

SAFETY INSTRUCTIONS FOR HAZARDOUS AREA INSTALLATION

Prosense P and PE series gas detectors are projected and built according to ATEX Directive 2014/34/EU with reference to standard EN IEC 60079-0, EN IEC 60079-1. "ATEX", by the French "ATmosphere EXplosible", provides the technical requirements to be applied to equipment intended for use in potentially explosive atmospheres. The Prosense P and PE series gas detectors must be installed and maintenance according to the suitable standards for electrical application in potentially explosive atmospheres (example: EN IEC 60079-14, EN IEC 60079-17 or other national standards).

Read this instruction first and keep this instruction manual always available.


The following instructions apply to equipment covered by ATEX/IECEx/UKEX/UL certificate number:

1- Prosense P and PE series gas detectors may be installed in hazardous area with flammable gases, vapors, and mist, group II, category 2G, maximum superficial permissible temperature 70°C.

Device category 2G, Identification II 2G

Ex db IIC T4 Gb (Tamb = -40÷+70 °C or -40÷+50 °C)

Ex db IIC T5 Gb (Tamb = -40÷+40 °C)

It means:  (European Community logo for ATEX applications) – group II (potentially explosive atmospheres – surface application – OTHER than mines)

Category 2G (G => Gas) – Zone 1 and Zone 21

Ex db => protection mode: explosion proof enclosure

IIC => define kind of gases

T4 Gb (Tamb = -40÷+70 °C or -40÷+50 °C)

T5 Gb (Tamb = -40÷+40 °C) => Temperature class -- Maximum allowable surface temperature.

IP 65 => Mechanical protection degree – protection against solid, dust and liquid.

2. Suitably trained personnel shall carry out installation in accordance with applicable code practice.

3. The electrical devices must be grounded using their grounding connections. The grounding connection must be ATEX/IECEx certified, suitable for the application required, substances, maximum superficial temperature, ambient temperature.

4. The user should guarantee periodical cleaning of the places where dust can storage to avoid the piling up to 5 mm.

5. The user should not repair this equipment.

6. The user should guarantee the keeping of the safety characteristic of the device after maintenance or repairing.

SAFETY INSTRUCTIONS FOR HAZARDOUS AREA INSTALLATION

7. If the equipment is likely to come into contact with aggressive substances, it is responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection is not compromised.

Aggressive substances: example Acids, liquid, gases with can affected metals

8. To guarantee the respect of the protection degree cable glands, blanking elements and thread adapters shall be certified Ex components according to protection “d” and a blanking element shall not be used with an adapter.

9. Sinter replacement shall be done by an approved technical service personal according to P series and PE series user manual “Sinter replacement” procedure (PRS-UM-P-EN and PRS-UM-PE).

10. Oring is made of Silicone and continuous operating temperature is -50C to 105C

11. If temperature exceeds 70°C at entry or 80°C at branching point use suitably rated cable and cable glands or conductors in conduit.

12. Thickness of outer painting is between 40 µm – 80 µm.

13. Maximum power consumption of the detector with optional boards installed is $P_{max}=2.5W$ where $I_{max}=100mA$ and $V_{max}=24VDC$.

14. All electrical connections should be made in accordance with any relevant local or national legislation, standards or codes of practice. Prosense detectors can operate between 12 - 24 VDC.

15. The use of industrial grade, suitably shielded field cable is recommended. The best practices shown that, screened 3 cores (plus screen 90% coverage), suitably mechanically protected copper cable with a suitable explosion-proof gland, or ¾” NPT steel conduit, depending on the distance between signal received or control panel and detector 0.5 to 2.5 mm² (20 to 13 AWG) conductors can give better results. Ensure the cable gland is installed correctly and fully tightened.

16. Effective Earth/Ground bonding is important to ensure good EMC and RFI immunity. The Earth Screen of the field cable should be “tied to Earth” or connected to Ground at one point only. It is common practise to adopt a STAR EARTH connection regime where all instrumentation Screens are connected at one common point. The Screen at the other end of the cable should be “parked” or terminated into a blank terminal.

17. Each detector has grounding screw which utilizes grounding for detector main PCB to detector body. The screw should be located correctly and fixed for all times. In case of any maintenance activity this screw should be checked and fixed to make sure for proper grounding. It is recommended to utilize a No 14 AWG copper, (Stranded or Solid), wire.

WARRANTY STATEMENT

All products are designed and manufactured to the latest internationally recognized standards by Prosense Technology under a Quality Management system that is certified to ISO 9001. As such Prosense Technology warrants its products against defective parts and workmanship and will repair or (at its option) replace any instruments which are or may become defective under proper use within 12 months from date of commissioning by an approved Prosense Technology representative or 18 months from date of shipment from Prosense Technology, whichever is the sooner. This warranty does not cover disposable batteries or damage caused by accident, abuse, abnormal operating conditions or poisoning of sensor.

Defective goods must be returned to Prosense Technology premises accompanied by a detailed description of any issue. Where return of goods is not practicable Prosense Technology reserves the right to charge for any site attendance where any fault is not found with the equipment. Prosense Technology shall not be liable for any loss or damage whatsoever or howsoever occasioned which may be a direct or indirect result of the use or operation of the Contract Goods by the Buyer or any Party.

This warranty covers instrument and parts sold to the Buyer only by authorized distributors, dealers and representatives as appointed by Prosense Technology. The warranties set out in this clause are not pro rata, i.e. the initial warranty period is not extended by virtue of any works carried out there under.


In no event will Prosense Technology be liable for any incidental damages, consequential damages, special damages, punitive damages, statutory damages, indirect damages, loss of profits, loss of revenues, or loss of use, even if informed of the possibility of such damages. Prosense Technology's liability for any claims arising out of or related to this product will in no case exceed the order value. To the extent permitted by applicable law, these limitations and exclusions will apply regardless of whether liability arises from breach of contract, warranty, tort (including but not limited to negligence), by operation of law, or otherwise.

EU Declaration of Conformity

Prosense Teknoloji San Ltd. Şti declares the P, PE, PEK and PES Series products to be in accordance with the following standards and directives.

Name and address of Manufacturer: **Prosense Teknoloji San Ltd Şti**
Cumhuriyet Mah. Mermer Sok No:16
34876 - Kartal – İstanbul – Türkiye

Description of Devices: P, PE, PEK and PES Series Fixed Type Gas Detectors

Ex Designation:  **II 2G Ex db IIC T5 Gb**

Applied Harmonized international standards:

EN/IEC 60079-0:2018 Equipment – General requirements

EN/IEC 60079-1:2014 Equipment protection by flameproof enclosures ‘d’

EN/IEC 50270:2015 Electromagnetic compatibility - Electrical apparatus for the detection and measurement of combustible gases, toxic gases and oxygen

Applied European Directives:

2014/34/EU ATEX Directive

2014/30/EU Electromagnetic Compatibility (EMC) Directive

Each P, PE, PEK and PES Series gas detector device which the Production Quality Assurance procedures and Type Examination procedures have been applied has been shown to conform to an approved Type and to the applicable classification rules and essential principles before being supplied. This declaration is being made on the basis of the following certificates:

Quality Management Certificate: **18ISO0073**
Production Quality Assurance Certificate: **ExVeritas 18PQAN0072**
Type Examination Certificate: **IMQ19 ATEX 045 X**
IT/IMQ/ExTR18.0009/02

Authorised Signatory: **Firat Celep**
Production Manager

Date: **12.10.2022**

