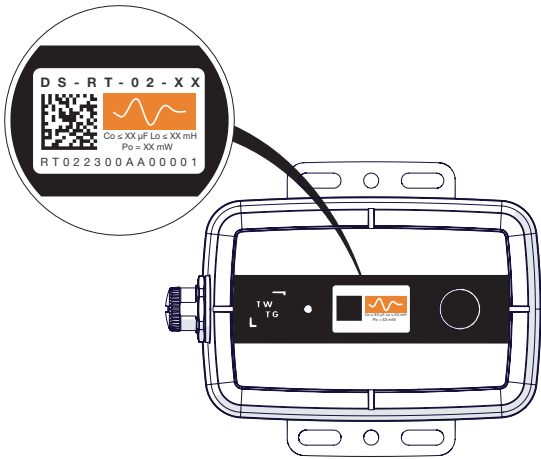




This document applies to version 1 of the:
NEON Ratiometric Transmitter (DS-RT-02-XX)
NEON Pressure Sensor (DS-RT-PS-02-XX)
NEON Pressure Gauge (DS-RT-PG-02-XX)

- Fully LoRaWAN compatible
- Based on the highest security standards
- 100% ownership of data
- IECEx-ATEX zone 0 certified
- Battery powered for easy deployment
- Installation within live environments-continuous operation
- Integration with existing data backends or DCS
- Visualisation via TWTG's SolidRed Suite or any other IoT platform
- detailed and extensive documentation
- Provision of Life cycle Support

Specifications RT

Product name	Ratiometric Transmitter
Type identification	DS-RT-02-XX

Supported sensors

Product name	Pressure Gauge
Type identification	DS-RT-PG-02-XX
Product name	Pressure Sensor
Type identification	DS-RT-PS-02-XX

Environmental

Operating temperature	-40 °F... 158 °F (-40 °C... 70 °C)
Storage temperature	50 °F... 86 °F (10 °C... 30 °C)
Operating humidity range	0% - 100% RH
Altitude	Up to 3000 m
Water & dust resistance	IP65
Pollution degree	3
Usage	Indoor and outdoor

Mechanical

Material	Molded plastic
Weight (incl. mounting bracket)	330 g
Dimensions	100x70x57mm

Installation

Transmitter	Band clamp or bolts (not included)
Sensor	Inside and outside UNF, NTP, metric and G thread options

Functional

Output	LoRaWAN
Input	M12 Connector (default 3 m)
Input insulation rating	1500VAC / 1 min

Connectivity

Protocol	LoRaWAN
Frequency band	868 MHz 915 MHz 923 MHz
Max. RF output power	+13.98 dBm max

Provisioning

Data matrix code / Serial	Serial number (read only)
NFC	Serial number (read only)

Power supply

Battery rated voltage	3.6 V
Battery rated capacity	17 Ah

Battery

Manufacturer	Tadiran
Part number	Tadiran S1P1/SL-2780/323/TWT
Battery type/size	D
Chemistry	Lithium Thionyl Chloride
Terminal type	Standard
Dimensions	61x32.5 mm
Battery life	>5 years*

*Applicable for default configuration.

Accessories & Spare parts

Battery replacement kit	5029.N02-09.Battery- Replacement-Kit
RT sensor cable	DS-EC-02-AB03

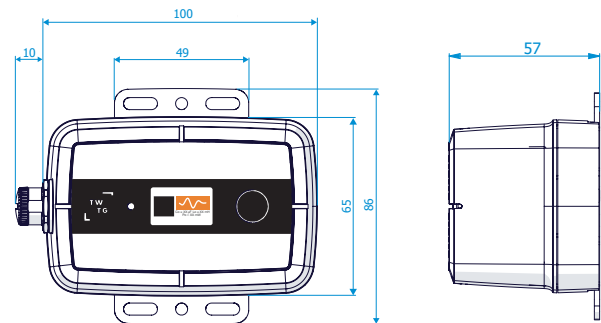
Order code

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Approvals	
ATEX certificate	DEKRA 22ATEX0004X
IECEX certificate	IECEX DEK 22.0004X
ATEX IECEx marking	Ex II 1G Ex ia IIC T4 Ga
ATEX/IECEX standards	EN/IEC 60079-0 EN 60079-0 IEC 60079-0 IEC 60079-11
FM US certificate	FM22US0061X
FM CA certificate	FM22CA0043X
US Marking	IS CI I, DIV 1, Group ABCD T4 CI I, Zone 0 Ex ia IIC T4 Ga
CA Marking	IS CI I, DIV 1, Group ABCD T4 CI I, Zone 0 AEx ia IIC T4 Ga
FM standards	FM Class 3600 FM Class 3610 FM Class 3810 FM Class 3810 ANSI/UL 60079-0 ANSI/UL 60079-11 CAN/CSA-C22.2 No. 61010-1 CAN/CSA-C22.2 No. 60079-0 CAN/CSA-C22.2 No. 60079-11
CE	EN 300 220-1 V3.1.1 EN 300 220-2 V3.2.1 EN 61010-1:2010 (+A1:2019 +A1:2019/AC:2019) EN 62311:2020 EN 60529:1911 (+A1:2000+A2:2013) EN 301 489-1 V2.2.3 EN 301 489-3 V2.1.1
UKCA	RER 2017
WEEE	Directive 2033/108/EC
RoHS	2011/65/EU
FCC	FCC CFR 47, Part 15 (Subpart C) FCC CFR 47, Part 15 (Subpart B)
ISED	USA FCC Part 15.209, 15.247, 15.205 RSS-247, RSS-Gen
ICES	CAN ICES-003(B),NMB-003(B)

