

# EU-Type Examination Certificate

- [2] COMPONENT INTENDED FOR USE ON/IN AN EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: Presafe 16 ATEX 9081X Issue 1
- [4] Product: PTC VR Sensor
- [5] Manufacturer: WestControl AS
- [6] Address: Breivikvegen 7  
4120 TAU  
Norway
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive..  
The examination and test results are recorded in confidential reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with: EN 60079-0: 2012 / A11: 2013 and EN 60079-11: 2012
- [10] The sign “U” is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system
- [11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- [12] The marking of the product shall include the following:

 II 1 G Ex ia IIB T3 Ga -20°C ≤ Ta ≤ +60°C  
 Ex ia IIB T4 Ga -20°C ≤ Ta ≤ +60°C



Date of issue:  
2018-10-01



Bjørn Spongsveen  
For DNV GL Presafe AS  
The Certificate has been digitally signed.  
See [www.presafe.com/digital\\_signatures](http://www.presafe.com/digital_signatures) for more info

*This certificate may only be reproduced in its entirety and without any change, schedule included.*

[13]

## Schedule

[14] **EU-TYPE EXAMINATION CERTIFICATE No.:** Presafe 16 ATEX 9081X Issue 1

[15] **Description of Product**

The PTC VR Sensor is a Pressure and Temperature sensor. There are two main types, "PTCVR SensorWireless", and "PTCVR Sensor wired". The PTCVR 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  
PTC VR Sensor Wired

**Electrical Data**

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

**Temperature range**

$-20^\circ\text{C} \leq T_a \leq +60^\circ\text{C}$   
T3 (wireless version) and T4 (wired version)

**Routine tests**

N/A

[16] Report No.: D0002138

Project No.: PRJC-532882-2015-PRC-NOR

## [17] Schedule of Limitations

1. The antenna contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account 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.

## [18] Essential Health and Safety Requirements

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

## [19] Drawings and Documents

Number	Title	Rev.	Date
SCH-209-212-205	PTC-209-IF Board S-Modem	2.12	2016-09-27
SCH-209-210-204-02	PTC-209-IF Board T-Modem	2.1	2014-07-15
SCH-209-140C-300-SB	PTC Sensor Board	1,4C	2013-10-18
BOM-M-209-212-205	Interface board (Sine Modem)	2.12	2016-06-15
BOM-M-PCA-209-210-204	Interface board (T Modem)	2.1	2014-07-15
PCB-291-120-001	BOM PTC VR SENSOR	1.20	2016-11-18
SCH-209-210-204	Schematic of: Ceramic Adapter Board	2.1	2014-08-10
BOM-M-PCA-209-210-203	BOM for: Ceramic Adapter Board	2.1	2014-08-11
BOM-M-PCA-209-210-205_IF_Board(S-Modem-2)	Interface board S-Modem-2	2.1	2014-10-09
SCH-209-210-205_IF_Board_S Modem-2	Main SCH (IF Board, Sine Modem 2)	2.1	2014-08-15
BOM-M-PCA-209-140C-3- SB(Variant 03)	PTC VR SENSOR BOM Variant 03	1.4C	2014-11-26
SCH-291-120-001	PTC Sensor Board Schematics	1.20	2016-11-18
PCB-209-140C-300-SB	(Sensorboard layout, 14 sheets)	--	2015-01-07
PCB-209-210-201	(Connection board layout, 14 sheets)	--	2015-01-07
PCB-209-210-203	(Ceramic adapter layout, 14 sheets)		2015-01-07
MA-209-034	ATEX label Sensor	3	2015-01-08
	<b><i>PTC VR Wireless</i></b>		
SCH-209-210-101	Battery pack	2.1	2014-07-31
SCH-209-210-201	ConnBoard_Variant 1_Wireless	2.1	2014-06-27
BOM-M-PCA-209-210-1	Battery Pack Variant 1 Non-rechargeable Battery	2.1	2014-07-31

