution of components may impair suitability for Class I, Division 1.

**AVERTISSEMENT:**

Toutes les installations EPX4-075 doivent être conformes aux procédures d'installation, de mise en service, d'utilisation et d'entretien décrites dans ce manuel. Le non-respect des instructions et des avertissements de ce manuel peut entraîner la mort, des blessures graves, l'électrocution, des dommages matériels, des dommages au produit et/ou des amendes gouvernementales. Toutes les installations EPX4-075 doivent être effectuées conformément au(x) code(s) électrique(s) local(aux) par un électricien compétent, et doivent être inspectées sur place par l'autorité compétente afin de garantir la conformité aux codes locaux de l'électricité.

Risque d'explosion - ne pas débrancher tant que le circuit est sous tension, à moins qu'il ne s'agisse d'un emplacement non dangereux.

Ouvrir le circuit avant d'enlever le couvercle.

Toutes les fonctions de sécurité doivent être éprouvées de bout en bout après la mise en service du système. Cet équipement convient à une utilisation en Classe I, Division 1, Groupes A, B, C et D, Classe I, Division 2, Groupes A, B, C et D ou uniquement dans des emplacement non dangereux.

Attention – Utilisez un fil d'alimentation conçu pour résister à une température minimale de 120 °C ou plus.

La substitution de composants peut rendre ce matériel inacceptable pour les emplacements de Classe I, Division 1.

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1 SCOPE

This document provides details on installation and maintenance for the EPX4-075 series of products.

1.1 EPX4-075

The EPX4-075 is a bare explosion proof enclosure with four ¾" NPT conduit entries. This enclosure is intended to house electronics in Class I Division 1 hazardous locations.


1.2 EPX4-075CL

The EPX4-075CL consists of the EPX4-075 enclosure integrated with a Profire Gen 1 ignition coil. The EPX4-075CL is intended to be paired with Profire controllers to provide a reliable burner ignition source. The EPX4-075CL is suitable for use in Class I Division 1 hazardous locations.


2 APPROVALS AND RATINGS

2.1 CERTIFICATIONS

2.1.1 EPX4-075

	<p>CSA C22.2 No. 30-M1986:12; ANSI/UL 1203 – 2013 CSA Std. C22.2 No. 94.2-20 ; ANSI/UL Std 50E, 3rd Edition CAN/CSA-C22.2 No. 60079-0:11; CAN/CSA-C22.2 No. 60079-1:11; ANSI/ISA 60079-0:09; ANSI/ISA 60079-1:09</p> <p>Class I, Division 1, Groups B, C, and D, IP66, Type 4X; Class I, Zone 1, AExd, IIB+H2, Gb, IP66; Ex d IIB+H2 Gb, IP66;</p>
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2.1.2 EPX4-075CL

	<p>CSA C22.2#30:2020 Ed.4; UL 1203:2023 Ed.6+R:30May2024</p> <p>Class I, Division 1, Groups B, C, and D, T4, Type 4/4X</p>
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2.2 PRODUCT RATINGS

SYSTEM PARAMETER	VALUE
Operating temperature	EPX4-075 -50°C TO 135°C (-58°F TO 275°F)
	EPX4-075CL -40°C TO 55°C (-40°F TO 131°F)
Storage temperature	EPX4-075 -50°C TO 135°C (-58°F TO 275°F)
	EPX4-075CL -40°C TO 55°C (-40°F TO 131°F)

2.3 ENCLOSURE RATINGS

SYSTEM PARAMETER	VALUE
Material	ALUMINUM
Type rating	TYPE 4/4X
Ingress protection rating	IP66
Dimensions	216.7mm x 168.3mm x 133.4mm (8.53" x 6.63" x 5.25")
Weight	EPX4-075 4.2kg (9.2LBS)
	EPX4-075CL 5.0kg (11.0lbs)

3 INSTALLATION



Warning:

The enclosure lid must be securely closed after opening. Improper closure may result in explosion, moisture ingress, or other environmental damage and may compromise the integrity of the product.

Installers and commissioners of the EPX4-075 or EPX4-075CL systems must:

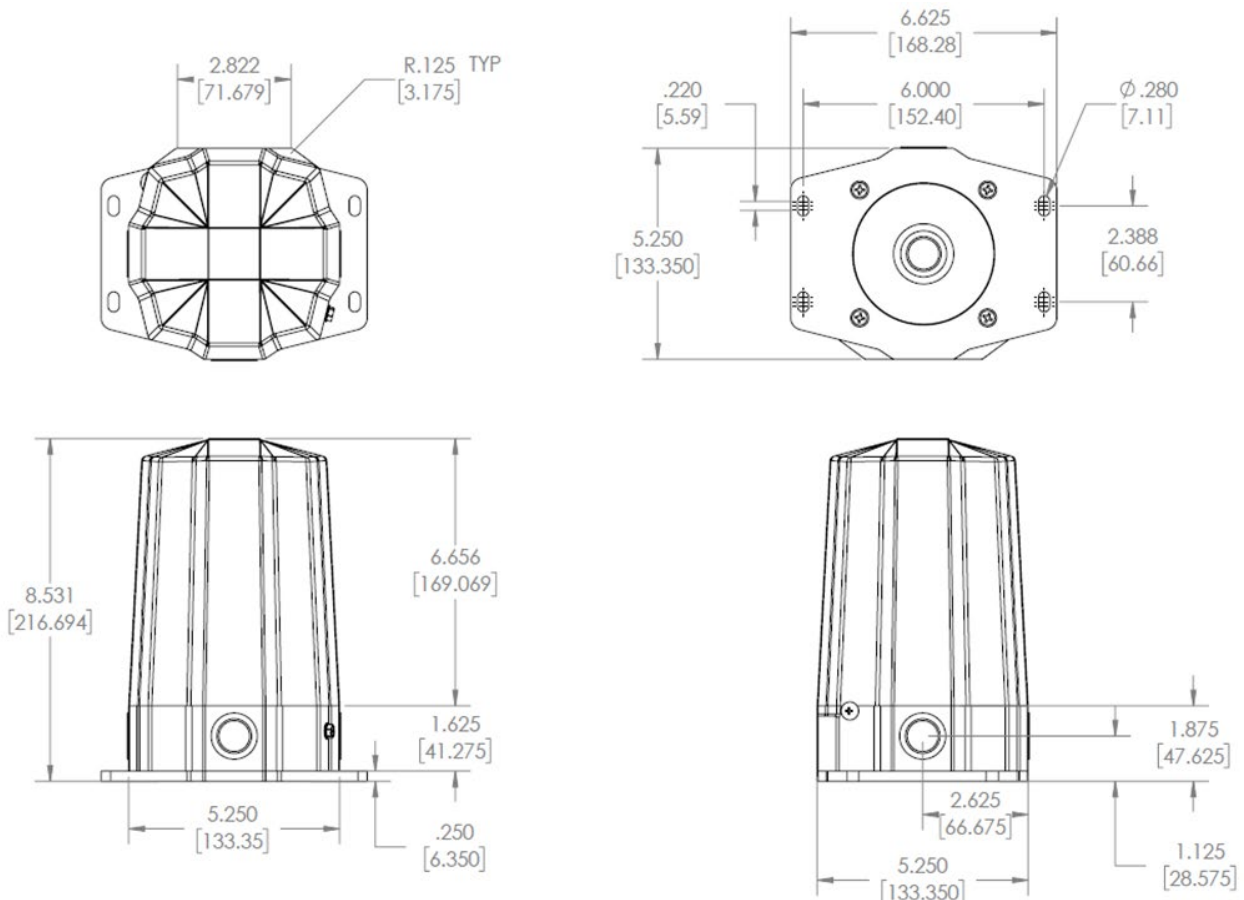
- Understand local codes and how they apply to the installation (for both electrical and mechanical aspects of the installation).
- Understand the electrical and mechanical limitations of the product and how that relates to the installation.
- Understand the safety and operational effects of modifying system wiring.
- Verify all required safety functions prior to completing the commissioning of the appliance.
- Be fluent in the English language (the only language this product supports).

3.1 MOUNTING CONSIDERATIONS

The enclosure should be mounted:

- At least 45cm (18”) above the ground.
- Near to the appliance being controlled to minimize cable run lengths to the burner assembly (EPX4-075CL)
- Such that the enclosure lid can be fully opened during maintenance and commissioning.

3.1.1 ENCLOSURE DIMENSIONS



3.2 CONDUIT ENTRIES

The installer shall use one of the four (4) provided 3/4" NPT conduit entry ports on the EPX4-075. Drilling of new conduit entry ports or modifying existing conduit entry ports will compromise the integrity of the enclosure.

All fittings must be rated for Class I Division 1 hazardous locations to maintain product hazardous location ratings.

All conduit connections must maintain a minimum of five (5) threads of engagement to maintain product hazardous location ratings.

3.3 CONNECTION DIAGRAMS (EPX4-075CL)



Warning:

Failure to provide a low-impedance path from the burner assembly to a connected controller may result in electric shock, product damage, failure to ignite the pilot, or failure to detect flame.



