



Marine &amp; Offshore

Certificate number: 73723/A0 BV

File number: MPA2000672

Product code: 3793H

*This certificate is not valid when presented without the full attached schedule composed of 7 sections*

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## TYPE APPROVAL CERTIFICATE

*This certificate is issued to*

**PROSENSE TEKNOLOJI SAN. LTD. STI.**  
ISTANBUL - Türkiye

*for the type of product*

**FIXED FLAMMABLE GAS DETECTORS**  
PQ Series Gas Detectors PQN/PQD

### Requirements:

Bureau Veritas Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.

IEC 60079-0: 2017

EN 60079-29-1:2016

EN 50270: 2015 + AC: 2016

EC Code: 31/41 S

*This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.*

**This certificate will expire on: 30 Oct 2029**

**For Bureau Veritas Marine & Offshore,**

At BV ISTANBUL, on 30 Oct 2024,

Gurcan Yilmaz

***This certificate was created electronically and is valid without signature***



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=j8b4hf5lra>

BV Mod. Ad.E 530 June 2017

This certificate consists of 5 page(s)

## THE SCHEDULE OF APPROVAL

### 1. PRODUCT DESCRIPTION :

The **PQ Series Gas Detectors** PQN/PQD are intended to detect the presence of flammable gases in air. They are constructed from a threaded aluminium and stainless steel Junction Box that can be fitted with either a solid (**PQN**) or glassed windowed (**PQD**) cover.

#### 1.1 - Product coding:

**PQ(N/D) - (XY)(W)(Z)(Tx)**

| (N/D) -Display option                  | (XY) Gas Type   | (W) Sensor Head                  | (Z) Sensor Type   | (Tx) cable entry type  |
|--|---|----------------------------------|---|--|
| N - without display<br>D- with display | 30 - 97 : flammable gas<br>(refer to Prosense<br>Product coding system) | 1 - SH10<br>2 - SH20<br>3 - SH30 | 1 - Semiconductor,<br>2 - Catalytic<br>3 - Infrared,<br>4 - Electrochemical<br>5 - Pellistor, 6 - PID,<br>7-MPS | T1 - 1/2" Entry 1/2/3, 3/4" Entry 4<br>T2 - 3/4" Entry 1/2/3/4<br>T3 - M20 Entry 1/2/3, 3/4" Entry 4 |

#### 1.2 - Main Specifications:

|                     |  |
|---------------------|--|
| Enclosure           | PQ Series enclosure SS (SS316L)+PQ Series enclosure (Aluminium)  |
| Sensor Head         | SH30 Sensor Head (SS316)   |
| Output              | 4 - 20mA analogue output on main board<br>RS485 Modbus output on main board<br>Switching output on optional Relay Module (PRS-K038)<br>HART output on mainboard with optional HART module (PRS-K054) |
| Input Voltage Range | 12 to 24VDC (24VDC nominal)  |
| Entries             | Refer to T1/T2/T3  |
| IP Rating           | IP65   |
| Ex Marking          | Ex II 2G Ex db IIC T6 Gb<br>Ex II 2G Ex tb IIIC T85°C Db<br>Ex I M2 Ex db I Mb -40°C ≤ Ta ≤ +70°C  |

**2. DOCUMENTS AND DRAWINGS :****PROSENSE:**

- PQ Series PQN Data Sheet, No. PRS-DS-PQN-EN Rev.4, dated 27-07-2020.
- PQ Series PQD Data Sheet, No. PRS-DS-PQD-EN Rev.4, dated 27-07-2020.
- PQ Series Product Coding System, No. LST.05 Rev.4, dated 11-02-2022.
- PQ Series Fixed Gas and Vapour Detection Equipment User Manual, No. PRS-UM-PQ-EN, Rev.5.5.1, dated 10-02-2022.
- PQ Series Technical Drawings:

| DWG No.                 | Title                      | Revision | Date       |
|-------------------------|----------------------------|----------|------------|
| PQ_TD1                  | Overall drawing            | 1.4      | 29-04-2021 |
| PQ_TD2                  | PQD Sight Glass            | 1.2      | 04-10-2018 |
| PQ_TD3                  | PQN Junction box cover     | 1.4      | 10-01-2022 |
| PQ_TD3_SS               | PQN Junction box cover     | 1.2      | 10-01-2022 |
| PQ_TD4                  | PQD Junction box cover     | 1.7      | 10-01-2022 |
| PQ_TD4_SS               | PQD Junction box cover     | 1.5      | 10-01-2022 |
| PQ_TD5                  | PQD Sight Glass Cover Disc | 1.1      | 04-10-2018 |
| PQ_TD6                  | Junction Box               | 1.8      | 10-01-2022 |
| PQ_TD6_SS_1             | Junction Box               | 1.1      | 19-02-2019 |
| PQ_TD6_SS_2             | Junction Box               | 1.2      | 19-02-2019 |
| PQ_TD7                  | PCB Drawing                | 1.1      | 04-10-2018 |
| PQ_TD8                  | O-Ring                     | 1.2      | 24-02-2022 |
| PQ_TD9                  | PQD LCD PCB                | 1.1      | 04-10-2018 |
| PQ_TD10                 | PQD LCD Holder Back        | 1.1      | 04-10-2018 |
| PQ_TD11                 | PQD LCD Holder Front       | 1.1      | 04-10-2018 |
| PQ_TD12                 | PQD LCD Stand              | 1.1      | 04-10-2018 |
| PQ_TD13                 | Relay Card                 | 1.1      | 04-10-2018 |
| PQ_TD14                 | SH30 Sensor Head           | 1.4      | 24-02-2022 |
| PQ_TD15                 | SH30 CAP                   | 1.5      | 10-02-2022 |
| PQ_TD16                 | Sinter Disc                | 1.0      | 23-09-2018 |
| PQ_TD17                 | SH30 Sinter Nut            | 1.0      | 23-09-2018 |
| PQ_TD18                 | PCB Protection Cover       | 1.0      | 29-04-2021 |
| PQ_TD19                 | Calibration Mask-1         | 1.0      | 08-02-2019 |
| PQ_TD20                 | Calibration Mask-2         | 1.0      | 29-04-2021 |
| PQ_TD21                 | Sensor Module              | 1.0      | 29-04-2021 |
| PQ_TD22                 | Bottom Base                | 1.1      | 29-04-2021 |
| PQ_TD23                 | HART Modem                 | 1.0      | 29-04-2021 |
| PQ_TD24                 | LABEL                      | 1.0      | 05-08-2021 |
| PQ Series product label | TF3                        | 3.4      | 11-02-2022 |

