

**Hereby We,**

Name of manufacturer: TWTG R&D B.V.  
 Address: Schaardijk 386  
 Zip code & City: 2909 LA, Capelle a/d IJssel  
 Country: The Netherlands  
 Phone Number: +31 (0)10 203 79 05

**declare that this DoC is issued under our sole responsibility and that the following products:**

1. DS-TT-02-DD - Temperature Transmitter, intended to monitor the temperature in industrial environments and send it over LoRaWAN wireless protocol
2. DS-RT-02-DD - Ratiometric Transmitter, intended to measure ratiometric signal from a range of sensors, and send it over LoraWAN wireless protocol
3. DS-LD-02-DD - Low Voltage Differential Transmitter, intended to communicate with external sensors, and send their data over LoRaWAN wireless protocol
4. DS-VB-02-DD - Vibration Sensor, intended to be connected to DS-LD-02-DD to monitor vibration of industrial equipment and send it over LoRaWAN wireless protocol
5. DS-PG-02-DD - Pressure sensor assembly within pressure gauge, intended to be connected to DS-RT-02-DD

Type Designation:

- DS-BB-CC-DD

Serial number: "BBCCDDYYZZXXXXX"

Trademark: TWTG R&D B.V.

Model: DS02B

Nomenclature:

- BB = Product variant e.g. TT, RT, LD, VB or PG
- CC = Major Revision
- DD = Region, e.g. 00 for Global
- YY = Year of manufacture, e.g. 24 for 2024
- ZZXXXXX = Individual Identifier e.g. "AA00001":
  - ZZ = Production Batch ID
  - XXXXX = Individual Identifier

This product is covered by the following FM classification:

- IS CII, DIV 1, Group ABCD T4
- Zone 0, AEx/Ex ia IIC T4 Ga
- -40 °C < Ta < +70 °C (for DS-LD-02-DD, DS-TT-02-DD, DS-RT-02-DD)
- -40 °C < Ta < +80 °C (for DS-VB-02-DD, DS-PG-02-DD)

**is in conformity with the relevant Union harmonization legislation:**

1. US FM Approval standards and other documents:
  - (a) FM Class 3600:2022
  - (b) FM Class 3610:2021
  - (c) FM Class 3810:2021
  - (d) ANSI/UL 60079-0:2020
  - (e) ANSI/UL 60079-11:2014
2. Canadian Standards for Electrical Equipment in Hazardous Locations:
  - (a) CAN/CSA-C22.2 No. 60079-0:2019
  - (b) CAN/CSA-C22.2 No. 6007911:2014
  - (c) CAN/CSA-C22.2 No. 61010-1:2012
3. FCC Radio Frequency Regulations
  - (a) Title 47 CFR Part 15, Subpart C
  - (b) Title 47 CFR Part 15, Subpart B
  - (c) USA FCC Part 15.209, 15.247, 15.205
4. Industry Canada Radio Frequency Regulations
  - (a) RSS-Gen
  - (b) RSS-247

Notified Body FM Approvals LLC, 1151 Boston-Providence Turnpike, Norwood, MA 02062 USA, performed US and Canadian-type examinations according to FM Approvals US Certification Requirements, and Canadian Certification Scheme, issuing certificate number(s):

- FM22US0061X
- FM22CA0043X

Notified Body Dekra Testing and Certification, S.A.U, Parque Tecnologico de Andalucia, Calle, Severo Ochoa 2 y 6, Campanillas – Malaga, 29590, Spain granted authorization of equipment, issuing certificate number(s):

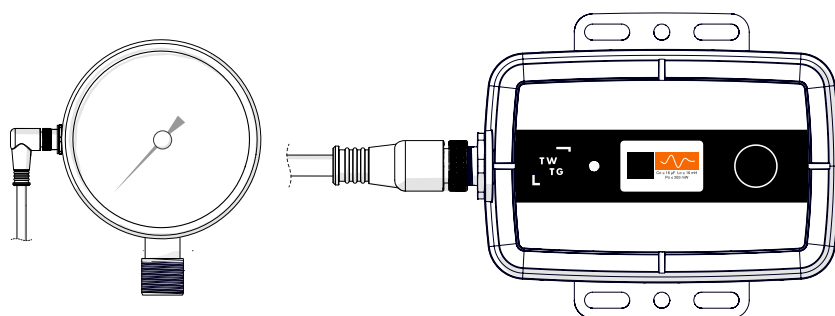
- FCCID: 2ATYF-DS02B
- IC: 28385-DS02B

Name: N. Herrwerth  
 Function: CEO  
 Document Name: 7053.N02-09\_DoC\_US-CA\_A2  
 Effective date of this document: 14-05-2024




