



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:	<b>IECEX DNV 21.0016X</b>	Page 1 of 5	<u>Certificate history:</u>
Status:	<b>Current</b>	Issue No: 4	Issue 3 (2023-08-17)
Date of Issue:	2024-02-22		Issue 2 (2022-09-13)
Applicant:	<b>Petroleum Technology Company A.S</b> Slettestrandveien 13 4032 Stavanger <b>Norway</b>		Issue 1 (2021-11-01)
Equipment:	<b>PTC VR Sensor</b>		Issue 0 (2021-04-25)
Optional accessory:	N/A		
Type of Protection:	<b>Ex ia</b>		
Marking:	Ex ia IIB T3 Ga -20°C ≤ Ta ≤ +60°C (Wireless version) Ex ia IIB T4 Ga -20°C ≤ Ta ≤ +60°C (Wired version)		

Approved for issue on behalf of the IECEx  
Certification Body:

**Asle Kaastad**

Position:

**Certification Manager**

Signature:  
(for printed version)

Date:  
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting [www.iecex.com](http://www.iecex.com) or use of this QR Code.



Certificate issued by:

**DNV Product Assurance AS**  
Veritasveien 1  
1363 Høvik  
Norway





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Manufacturer: **Petroleum Technology Company A.S**  
Slettestrandveien 13  
4032 Stavanger  
**Norway**

Manufacturing locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

## STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

[IEC 60079-11:2011](#) Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"  
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

## TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[NO/DNV/ExTR21.0013/00](#)  
[NO/DNV/ExTR21.0013/03](#)  
[NO/PRE/ExTR16.0085/01](#)

[NO/DNV/ExTR21.0013/01](#)  
[NO/DNV/ExTR21.0013/04](#)  
[NO/PRE/ExTR16.0085/02](#)

[NO/DNV/ExTR21.0013/02](#)  
[NO/PRE/ExTR16.0085/00](#)

Quality Assessment Reports:

[NO/PRE/QAR20.0005/00](#)

[NO/PRE/QAR20.0005/01](#)

[NO/PRE/QAR20.0005/02](#)



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**EQUIPMENT:**

Equipment and systems covered by this Certificate are as follows:

PTC VR Sensor Wireless  
PTC VR Sensor Wired

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

- 1 The antenna contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken during installation and use to prevent impact and friction. This is according to the antenna certificate FM17ATEX0046X.
- 2 If located in zone, battery must be disconnected before the connector to the antenna is disconnected or connected. The female connector must be secured with the screws



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## Equipment (continued):

The PTC VR Sensor is a Pressure and Temperature sensor. There are two main types, "PTC VR SensorWireless", and "PTC VR Sensor wired". The PTC VR version comes in two versions, Npolar and Polar. These are almost identical, the Npolar is indiscriminate on wiring input polarity, the other not. The communication protocol is HART. All variants consist of 3 electronics boards where the main differences is located on an interface unit. The main electronics printed circuit boards are encapsulated. In addition the Wireless version has a Hart wireless transmitter and a battery pack. The outer chassis are heavy duty stainless steel enclosures.

### Type designation

PTC VR Sensor Wireless, Ex ia IIB T3 Ga

PTC VR Sensor Wired, Ex ia IIB T4 Ga

### Intrinsic Safety Parameters

I/O parameters for 4-20 mA and Hart input, PTC VR Sensor only:

$U_i = 28\text{ V}$ ,  $I_i = 93\text{ mA}$ ,  $P_i = 651\text{ mW}$ ,  $C_i = 6.27\text{ nF}$ ,  $L_i = 3.5\mu\text{H}$

### Degrees of protection (IP Code)

Wireless version: IP67

Wired version: IP67

Wired retrievable version: IP69

Wireless retrievable version: IP67

### Ambient temperature:

$-20^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$

External heat source is max  $80^\circ\text{C}$ .



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)**

New VR Sensor System variants VR Sensor-TIB.

Added alternative component for Duratool D00789 Washers: Keystone Electronics 3111