Dimensions



Manufacturer

Name	TWTG R&D BV
Address	Schaardijk 386 2909 LA Capelle a/d IJssel The Netherlands

Customer is responsible for selecting appropriate Products for desired application, testing and validating such application and ensuring that implementation is in compliance with rules and (safety) requirements as listed in the data sheet, instruction manual or equivalent. Supplier allows use of Products only for the primary purpose of each device. If Customer adapts or processes or makes changes to any Product delivered without prior written authorisation from the Supplier or does not use the Products in accordance with the instructions for use as listed in the respective Data Sheet, instruction manual or equivalent and to be found within the TWTG github or allows these to be used improperly, any warranty, if applicable, lapses. The Customer is not permitted to remove/hide any trademark/logo/warning /information applied by the Supplier from / to the Product. Supplier disclaims responsibility for, and Customer will fully indemnify Supplier and its representatives against, any claims, damages, costs, losses, and liabilities arising out of wrongful or intentionally wrong use of the Products. Supplier disclaims responsibility for any actions taken by Customer staff or third parties as a result of the data provided by Products. The Customer indemnifies the Supplier from any claims for damages and claims by third parties resulting from non-compliance on the part of the Customer] of the obligations stipulated in this article.

DS-RT-PS-02-R & 03-VWXYZ

DS-RT	Transmitter
PS	Pressure Sensor
02	Series
R	Region
03	Cable length
V	Pressure range (relative)
W	Connection
X	Application
Y	Pressure orifice
Z	Custom options

Selection table Pressure sensor BAR		DS-RT-PS-02-	X	03	X	X	X	X	X
Region	Europe		01						
	Global		00						
Cable length	3 m			03					
Pressure range (relative)	0... 2,5 bar				b06				
	0... 4 bar				b07				
	0... 6 bar				b08				
	0... 10 bar				b09				
	0... 16 bar				b10				
	0... 25 bar (3)				b11				
	0... 40 bar				b12				
	0... 60 bar				b13				
	0... 100 bar				b14				
	0... 160 bar				b15				
	0... 250 bar				b16				
	0... 400 bar				b17				
	0... 600 bar				b18				
	0... 1000 bar				b19				
	-1... 9 bar				b20				
Connection (inside thread F)	7/16 - 20 UNF					1			
	1/2 - 14 NPT (1)					2			
Connection (Outside thread M)	G ¼ with O-Ring seal FPM					3			
	7 /16 -20 UNF sealing cone					4			
	¼ -18 NPT					5			
	G ¼ sealed at back DIN EN ISO 1179-2 with profile seal ring in FPM					6			
	G ¼ sealed at back and manometer with profile seal ring in FPM					7		Y1	
	R ¼ acc. to EN 10226					8			
	G ½ sealed at back and manometer with profile seal ring in FPM (3)					9	X1		
	7 /16 -20 UNF sealed at back SAE 4 with O-Ring seal FPM					10	X1		
	1/8 - 27 NPT (1)					11			
	G 1/8 sealed at front (1)					12			
	G 1/8 sealed at back DIN EN ISO 1179-2 with Profile seal ring in FPM (2)					13	X1		
	M10x1 sealed at back DIN EN ISO 1179-2 with profile seal ring in FPM (1)					14	X1		
	M20x1.5 sealed at front and manometer (combi)					15			
Application	Standard (3)					1			
	Drinking water approval NSF/ANSI 61/372, WRAS					2		Y1	
Pressure orifice	Without orifice (inclusive pressure tip orifice from 100 bar on) (3)							1	
	With pressure orifice							2	
Custom Options	No								1
	Yes								C

(1) Pressure range ≤ 60 bar / (2) Pressure range ≤ 250 bar (max. rupture pressure 1000 bar) / (3) Standard pressure sensor

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DS-RT-PS-02-R & 03-VWXYZ	
DS-RT	Transmitter
PS	Pressure Sensor
02	Series
R	Region
03	Cable length
V	Pressure range (relative)
W	Connection
X	Application
Y	Pressure orifice
Z	Custom options