## NEON Product Sheet

# Pressure Gauge



Product	
Product name	TWTG NEON Pressure Sensor
Type identification	Transmitter: DS-RT-PG-02-XX
Environmental conditions	
Operating temperature - Transmitter	-40°C - 70°C
Operating temperature - Sensor	-40°C - 60°C
Process (pressure medium) temperature	-30°C - 80°C
Storage temperature range	10°C - 30°C
Water & dust-resistance	IP65
Connectivity	
Protocol	LoRaWAN (Private LoRa-WAN, public LoRa-WAN upon request)
Frequency band	Refer to "Product Manual" for supported frequency plans
Maximum output power	+14 dBm
Mechanical	
Dimensions (transmitter)	106x86x57 mm
Product Warnings	
<ul style="list-style-type: none"> <li>The connector of this equipment may only be used with external equipment as listed in the "Product Matrix". <ul style="list-style-type: none"> <li>The connector of this equipment shall not be connected when an explosive atmosphere is present.</li> <li>Field devices earth shall be isolated from device M12 connector earth with an dielectric strength of 500 VAC/1minute.</li> </ul> </li> <li>When the equipment is used in hazardous locations, avoid any actions which generate electrostatic discharge. <ul style="list-style-type: none"> <li>Cleaning: The equipment shall only be cleaned using a damp cloth.</li> <li>Installation: Touch non-metallic parts with an insulating object.</li> <li>Environment: Do not use the product in environments with powerful charge-generating processes.</li> </ul> </li> <li>This equipment shall be installed according to EN-IEC 60079-14 and the installation instructions. <ul style="list-style-type: none"> <li>Ensure that the transmitter is earthed according to EN-IEC 60079-14.</li> </ul> </li> <li>This equipment is intended for fixed installations only.</li> <li>This equipment is intended for use in restricted access areas only.</li> <li>Under no circumstances shall the equipment enclosure be opened within a hazardous area.</li> <li>This equipment shall only be opened by TWTG or by a competent instructed person. <ul style="list-style-type: none"> <li>The battery is serviceable by said persons.</li> </ul> </li> <li>This equipment shall only be used in environments where electromagnetic field strength is limited according to EN-IEC 60079-14.</li> <li>This equipment is only intended for use in combination with NFC Forum Tag 2 Type technical specification compatible readers.</li> <li>This transmitter shall only be used within ambient temperatures between -40 °C and +70 °C.</li> <li>This sensor shall only be used within ambient temperatures between -30 °C and +80 °C.</li> <li>If damage to the enclosure is noticed, the discoverer shall immediately inform a competent and trained person, who shall remove the device from service as soon as possible.</li> <li>If the equipment is in contact with chemical materials please clean it appropriately.</li> </ul>	



For more information, visit:  
<https://www.twtg.io/products/neon-pressure-sensor/>

Product Sheet Pressure gauge  
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## EU Declaration of Conformity

### Hereby We,

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Serial number: "BBCCDDYYZZXXXXX"

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  - ZZ = Production Batch ID
  - XXXXX = Individual Identifier

This product is covered by the following ATEX/IECEX classification:

- Ex II 1G Ex ia IIC T4 Ga
- -40°C < Ta < +70°C (for DS-LD-02-DD, DS-TT-02-DD, DS-RT-02-DD)
- -40°C < Ta < +80°C (for DS-VB-02-DD, DS-PG-02-DD)

**is in conformity with the relevant Union harmonization legislation:**

#### 1. Radio Equipment Directive (2014/53/EU):

- (a) EN 300 220-1 v3.1.1
- (b) EN 300 220-2 v3.2.1
- (c) EN 301 489-1 v2.2.3
- (d) EN 301 489-3 v2.1.1
- (e) EN 62311:2020
- (f) EN 61010-1:2010 + A1:2019
- (g) EN 60529:1991 + A1:2000 + A2:2013

#### 1. ATEX Directive (2014/34/EU):

- (a) EN 60079-0:2012 +A11:2013
- (b) EN 60079-0:2018
- (c) EN 60079-11:2012

#### 3. WEEE Directive 2012/19/EU

#### 4. RoHS (2011/65/EU)

#### 5. REACH

Notified Body DEKRA Certification BV (0344), located at Meander 1051, 6825 MJ, Arnhem, performed EU-type examinations according to Annex III, and Annex IV and Annex VII of 2014/34/EU, issuing certificate numbers:

- DEKRA 22 ATEX0004X
- IECEX DEK 22.0004X

The Notified Body, Kiwa Nederland B.V. with notified body number 0063, has issued under Conformity Assessment procedure Module B + C the EU type examination certificate 212140704/AA/01.

Name: N. Herrwerth  
Function: CEO  
Document Name: 7050\_N02-09\_DoC.EU.B2  
Effective date of this document: 13-05-2024



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- $-40^{\circ}\text{C} < T_a < +70^{\circ}\text{C}$  (for DS-LD-02-DD, DS-TT-02-DD, DS-RT-02-DD)
- $-40^{\circ}\text{C} < T_a < +80^{\circ}\text{C}$  (for DS-VB-02-DD, DS-PG-02-DD)

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## 1. Radio Equipment Regulation 2017:

- (a) EN 300 220-1 v3.1.1
- (b) EN 300 220-2 v3.2.1
- (c) EN 301 489-1 v2.2.3
- (d) EN 301 489-3 v2.1.1
- (e) EN 62311:2020
- (f) EN 61010-1:2010 + A1:2019 + A1:2019/AC:2019
- (g) EN 60529:1991 + A1:2000 + A2:2013

## 1. ATEX Directive (2014/34/EU):

- (a) EN 60079-0:2012 +A11:2013
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- (c) EN 60079-11:2012

## 3. WEEE Directive 2003/108/EC

## 4. RoHS (2012/19/EU)

## 5. REACH

Notified Body DEKRA Certification BV (0344), located at Meander 1051, 6825 MJ, Arnhem, performed EU-type examinations according to Annex III, and Annex IV and Annex VII of 2014/34/EU, issuing certificate numbers:

- DEKRA 22 ATEX0004 X
- IECEx DEK 22.0004 X

The Notified Body, Kiwa Ltd with Approved Body number 0558, has issued under Conformity Assessment procedure Module B + C the UK type examination certificate 212340039/AA/01

Name: N. Herrwerth  
Function: CEO  
Document Name: 7051\_N02-09\_DoC.UK.B1  
Effective date of this document: 13-05-2024

