



Certificate of Compliance

Certificate: 80025300

Master Contract: 168668

Project: 80025300

Date Issued: March 31, 2020

Issued to: Neles Finland Oy
Vanha Porvoontie 229,
P.O. Box 304,
FI-01301
Vantaa, Finland

Attention: Jari Lepisto

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:

Goutam Das.
Goutam Das

PRODUCTS

CLASS – 2258-02 PROCESS CONTROL EQUIPMENT

Ex nA IIC T4/T5/T6 Gc
Class I, Division 2, Groups A,B,C,D

CLASS – 2258-82 PROCESS CONTROL EQUIPMENT - CERTIFIED TO U.S. STANDARDS

AEx nA IIC T4/T5/T6 Gc
Class I, Division 2, Groups A,B,C,D

Model VG9...U2...4-20mA loop-powered intelligent safety solenoid and partial stroke test device with HART communication designed to control on/off valves.

The maximum allowed ambient temperature ranges according to different T Classes are:

$-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ for temperature class T6

$-40^{\circ}\text{C} \leq T_a \leq +75^{\circ}\text{C}$ for temperature class T5

$-40^{\circ}\text{C} \leq T_a \leq +85^{\circ}\text{C}$ for temperature class T4

Input values of current mA loop: $U_i = 30\text{V}$, $I_i = 152\text{mA}$, $P_i = \text{n/a}$ (device limits itself);



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Input values of PT loop: $U_i = 30V$, $I_i = 152mA$, $P_i = n/a$ (device limits itself);

Input values of LCP: $U_i = 15V$, $I_i = 1350mA$, $P_i = n/a$ (device limits itself);

Non-sparking when connected in accordance with Installation Drawing No F68963 Control Wiring, page 4 of 4.

Product type marking nomenclature of Model VG9...U2...:

a	b	c	d	e	f	g	h
VG	9	2	15	H	U2	T	/ -

- a. Marketing brand
 - VG: ValvGuard
- b. Series
 - 9: Not relevant for hazardous area protection
- c. Enclosure type
 - 2: Aluminium alloy
 - 3: Stainless steel
- d. Spool valve capacity and pneumatic connections
 - 12: Restricted capacity
 - 15: Standard Capacity
 - 35: High Capacity
 - 37: Extended Capacity
- e. Communication option
 - H: HART
- f. Approval for hazardous areas
 - U2: Class I, Division 2, Groups A,B,C,D
Ex nA IIC T4/T5/T6 Gc,
Class I, Zone 2 AEx nA IIC T4/T5/T6 Gc
Not available with limit switches
- g. Options of valve controller
 - None
 - T: Internal 2-wire (passive) position transmitter output
 - S: Internal 2-wire (passive) device status output
 - P: Partial stroke test
 - J: External Junction Box
 - L1: Extension housing with additional conduit entries
 - L2: Extension housing with terminal strip for externally powered Local Control Panel (LCP9H)
 - L3: Extension housing with terminal strip for loop powered Local Control Panel (LCP9H_L)
 - Y: Special construction – shall not affect to hazardous area approvals
- h. Limit switch type
 - Not used



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EUT is not directly connected to a supply MAINS, EUT is supplied by separately approved Power Supply Unit (not part of investigation) which fulfills the requirements of 6.3.1/6.3.2 and 9.4 max. 30 Vdc of CAN/CSA-C22.2 No. 61010-1-12 or class 2 according to CSA 223/UL 1310 (Permanently connected).

Conditions of Acceptability:

HAZLOC condition:

- i. The equipment have earth bonding facility and must comply with CAN/CSA-C22.2 No. 0.4 & ANSI/NFPA 70 and shall be subjected to acceptance of local codes or authorities permit or require such connection.
- ii. The permissible ambient temperature range depends on the used configuration. The ambient temperature range is marked on the identification plate.
- iii. The safety valve controller shall be connected according to the manufacturer's instructions.
- iv. Provision shall be made to provide the transient protection at a level not exceeding 40% of the rated voltage of the supply and the position output circuit.
- v. Selected cable gland shall not invalidate the type of protection.

