



DET NORSKE VERITAS

EC-TYPE EXAMINATION CERTIFICATE

- [2] **EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 94/9/EC**
- [3] EC-Type Examination Certificate Number: **DNV 14 ATEX 5433X**
- [4] Equipment or Protective System: **Pressure Transmitter**
- [5] Applicant – Manufacturer or Authorized representative: **DUON System Co., Ltd.**
- [6] Address: **60-31 Gasan-dong, Kumcheon-gu, Korea, 153-801**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV, notified body number 0575 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems 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 14.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0: 2012 and EN 60079-1:2007
- [10] If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified equipment or protected system. If applicable, further requirements of this Directive apply to the manufacturer and supply of this equipment or protective system.
- [12] The marking of the equipment or protective system shall include the following:

 **II 2 G Ex d IIC T6 – T4 Gb -20°C ≤ T_{amb} ≤ +60 °C**

Høvik, 2015-05-04
for Det Norske Veritas AS


Bjørn Spongsveen
Certification Manager



Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The digitally signed and electronically distributed document is the original and valid certificate. Ref.: www.dnv.com/digitalsignatures

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 300.000. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.





[13] **Schedule**

[14] **EC-TYPE EXAMINATION CERTIFICATE No.:** DNV 14 ATEX 5433X

Certificate History

| Revision | Description | Report no. | Issue date |
|----------|----------------------|------------|------------|
| - | Original certificate | 2014-9461 | 2015-05-04 |

[15] **Description of Equipment or Protective System**

The Pressure Transmitter type APT 3500 series comprise housing part housed in aluminium ductile casting or stainless steel casting and sensor part housed in stainless steel casting.

Type APT 3500 series measure the pressure of a process and convert it into an electrical 4 – 20 mA analogue current signal with digital communication.

Ambient temperature range: -20°C to +60°C

Process temperature: max. 80°C for T6
max. 95°C for T5
max. 120°C for T4

Type Identification

APT 3500

Electrical Data

Supply: 12,5 Vdc to 45 Vdc
Output: 4 – 20 mA

Degrees of protection (IP Code)

IP 66 / IP 67

[16] **Project No.:** PRJC-497149-2014-PRC-KOR

Descriptive Documents

| Number | Title | Rev | Date |
|-----------------------------------|--------------------------------|-----|------------|
| EX-MD-ASS-3500-EPV (Sheet 1/3) | APT3500 DP ASS'Y | 3 | 2015-04-15 |
| EX-MD-ASS-3500-EPV (Sheet 2/3) | APT3500 DP ASS'Y | 0 | 2013-09-24 |
| EX-MD-ASS-3500-EPV (Sheet 3/3) | APT3500 DP ASS'Y | 2 | 2015-03-09 |
| EX-MD-PT-3500-HOU | APT3500 EXP-Proof Type Housing | 0 | 2013-09-24 |
| EX-MD-PT-3500-FCV | APT3500 Front Cover | 0 | 2013-09-24 |

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| Number | Title | Rev | Date |
|---------------------|--|-----|------------|
| EX-MD-PT-3500-TGS | APT 3500 Tempered Glass | 0 | 2013-09-24 |
| EX-MD-PT-3500-WCR | APT 3500 Wave Washer/C-Snap Ring | 0 | 2013-09-24 |
| EX-MD-PT-3500-RCV | APT 3500 Rear Cover | 0 | 2013-09-24 |
| EX-MD-PT-3500-NMP | APT 3500 Name Plate | 0 | 2013-09-24 |
| EX-MD-PT-3500-TGP | APT 3500 Tag Plate | 1 | 2015-04-15 |
| EX-MD-PT-3500-SBD | APT 3500 (DP type) Sensor Body | 1 | 2014-11-03 |
| EX-MD-PT-3500-MC | APT 3500 MC Cap | 0 | 2013-09-24 |
| EX-MD-PT-3500-SBA | APT 3500 Sensor Body Adapter | 0 | 2013-09-24 |
| EX-MD-PT-3500-SPN | APT 3500 (DP type) Sensor Body Pin | 0 | 2014-11-03 |
| EX-MD-PT-3500-FLG | APT 3500 Flange | 0 | 2013-09-24 |
| EX-MD-PT-3500-CTM | APT 3500 Caution Marking | 0 | 2013-09-24 |
| EX-MD-PT-3500-FCA | APT 3500 Front Cover Assembly | 0 | 2013-09-24 |
| EX-MD-PT-3500-GAJ | APT 3500 Glass Ass'y Jig | 0 | 2013-09-24 |
| EX-MD-PT-3500-GRM | APT 3500 Ground Marking | 0 | 2013-09-24 |
| EX-MD-PT-3500-TBA | APT 3500 Terminal Block Ass'y | 0 | 2013-09-24 |
| EX-MD-PT-3500-DCSA | APT 3500 DP Cross Sectional Assembly View | 0 | 2013-09-24 |
| EX-MD-PT-3500-DESV | APT 3500 DP Enclosure Volume | 0 | 2013-09-24 |
| EX-MD-PT-3500-DSMCS | APT 3500 Sensor Module (DP) Cross Section | 0 | 2013-09-24 |
| EX-MD-PT-3500-DSMW | APT 3500 DP Sensor Module for Welded Parts | 2 | 2015-04-15 |
| EX-MD-PT-3500-TSM | Thread size marker | 0 | 2015-03-19 |

[17] Special Conditions for Safe Use

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1.

The enclosure of sensor part must be routine pressure tested with 1 000 kPa for 60 seconds according to clause 16 of EN 60079-1.

[18] Essential Health and Safety Requirements

See part 9 of this certificate

END OF CERTIFICATE

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