**Ex certificate:**

- EU-Type Examination Certificate No. ExVeritas 18 ATEX 0371X, Issue 1, dated 30-04-2019.
- EU-Type Examination Certificate No. FTZU 18 ATEX 0086, dated 18-09-2024.
- IECEX Certificate No. IECEX EXV 18.0021X, Issue No.0, dated 23-10-2018.
- UL 21 ATEX 2656X Rev. 0 dated 2022-04-27.
- IECEX Certificate No. IECEX ULD 21.0033X Issue No.: 0, dated 2022-04-27.

**3. TEST REPORTS :****GLOBAL:**

- Test Report No. GTL-ENV-T-887/22, dated 09-09-2022.

**EMC TEST VE KONTROL HİZMETLERİ:**

- Test Report No. EMC953, dated 02-03-2021.

**TSE:**

- Test Report No. 193994, dated 22-06-2023.

- Test Report No. 361087, dated 27-11-2023.

- Test Report No. 280591, dated 19-09-2023.

**Prosense:**

- Test Report No. 240424-INT, dated 24-04-2024.

**LVT:**

- Test Report No. 20-1382-R0-N1-1, dated 26-11-2020.

**ExVeritas:**

- IECEx Test report cover No. BN/EXV/ExTR18.0023/00, dated 23-10-2018.

**FTZU:**

- Test Report No. 18.0205-76, dated 19-08-2019.

- Test Report No. 18.0205-77, dated 04-09-2018.

- Test Report No. 18.0205-77/1, dated 06-09-2019.

- Test Report No. 18.0205-78, dated 20-08-2019.

- Test Report No. 18.0205-82, dated 10-09-2019.

- Test Report No. 18.0205-83, dated 28-08-2019.

- Test Report No. 18.0205-83/1, dated 06-09-2019.

- Test Report No. 18.0205-84, dated 04-02-2019.

- ATEX Assessment Report No. 18/0086, dated 18-09-2019.

- Evaluation Report No. 19E/0002, dated 12-02-2019.

**ESim:**

- Test Report No. EMC-2024111, dated 02-07-2024.

**ELDAS:**

- Test Report No. EMC24-561, dated 15-08-2024.

**4. APPLICATION / LIMITATION :**

4.1 - Bureau Veritas Rules for the Classification of Steel Ships, Offshore Units, Naval Ships and Yachts.

4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS**

4.3 - BUREAU VERITAS Environmental Category **EC code : 31/41 S.**

4.4 - The equipment fulfils the EMC requirements for installation in General Power Distribution Zones.

4.5 - Ex-certification is not covered by this certificate, Applications in hazardous areas are to be approved in each case according to the Rules and Conditions for Safe Use specified in a valid Ex-Certificate issued by a Notified or Recognised Certification Body.

4.6 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev.9.

**5. PRODUCTION SURVEY REQUIREMENTS :**

5.1 - The PQ Series Gas Detectors PQN/PQD are to be supplied by **PROSENSE TEKNOLOJI SAN. LTD. STI.** in compliance with the type described in this certificate.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.

5.3 - **PROSENSE TEKNOLOJI SAN. LTD. STI.** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.

5.4 - For information, **PROSENSE TEKNOLOJI SAN. LTD. STI.** has declared to Bureau Veritas the following production site(s):

**PROSENSE TEKNOLOJI SAN. LTD. STI.**  
**CUMHURİYET MAH.**  
**MERMER SOKAK**  
**No:16 34876**  
**KARTAL / ISTANBUL**  
**TURKIYE**

**6. MARKING OF PRODUCT :**

- Maker's name or trademark.
- Date of manufacture and/or serial number.
- Equipment type or model identification.
- Ex marking as relevant

**7. OTHERS :**

It is **PROSENSE TEKNOLOJI SAN. LTD. STL**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

\*\*\* END OF CERTIFICATE \*\*\*