ORDLOC condition:

- i. The device shall be powered by a certified power supply unit with limited energy electric output rated 30 V dc max. in accordance with CSA/UL/EN/IEC 61010-1:2010 chapter 6.3.1/6.3.2 and 9.4 or class 2 according to CSA 223/UL 1310.
- ii. Equipment is only to be installed by trained personal in accordance to the installation, set-up, operation and maintenance of comparable devices and certified as being capable of such work

Note: Equipment has only been tested for electrical safety. No evaluations of functional safety and performance characteristics have been performed.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 60079-0:15	- Explosive atmospheres - Part 0: Equipment - General Requirements
CAN/CSA-C22.2 No. 60079-15:16	- Explosive atmospheres — Part 15: Equipment protection by type of protection "n"
ANSI/UL 60079-0:13	- Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-15:13	- Explosive atmospheres – Part 15: Equipment protection by type of protection "n"
CAN/CSA-C22.2 No. 61010-1-12	- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements
UL Std. No. 61010-1 (3rd Edition): (May 11, 2012) Incl update 1 and 2.	- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirement



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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.

Nameplate adhesive label material approval information:

The following marking details appear:

CSA Monogram, with c us indicator;

- Company name "Neles Finland Oy" or Master Contract Number ("M.C. # 168668");
- Model number; As specified in the PRODUCTS section, above.
- Serial number or Date Code;
- Certificate reference "CSA 19.80025300X";
- Hazardous Location designation "Ex nA IIC T6...T4 Gc"
- Hazardous Location designation "Class I, Zone 2, AEx nA IIC T6...T4 Gc";
- Hazardous Location designation "Class I, Div 2, Groups A,B,C,D";
- Ambient Temperature "Tamb. T6: -40 ... +60 °C, T5: -40 ... +75 °C, T4: -40 ... +85 °C;
- The statement: "4-20 mA input : (9.7 V DC / 20 mA / 485 Ohm)"
- The statement: " $U_i \leq 30 \text{ V}$, $I_i \leq 152 \text{ mA}$, P_i : Device limits itself, $C_i \leq 9.6 \text{ nF}$, $L_i = 53 \text{ } \mu\text{H}$ "
- The following Caution/Warning statements (In English and French):
"WARNING – EXPLOSION HAZARD. DO NOT CONNECT OR DISCONNECT WHEN ENERGIZED", and "AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS BRANCHER NI DÉBRANCHER SOUS TENSION"
"WARNING – EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE WHILE CIRCUIT IS LIVE UNLESS THE AREA IS FREE OF IGNITIBLE CONCENTRATIONS", and "AVERTISSEMENT – RISQUE D'EXPLOSION. NE PAS RETIRER NI REMPLACER PENDANT QUE LE CIRCUIT EST SOUS TENSION À MOINS QUE L'EMPLACEMENT NE SOIT EXEMPT DE CONCENTRATIONS INFLAMMABLES"

Use in Class I Division 2 hazardous locations:

Canada: Clause 29.1A of CAN/CSA-C22.2 No. 60079-0:15 permits equipment compliant with 60079-0 and 60079-15 to be marked for Class I, Division 2 use provided the equipment is assessed as "nA".

USA: As per clause 29.19DV of UL 60079-0:13, electrical equipment complying with all applicable Class I, Zone 2, Group IIC requirements for any of the Class I, Zone 2 types of protection are permitted to additionally be marked Class I, Division 2, Group A, B,C,D – along with the appropriate temperature class.



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Nameplate adhesive label material approval information:

For stainless steel enclosure, the marking nameplate is metallic and attached to the device by screw or by rivet.

For aluminum enclosure, the marking nameplate is metallic and attached to the device as a sticker. The stickers are CSA approved under CSA files LS 41833 and 253402. A copy of the documents is held in the project folder. Refer documents F967964 and F96804 for marking label requirements.