Selection table Pressure sensor PSI DS-RT-PS-02-		X	03	X	X	X	X	X
Region	Europe	01						
	Global	00						
Cable length	3 m		03					
Pressure range (relative)	0... 30 psi			p05				
	0... 60 psi			p06				
	0... 100 psi			p07				
	0... 200 psi			p09				
	0... 300 psi			p10				
	0... 500 psi			p11				
	0... 750 psi			p12				
	0... 1000 psi			p13				
	0... 2000 psi			p14				
	0... 3000 psi			p15				
	0... 5000 psi			p16				
	0... 7500 psi			p17				
	0... 14500 psi			p18				
	-15... 310 psi			p19				
Connection (inside thread F)	7/16 - 20 UNF				1			
	1/2 - 14 NPT (4)				2			
	G 1/4 with O-Ring seal FPM				3			
Connection (Outside thread M)	7 /16 -20 UNF sealing cone				4			
	1/4 -18 NPT				5			
	G 1/4 sealed at back DIN EN ISO 1179-2 with profile seal ring in FPM				6			
	G 1/4 sealed at back and manometer with profile seal ring in FPM				7		Y1	
	R 1/4 acc. to EN 10226				8			
	G 1/2 sealed at back and manometer with profile seal ring in FPM				9	X1		
	7 /16 -20 UNF sealed at back SAE 4 with O-Ring seal FPM				10	X1		
	1/8 - 27 NPT (4)				11			
	G 1/8 sealed at front (4)				12			
	G 1/8 sealed at back DIN EN ISO 1179-2 with Profile seal ring in FPM (5)				13	X1		
	M10x1 sealed at back DIN EN ISO 1179-2 with profile seal ring in FPM (4)				14	X1		
Application	M20x1.5 sealed at front and manometer (combi)				15			
	G 1/4 sealed at front				16			
	G 1/2 sealed at front				17			
	Standard				1			
Pressure orifice	Drinking water approval NSF/ANSI 61/372, WRAS				2		Y1	
	Without orifice						1	
Custom Options	With pressure orifice						2	
	No							1
	Yes							C

(4) Pressure range ≤ 870 psi / (5) Pressure range ≤ 3000 psi (max. rupture pressure 14500 psi)

DS-RT-PG-02-R & 03-VWXYZ

DS-RT	Transmitter
PG	Pressure Sensor with Gauge
02	Series
R	Region
03	Cable length
V	Pressure range (relative)
W	Connection
X	Mounting
Y	Pointer
Z	Custom options

Selection table Pressure Sensor& Gauge BAR		DS-RT-PG-02-	X	03	X	X	X	X	X	X
Region	Europe	01								
	Global	00								
Cable length	3 m			03						
Pressure range (relative)	-1... 0 bar				b01					
	-0,6... 0 bar				b02					
	0... 0,6 bar				b03					
	0... 1,6 bar				b04					
	0... 2,5 bar				b05					
	0... 4 bar				b07					
	0... 6 bar				b08					
	0... 10 bar				b09					
	0... 16 bar				b10					
	0... 25 bar (1)				b11					
	0... 40 bar				b12					
	0... 60 bar				b13					
	0... 100 bar (1)				b14					
	0... 160 bar				b15					
	0... 250 bar				b16					
Connection	G ½					18				
	1/2 - NPT (1)					19				
	R 1/2					20				
	M20x1.5					21				
	Custom					C				
Mounting	Bottom - Direct mounting (1)						1			
	Bottom - Surface mounting						2			
	Custom						C			
Pointer	Adjustable slotted pointer (1)							1		
	Micro adjustable pointer							2		
	Custom							C		
Custom Options	No								1	
	Yes								C	

(1) Standard pressure gauge

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DS-RT-PG-02-R & 03-VWXYZ	
DS-RT	Transmitter
PG	Pressure Sensor with Gauge
02	Series
R	Region
03	Cable length
V	Pressure range (relative)
W	Connection
X	Mounting
Y	Pointer
Z	Custom options

Selection table Pressure Sensor& Gauge PSI		DS-RT-PG-02-	X	03	X	X	X	X	X
Region	Europe	01							
	Global	00							
Cable length	3 m			03					
Pressure range (relative)	0... 30 psi				p01				
	0... 60 psi				p02				
	0... 100 psi				p03				
	0... 200 psi				p04				
	0... 300 psi				p05				
	0... 500 psi				p07				
	0... 1000 psi				p08				
	0... 2000 psi				p09				
Connection	G ½					18			
	1/2 - NPT					19			
	R 1/2					20			
	M20x1.5					21			
	Custom					C			
Mounting	Bottom - Direct mounting						1		
	Bottom - Surface mounting						2		
	Custom						C		
Pointer	Adjustable slotted pointer							1	
	Micro adjustable pointer							2	
	Custom							C	
Custom Options	No								1
	Yes								C