



Certificate of Compliance

Certificate: 2644793

Master Contract: 153857

Project: 70192964

Date Issued: March 20, 2019

Issued to: Vega Grieshaber KG
Am Hohenstein 113
Schiltach,
77761
GERMANY

Attention: Sebastian Schaller

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.



Issued by:

Jens Ensminger

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations

CLASS 2258 82 - PROCESS CONTROL EQUIPMENT – For Hazardous Locations – Certified to US Standards

Class I Div 1, Groups B, C and D T6...T1

Ex d IIC T6...T1 Gb

Cass I, Zone 1 AEx d IIC T6...T1 Gb

Ex d IIC T6...T1 Ga/Gb

Class I, Zone 0/1 AEx d IIC T6...T1 Ga/Gb

VEGASWING SG66 Series Vibrating Level Switch, Supply Voltage 20...72 Vdc/ 9.6...55 Vdc/ 9.6...35Vdc or 20...253 Vac, 50/60 Hz, max. Power dissipation 8VA, max. 2.0W; T6-1; Encl. Type 4X/6P, IP66/68 (0.2 bar) Single Seal





Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

Electronics:

R	Relay (2x SPDT) 20...72VDC/20...253VAC (5A)	
S	Relay (2x SPDT) 20...72VDC/20...253VAC (5A)	SIL Version*
T	Transistor (NPN/PNP) 9.6...55VDC	
I	Transistor (NPN/PNP) 9.6...55VDC	SIL Version*
Z	Two-wire 8/16 mA 9.6...35VDC	
L	Two-wire 8/16 mA 9.6...35VDC	SIL Version*

Note: *SIL-approval is not part of CSA certification

VEGASWING SG66 Ex d (XP) installed in Zone 0/1 or Division 1 or Zone 1

Temperature Class	Permissible ambient temperature on the electronics enclosure	Permissible process temperature on the measuring probe
T6	-50°C...+60°C	-196°C...+80°C
T5		-196°C...+95°C
T4		-196°C...+130°C
T3		-196°C...+195°C
T2		-196°C...+290°C
T1		-196°C...+440°C

- Model VEGASWING SG66(*).abcdefghi where
 - a = For internal production control, not relevant for explosion protection
 - b = Approval
 - E = cCSAus (XP certification)
 - * = is identical with E with the exception that an additional certificate exists, which is not part of this certification
 - c = Version / Material (K, R or H)
 - d = Process Fitting/Material: Two digit alphanumeric variable for connections
 - e = Second line of defense (A)
 - f = Electronics (R, S, T, I, Z, L)
 - g = Housing (A, V,
 - * = Existing housings in special color)
 - h = Cable entry: (N, D, I, Q,
 - * = Other NRTL-rated cable entries / connections suitable for the respective type of protection.)
 - i = Certificates (Vega-internal certificates not relevant for explosion protection)



Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

Class I Div 2, Groups A, B, C and D T6...T1
Ex nA IIC T6...T1 Gc
Class I, Zone 2 Ex nA IIC T6...T1 Gc

VEGASWING SG66 Series Vibrating Level Switch, Supply Voltage 20...72 Vdc/ 9.6...55 Vdc/ 9.6...35Vdc or 20...253 Vac, 50/60 Hz, max. Power dissipation 8VA, max. 2.0W; T6-1; Encl. Type 4X/6P, IP66/68 (0.2 bar), Single Seal

Electronics:

R	Relay (2x SPDT) 20...72VDC/20...253VAC (5A)	
S	Relay (2x SPDT) 20...72VDC/20...253VAC (5A)	SIL Version*
T	Transistor (NPN/PNP) 9.6...55VDC	
I	Transistor (NPN/PNP) 9.6...55VDC	SIL Version*
Z	Two-wire 8/16 mA 9.6...35VDC	
L	Two-wire 8/16 mA 9.6...35VDC	SIL Version*

