Certificate of Compliance

Certificate: 80000123 **Master Contract:** 153857

Project: 80149576 **Date Issued:** March 2, 2023

Issued to: **Vega Grieshaber KG**
Am Hohenstein 113
Schiltach Baden-Württemberg 77761
Germany

Attention: Udo Ressel

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.

C US

Issued by: Awais Hameed

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations - Certified to US Standards

Intrinsic Safe for Class I, Division 1, Groups A, B, C, D; Class II, Division 1, Groups E, F, G; Class III T4
Ex ia IIC T4 Ga, Ga/Gb
Class I, Zone 0, 0/1 AEx ia IIC T4 Ga, Ga/Gb
Ex ia IIIC T134°C Da, Da/Db
Zone 20, 20/21 AEx ia IIIC T134°C Da, Da/Db

VEGAPULS C 21, C 22, C 23

Radar sensors types VEGAPULS C 21, C 22, C 23 for use in explosive atmospheres caused by the presence of combustible gases or dusts, are used for monitoring and control of filling levels by means of microwave technology. The electronics, mounted in a plastic enclosure converts the reflected microwave echo, indicating the filling level, into a 2-wire 4…20mA HART signal. Operation and control of the sensor can either be through the wired connection or via smart phone and VEGA Tools-App (Bluetooth).

The sensor is equipped with a fixed cable (VEGAPULS C 21, C 22, C 23) of 5m, 10 m, 25m or selectable length with a G1", 1" NPT or R1" threaded connection. Threaded connection at the antenna side can be of G1 ½", R1 ½" or NPT 1 ½".

Supply and output circuit (+ (Brown wire), - (Blue wire)):
In type of protection intrinsic safety Ex ia IIC or Ex ia IIIC, only for connection to a certified intrinsically safe circuit, with the following maximum values/entity parameters:
Ui/Vmax = 30V, Ii/Imax = 131mA, Pi/Pmax = 983mW, Ci = 180pF/m, Li = 0.65uH/m.
Ambient and process temperature range: -40°C to +80°C.
Enclosures are Type 4X/6P, IP66/68 3bar, 24hrs.
Safety Instructions document: 62412.

PULS C 21S, C 23S

Radar sensors types PULS C 21S and C 23S are identical to VEGAPULS C 21 and VEGAPULS C 23 in every aspect and are only different in enclosure shape, color, and type of connection cable.
Entity Parameter Values: Ui/Vmax = 30V, Ii/Imax = 131mA, Pi/Pmax = 983mW, Ci = 180pF/m, Li = 1uH/m.
Safety Instructions document: 62427.

Intrinsic Safe for Class I, Division 1, Groups A, B, C, D T4
Ex ia IIC T4 Ga, Ga/Gb
Class I, Zone 0, 0/1 AEx ia IIC T4 Ga, Ga/Gb

VEGAPULS 21, 31

Radar sensors types VEGAPULS 21, 31 for use in explosive atmospheres caused by the presence of combustible gases, are used for monitoring and control of filling levels by means of microwave technology. The electronics, mounted in a plastic enclosure converts the reflected microwave echo, indicating the filling level, into a 2-wire 4…20mA HART signal. Operation and control of the sensor can either be through the wired connection or via smart phone and VEGA Tools-App (Bluetooth).

The sensor is equipped with a 2 wire terminal via a M20x1.5 or ½" NPT cable entry. Threaded connection at the antenna side can be of G1 ½", R1 ½" or NPT 1 ½".

VEGAPULS 21 and 31 are electrically identical where type 21 is equipped without a display module and a blind cover and type 31 is equipped with a display module and a windowed cover.

Supply and output circuit (+ (terminals 1), - (terminal 2)):
In type of protection intrinsic safety Ex ia IIC, only for connection to a certified intrinsically safe circuit, with the following maximum values/entity parameters:
Ui/Vmax = 30V, Ii/Imax = 131mA, Pi/Pmax = 983mW, Ci ≈ 0nF, Li ≈ 0uH.
Ambient temperature range: -40°C to +70°C.
Process temperature range: -40°C to +80°C.
Enclosures are Type 4X, IP66/67.
Safety Instructions document: 62414.

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Notes:

1. Environmental Conditions: 5000m max.

Conditions of Acceptability:

1. For thermal data and further safety related properties refer to the safety instructions of the model.
2. The equipment shall be installed and maintained such that hazards caused by electrostatic discharge are excluded.

APPLICABLE REQUIREMENTS

Standard Number	Issue Date / Edition	Title
CAN/CSA C22.2 No. 61010-1-12, UPD1: 2015, UPD2: 2016, AMD1: 2018	2018	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1 General Requirements
CAN/CSA C22.2 No. 94.2	2015 / 2nd Edition	Enclosures for Electrical Equipment, Environmental Considerations
CSA C22.2 No. 60079-0	2019 / (Ed. 7.0) **	Explosive Atmospheres - Part 0: Equipment - General Requirements
CAN/CSA C22.2 No. 60079-11	2014 / (Ed. 6.0) **	Electrical apparatus for explosive gas atmospheres - Part 11: intrinsic safety “i”
CAN/CSA C22.2 No. 60079-26	2016 / (Ed. 3.0) **	Explosive atmospheres - Part 26: Equipment with Equipment Protection Level (EPL) Ga
UL 61010-1 (2012), AMD1: 2018	2018 / 3rd Edition	Standard for Safety - Electrical Equipment for Measurement, Control, and Laboratory use; Part 1: General requirements
ANSI/UL 50E	2015 / 2nd Edition	Enclosures for Electrical Equipment, Environmental Considerations
ANSI/UL 60079-0	2019 / (Ed. 7.0) **	Explosive Atmospheres - Part 0: Equipment - General Requirements
ANSI/UL 60079-11	2018 / (Ed. 6.0) **	Explosive Atmospheres - Part 11: Equipment Protection by Intrinsic Safety “i”
ANSI/UL 60079-26	2017 / (Ed. 3.0) **	Explosive Atmospheres - Part 26: Equipment with Equipment Protection Level (EPL) Ga

* ‘R’ = ‘Reaffirmed’
** ‘(Ed. n.n)’ refers to Edition No. of IEC standard for the mentioned national standard

Supplement to Certificate of Compliance

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The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
80149576	2023-03-02	Update the report 80000123 to accomplish the following: - To replace the current HART chip NCN5193 on SB1505-3 (IC213) and on SB1540-3 (IC213) to introduce an alternate adapter print with component "PULS-DAC-H". - Replacement of IC214 from REF3125 to MAX6033C."
80000123	2020-06-23	Original North American certification of the radar sensors VEGAPULS C21 C22 C23 and PULS C 21S 23S for the following markings: I.S. Cl I, Div 1, Gp ABCD; Class II, Division 1, Groups E, F, G; Class III T4; Cl I, Zn 0, 0/1 AEx/Ex ia IIC T4 Ga, Ga/Gb; Zn 20, 20/21 AEx/Ex ia IIIC T134°C Da, Da/Db; IP66/68 3bar, 24hrs, Type 4X/6P; and radar sensors VEGAPULS 21 31 for the following markings: I.S. Cl I, Div 1, Gp ABCD T4; Cl 1, Zn 0, AEx/Ex ia IIC T4 Ga, Ga/Gb; IP66/67 Type 4X; Tamb as specified in Minutes of Meeting – CSA. HAZLOC assessments based on acceptance of IECEx certificates, Enclosure ratings based on acceptance of FM Approvals; Separate ORDLOC assessments conducted by CSA.