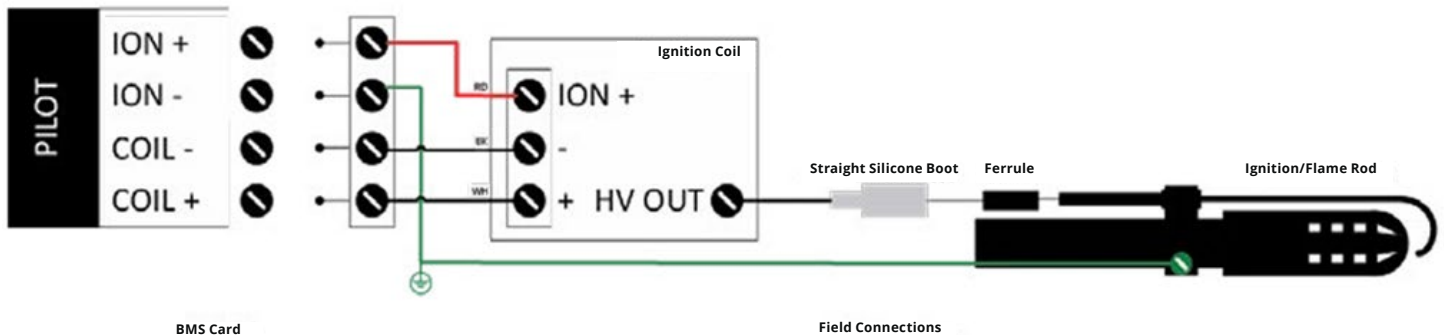
Caution:

Provided connections are for reference only. Consult the product manual for the connected controller for applicable BMS terminal connections.

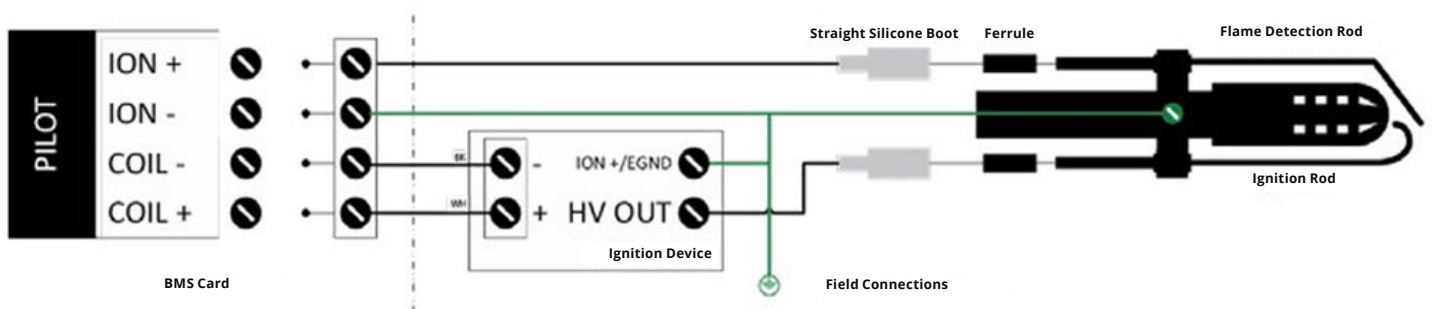
Installation Notes:

- For long run lengths of ION+, the connection should be made with 7mm ignition wire to help minimize ground-loading of the flame signal.

3.3.1 SINGLE ROD IGNITION WIRING



3.3.2 DUAL ROD IGNITION WIRING



4 MAINTENANCE

**Warning:**

Do not modify any system wiring or handle the electronics while the system is powered.

**Warning:**

The enclosure lid must be securely closed after opening. Improper closure may result in explosion, moisture ingress, or other environmental damage and may compromise the integrity of the product.

**Caution:**

Do not disassemble or modify the enclosure or electronics in any way. They are not field repairable and must be sent back to Profire for replacement if damaged.

4.1 TOOLS REQUIRED

The following tools are required for installation and maintenance:

- No.2 Phillips screwdriver for lid setscrews and internal mounting screws.
- 3.5mm terminal block screwdrivers for securing wiring to card terminal blocks. (EPX4-075CL)

4.2 RECOMMENDED MAINTENANCE PROCEDURES

- Check all wiring against site wiring diagram.
- Check enclosures, electronics and fittings for signs of wear and replace as needed.
- Check for moisture in enclosures.
- Clean enclosure internals with compressed air. Do NOT use solvents, cleaners, or liquids to clean.
- Ensure lid is fully seated when closed.
- Ensure connected conduits and fittings have at least five (5) full threads of engagement.

4.3 TRANSPORTATION AND STORAGE CONDITIONS

Transportation of the product shall be in the original product packaging or equivalent. Transportation of electronics without enclosure is not recommended and should be done with the utmost care utilizing an Anti-Static/ESD bag.

Storage temperature should be kept within rated operating temperature in a dry area. Avoid moisture buildup inside the enclosure.

4.4 REPAIR AND REPLACEMENT

Profire does not support on-site repairs for enclosures or electronics. For replacement parts contact Profire customer service.

4.5 DECOMMISSIONING

When decommissioning the system, power should be turned off to the EPX enclosure and the area known to be non-hazardous. All electronics should be disposed of appropriately (e.g. be sent to a recycling depot).

4.6 USEFUL LIFE

The useful life of the EPX4-075 / EPX4-075CL is 10 years. Prior to the expiry of that period the customer should [Contact Profire](#) for a suitable replacement.

4.7 MANUFACTURER NOTIFICATION

Any detected failures that compromise the functional safety of the system must be reported to Profire customer service immediately.

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