Note: *SIL-approval is not part of CSA certification

Temperature Class	Permissible ambient temperature on the electronics enclosure	Permissible process temperature on the measuring probe
T6	- 50°C... + 48°C	- 196°C...+ 80°C
T5	- 50°C... + 63°C	- 196°C...+ 95°C
T4	- 50°C... + 70°C	- 196°C...+ 130°C
T3		- 196°C...+ 195°C
T2		- 196°C...+ 290°C
T1		- 196°C...+ 440°C

- Model VEGASWING SG66(*)..abcdefghi where
 - a = (*) For internal production control, not relevant for explosion protection
 - b = Approval
 - A = cCSAus (NI certification)
 - * = is identical with A with the exception that an additional certificate exists, which is not part of this certification
 - c = Version / Material (K, R or H)
 - d = Process Fitting/Material: Two digit alphanumeric variable for connections
 - e = Second line of defense (A)
 - f = Electronics (R, S, T, I, Z, L)
 - g = Housing (A, V,
 - * = Existing housings in special color)
 - h = Cable entry: (N, D, I, Q,
 - * = Other NRTL-rated cable entries / connections suitable for the respective type of protection.)
 - i = Certificates (Vega-internal certificates not relevant for explosion protection)



Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

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

Class I Div 1, Groups A, B, C and D T6...T1

Ex ia IIC T6...T1 Ga
Class I, Zone 0, AEx ia IIC T6...T1 Ga

Ex ia IIC T6...T1 Ga/Gb
Class I, Zone 0/1, AEx ia IIC T6...T1 Ga/Gb

Ex ib IIC T6...T1 Gb
Class I, Zone 1, AEx ib IIC T6...T1 Gb

VEGASWING SG66 Series without barrier when installed per doc. 50634 clause 14; T6-1; Encl. Type 4X/6P, IP66/68 (0.2 bar), Single Seal

Entity parameters:

$V_{max}(U_i) = 30\text{ V}$

$I_{max}(I_i) = 131\text{ mA}$

$P_{max}(P_i) = 983\text{ mW}$

Ca (Ci) = negligibly small

La (Li) = negligibly small

Electronics:

Z Two-wire 8/16 mA 9.6...35VDC

L Two-wire 8/16 mA 9.6...35VDC

SIL Version*

Note: *SIL-approval is not part of CSA certification

VEGASWING SG66 Ex ia installed in Zone 0 (EPL Ga) or Zone 0/1 (EPL Ga/Gb) or Division 1 or Zone 1 (Gb)

Temperature Class	Permissible ambient temperature on the electronics enclosure	Permissible process temperature on the measuring probe
T6	-50°C...+48°C	-196°C...+80°C
T5	-50°C...+63°C	-196°C...+95°C
T4	-50°C...+70°C	-196°C...+130°C
T3		-196°C...+195°C
T2		-196°C...+290°C
T1		-196°C...+440°C

Note: In applications requiring instruments of Zone 1, the intrinsically safe supply and signal circuit can correspond to protection level ia or ib.



Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

- Model VEGASWING SG66(*) .abcdefghi where
 - a = (*) For internal production control, not relevant for explosion protection
 - b = Approval
 - C = cCSAus (IS certification)
 - * = is identical with C with the exception that an additional certificate exists, which is not part of this certification
 - c = Version / Material (K, R or H)
 - d = Process Fitting/Material: Two digit alphanumeric variable for connections
 - e = Second line of defense (A)
 - f = Electronics (Z, L)
 - g = Housing (A, V, 8,
 - * = Existing housings in special color)
 - h = Cable entry: (N, D, I, Q,
 - * = Other NRTL-rated cable entries / connections suitable for the respective type of protection.)
 - i = Certificates (Vega-internal certificates not relevant for explosion protection)

Conditions of Acceptability

Special conditions for safe use:

1. When used as a Zone 0 equipment, the vibration limit switches of type series VEGASWING SG66, which include the material aluminum, shall be installed in such a way that sparking as a result of impact or friction between aluminum and steel (with the exception of stainless steel if the presence of rust particles can be excluded) is excluded.
2. The vibration limit switches with metal enclosure with inspection window, as well as coated sensors or distance pipe include surfaces that can become charged electrostatically (note warning label).
3. When used as Zone 0 or Zone 0/1 equipment, the vibration limit switches shall be connected to the equipotential bonding conductor (contact resistance: 1 M Ω) (e.g. using the earthing terminal) in order to prevent metal elements from being charged electrostatically.
4. The vibration limit switches shall be installed in such a way that contact between the measuring sensor and the tank wall will be excluded with sufficient safety, considering the tank installations and the flow conditions inside the tank. This applies, in particular, to distance pipes exceeding the length of 3 m.
5. For applications where equipment of Zone 0 or Zone 0/1 is required, all parts of the vibration limit switches which are in contact with the medium must only be used in such media, against which they are sufficiently resistant.
6. Suitable certified cable glands shall be used for type of protection Ex d and XP for an operating temperature range of -50 °C to +90 °C.
7. Approved or recognized cable glands rated 4X/6P or better and suitable certified for the type of protection and an operating temperature range of -50 °C to +90 °C shall only be used in the equipment to maintain the Enclosure Type Rating 4X/6P.
8. Cable glands rated IP66/68 and suitable certified for the type of protection and an operating temperature range of -50 °C to +90 °C shall only be used in the equipment to maintain Degree of Protection IP66/68 of the enclosure.
9. Models with electronics T, I, Z and L are to be supplied by a Class 2 or Limited Energy Source in accordance with CSA 61010-1-12.
10. Intrinsically safe models have to be supplied by an Ex ia circuit, except models intended for Zone 1, which can also be supplied by Ex ib circuits.



Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

APPLICABLE REQUIREMENTS

CSA Std. C22.2 No. 0-10 (reaffirmed 2015) CAN/CSA-C22.2 No. 61010-1-12	General Requirements - Canadian Electrical Code, Part II Safety Requirements for Electrical Equipment for Measurement Control, and Laboratory Use, Part 1: General Requirements Enclosures for Electrical Equipment, Environmental Considerations
CAN/CSA-C22.2 No. 94.2-15 2 nd Edition (October 2015)	Explosion-Proof Enclosures for Use in Class Hazardous Locations Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations
CSA Std. C22.2 No. 30 M1986 (R 2012) CSA Std. C22.2 No. 157-92 (R 2012)	Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations
CSA Std. C22.2 No. 213-M1987 (R 2013)	Explosive atmospheres - Part 0: Equipment-General requirements Explosive atmospheres - Part 1: Equipment Protection by Flameproof Enclosure "d"
CAN/CSA Std. C22.2 No. 60079-0:11 CAN/CSA Std. C22.2 No. 60079-1:11	Explosive gas atmospheres - Part 11: Equipment Protection by Intrinsic safety "i"
CAN/CSA Std. C22.2 No. 60079-11:14	Electrical Apparatus for Explosive Gas Atmospheres--Part 15: Type of Protection "n"
CAN/CSA Std. C22.2 No. 60079-15:12	Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements Intrinsically Safe and Associated Apparatus For Use In Class I, II, and III, Division 1, Hazardous (Classified) Locations Enclosures for Electrical Equipment, Environmental Considerations
UL Std. No. 61010-1 (3rd Edition)	Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
UL Std. No. 913 (8th Ed. 2013)	Explosive Atmospheres – Part 0: Equipment - General Requirements
UL Std. No. 50E 2nd Edition (October 2015)	Explosive Atmospheres – Part 1: Equipment Protection by Flameproof Enclosures "d"
UL Std. No. 1203, Ed 5 (2013)	Explosive Atmospheres – Part 11: Equipment Protection by Intrinsic Safety "i"
ANSI/UL 60079-0 (6th Ed. 2013)	Electrical Apparatus for Explosive Atmospheres. Part 15: Electrical Apparatus with Type of Protection "n"
ANSI/UL 60079-1 (6th Ed. 2009)	Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids
ANSI/UL 60079-11 (6th Ed. 2014)	Non-incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Division 1 and 2 Hazardous (Classified) Locations
ANSI/ISA-60079-15 (12.12.02)-2012	Degrees of Protection Provided by Enclosures (IP Code)
ANSI/ISA-12.27.01: 2011	Degrees of Protection Provided by Enclosures (IP Code)
ANSI/ISA 12.12.01-2013	
IEC 60529 (Edition 2.2)	
CAN/CSA-C22.2 No. 60529:16 (July 2016)	