BOM-M-PCA-209-210-201	ConnBoard(Variant-1(Wireless))	2.1	2014-06-27
AR6571	VR Sensor Assembly	--	--
PCB-209-210-1	(Battery pack layout, 14 sheets)	--	2015-01-07
	<b>PTC VR</b>		
SCH-209-210-201	ConnBoard_Variant 2_Wired NPolar	2.1	2014-06-27
SCH-209-210-201	ConnBoard_Variant 2_Wired Polar	2.1	2014-06-27
AN3109	PTC VR Sensor(mechanical drawing)	--	--
PCB-209-210-204	(IF-board T-Modem layout, 14 sheets)	--	2015-01-07
PCB-209-210-205	(IF-board S-Modem layout, 14 sheets)	--	2015-01-07
MA-209-054(AR6981)	2.0" VR Sensor Plug -API	0	2015-05-27
MA-209-055(6190-2)	Wired potted plug assembly	01	2015-04-15
MA-209-056(AR6753)	Split feed – through assembly	-	2015-05-27
MA-209-057(6013)	GTMS feedthrough	02	2014-04-03
MA-209-058(6190-1)	Wired GTMS receptacle	01	2015-06-11
MA-209-059(AR7115)	Connection Box Retrievable	0	2015-05-29
MA-209-060(Conn. box)	VR Sensor connection box comparison	0	2015-10-20
MA-209-061(AN6312)	VR Sensor retrievable	0	2015-05-27
MA-209-062(AR7106)	AR7106 overall dimensions and section view	1	2015-10-21
MA-209-063(AR6312)	VR Sensor retrievable	0	2015-05-29
MA-209-064(AR7117)	VR Sensor spool assembly 3-1/16" to 3-1/16" 10k	0	2015-05-29
PN21209	ATEX label VR Sensor wireless	5	2016-11-17
PN18500	ATEX label VR Sensor wired	5	2016-11-17
PN25934	ATEX label VR Sensor retirevable	1	2016-11-17
DSP-209-002*	18006252 - AN8021 Comparison drawing Connection Box_0	0	2018-02-06
DSP-209-003*	18006253 - AN8021 Comparison drawing Electronic Bulkhead_0	0	2018-02-06
DSP-209-004*	18006254 - AN8021 System overall dimensions_0	0	2018-02-06
DSP-209-005*	18006307 - AN8021 Comparison drawing VR Sensor Plug_0	0	2018-02-07
DSP-209-006*	AN7108 - Martec HP Cable - Identification View	1	2016-08-11
DSP-209-007*	AN7113 - EM v2.1 Wired Martec - Identification View	1	2016-08-11
DSP-209-020*	AN2994_0 Sensor flange assembly	0	2012-07-04
DSP-209-021*	AN3109 – Spec sheet VR sensor assembly	0	2011-10-18
DSP-209-022*	AN 6312 VR Sensor Retrievable	0	2015-05-29
DSP-209-023*	18006251 - AN8021 System Section View_0c	0	2018-02-06
DSP-209-024*	18006254 - AN8021 System overall dimensions_0	0	2018-02-06
DSP-209-025*	AN8021 - VR Sense-R System - Spec Sheet	0	2017-12-12
DSP-209-035*	PN 15717 ATEX label VR sensor	6	2018-05-31
DSP-209-026*	Section View VR Sense-R Wireless	0	2018-05-28
DSP-209-027*	Comparison drawing VR Sense-R Wireless		
DSP-209-028*	System Overall Dimensions VR Sense-R Wireless	0	2018-05-28
DSP-209-029*	Spec Sheet VR Sense-R Wireless	0	2018-05-28
DSP-209-030*	AN10346 - Conn Box VR Sense-R Wireless BOM	0	2018-05-25
DSP-209-031*	AN8254 - Electronic Module Wireless Retrievable, 7C 6 Pins	1	2018-06-07
DSP-209-032*	AN6905 - Power Module - Battery Pack	1	2018-08-11
DSP-209-034*	AN6847 - Wireless Adapter Rev.1	1	2018-05-31
DSP-209-036*	PN34232 - ATEX Label VR Sensor Retrievable – Wireless	0	2018-05-31

DSP-209-040*	PN34149 - Battery Securing Ring	0	2018-05-25
DSP-209-038*	PN27342_1 Thread Cover Mech. Drawing	1	2018-06-18
BM-209-025*	BOM - AN10112_0 - 2,875" Sharp Vee VR Sense Plug	0	2018-01-30
BM-209-026*	BOM - AN7623_0 - Fire Protection Plug 6 Pin	0	2018-01-30
BM-209-028*	BOM - AN8171_0 - 3,5" Feed-Through Plug - Solid	0	2017-12-11
BM-209-029*	BOM - AN8242_0 - Connection Box for VR Sense R	0	2016-10-03
DSP-209-37*	AN8170 VRSensor-R flange	1	2018-06-18

Note: An \* is included before the title of documents that are new or revised.

## [20] Certificate History

Issue	Description	Issue date	Report no.
0	Original issue	2016-11-22	D0002138
1	Larger outer dimension on enclosure. Minor change in bulkhead. New Wireless HART bullet. New ATEX label VR Sensor Retrievable Wireless	2018-10-01	D0002138

END OF CERTIFICATE