Certificate: 2644793
Project: 70192964

Master Contract: 153857
Date Issued: March 20, 2019

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

- (1) Submitter's name, trademark, or the CSA file number (adjacent the CSA Mark).
- (2) Catalogue / Model designation.
- (3) Complete electrical rating (amps, hertz, and volts).
- (4) Date code / Serial number traceable to month and year of manufacture.
- (5) Hazardous Location designations.
- (6) The words "INTRINSICALLY SAFE" (as applicable)
- (7) Install as per doc. 50634 clause 14 (as applicable)
- (8) Temperature code with derating for process temperature (may appear in Instruction Manual or in Safety Manual provided with the Instruction Manual).
- (9) Maximum Working Pressure
- (10) The CSA Mark with "C" and "US" indicators
- (11) Single Seal
- (12) CSA Certificate Number: CSA 13.2644793X
- (13) The following cautions for the XP / Ex d equipment:
WARNING - A SEAL SHALL BE INSTALLED WITHIN 18 inch OF THE ENCLOSURE
AVERTISSEMENT - UN SCELLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 18 POUCE DU BOÎTIER.
WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT
AVERTISSEMENT - NE PAS OUVRIR SI UNE ATMOSPHÈRE EXPLOSIVE PEUT ÊTRE PRÉSENTE
- (14) The following cautions for the IS / Div 2 equipment:
WARNING - EXPLOSION HAZARD - SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CL. I DIV 2 AND INTRINSIC SAFETY
AVERTISSEMENT - REMPLACEMENT DES COMPOSANTS PEUT NUIRE À POUR CL. I DIV 2 ET SÉCURITÉ INTRINSÈQUE

REQUIRED METHOD OF MARKING:

The marking shall be permanent, such as a 0.5-mm thick metal nameplate secured by drive pins or screws in bottomed holes, cast, etched, or engraved, or CSA Accepted adhesive-type nameplates.

Nameplate adhesive label material approval information:

CSA Accepted adhesive-type nameplates, manufactured by Schreiner Group GmbH, Colour Laser Film black-white 20-91 / 39-06 mounted to bare stainless steel, Valox 357 Polymer or painted aluminum



Supplement to Certificate of Compliance

Certificate: 2644793

Master Contract: 153857

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
70192964	2019-03-20	Variation to CofC 2644793 to improve some minor changes in the XP construction, the type key and ambient and process temperature ranges; The Class II/III marking were removed.
70028885	2015-09-14	Correction to Existing Report 2701489 for SWING66 Approval
2701489	2014-03-14	Evaluation of cCSAus Certification of VEGASWING SG66 Series Vibrating Level Switch for Ex d IIC Ga/Gb, Gb, Class I, Zone 0/1 AEx d IIC Ga/Gb, Gb.
2644793	2014-01-24	cCSAus certification of VEGASWING 66, Level Switch for Class I, Div2, Class II, III Div. 1, Class I-III, Div. 1; Class I-III, Div. 1, Includes CSA Certification for Ordinary Locations to Std. 61010.