



Certificate of Compliance

Certificate: 1921040

Master Contract: 171613

Project: 2679734

Date Issued: November 22, 2013

Issued to: Enraf B.V.

Delftechpark 39
Delft, 2628 XJ
Netherlands
Attention: Jan Bok

The products listed below are eligible to bear the CSA Mark shown



Nicholas Cameron

Issued by: Nicholas Cameron

PRODUCTS

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

CLASS 4418 02 - OUTLET BOXES AND FITTINGS - Boxes - For Hazardous Locations

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Division 1, Groups C and D; Enclosure 4X; Ex d [ia Ga] IIB T6 IP 66 / IP 67 Ga/Gb, Dual Seal:

Radar Level Gauge Type SmartRadar FlexLine

Temperature Class: T6

Ambient temperature rang: -40°C ... +65°C.

Atmospheric pressure: between: 0.8 and 1.1 bar.

Maximum process temperature: 250°C.

Maximum process pressure: 40 bar.



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Electrical data

The electrical data of all circuits can be found in document EN1C081-0690310-4 "ID-table of FlexConn Modules. The electrical data of the safety related circuits covered by this document are:

Power supply (terminals 00, 01, 02):

65-240 Vac, 50/60 Hz or 24-65 Vdc, 23 VA maximum

Supply / RS485 interface circuit (terminals 26, 27, 28, 29 or display connector):

in type of protection intrinsic safety, with the following maximum values:

$U_o / U_{oc} = 14.2 \text{ V}$; $I_o / I_{sc} = 522 \text{ mA}$; $P_o = 1.7 \text{ W}$; $C_o = 2.18 \text{ }\mu\text{F}$; $L_o = 0.25 \text{ mH}$

HART interface circuit (terminals 22, 23 or 24, 25):

in type of protection intrinsic safety, with the following maximum values:

$U_o / U_{oc} = 23.1 \text{ V}$; $I_o / I_{sc} = 124 \text{ mA}$; $P_o = 0.6 \text{ W}$; $C_o = 1 \text{ }\mu\text{F}$; $L_o = 9 \text{ mH}$

RTD interface circuit (terminals 30 to 45):

in type of protection intrinsic safety Ex ia IIB, with the following maximum values:

$U_o / U_{oc} = 8.61 \text{ V}$; $I_o / I_{sc} = 58 \text{ mA}$; $P_o = 0.13 \text{ W}$; $C_o = 1 \text{ }\mu\text{F}$; $L_o = 10.5 \text{ mH}$

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe, Entity - For Hazardous Locations

IS Class I, Division 1, Groups C and D; Enclosure 4X; Ex ia IIB T4 IP 66 / IP 67 Ga:

Display Type SmartView

Temperature Class: T4

Ambient temperature range: $-25^{\circ}\text{C} \dots +65^{\circ}\text{C}$



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Atmospheric pressure: between 0.8 and 1.1 bar.

Electrical data

Supply / input circuit:

in type of protection intrinsic safety, only for connection to a certified intrinsically safe circuit, with the following maximum values:

$U_i / U_{max} = 14.5 \text{ V}$; $I_i / I_{max} = 540 \text{ mA}$; $P_i = 1.75 \text{ W}$; $C_i = 2.03 \text{ }\mu\text{F}$; $L_i = 16 \text{ }\mu\text{H}$

CLASS 4418-02 - OUTLET BOXES AND FITTINGS-Boxes - For Hazardous Locations

Ex e [ia Ga] IIB T6, Encl 4X, IP 66 / IP 67 Gb:

Junction Box Type SmartConn

Temperature Class: T6

Ambient temperature range: $-40^{\circ}\text{C} \dots +65^{\circ}\text{C}$

Atmospheric pressure: between 0.8 and 1.1 bar.

Electrical data

Ex e terminals:

$U = 275$; $I = 3 \text{ A}$ maximum per terminal

Ex i terminals:

The maximum values are to be taken from the intrinsically safe circuits of the connected equipment e.g. the SmartRadar FlexLine.

APPLICABLE REQUIREMENTS

CAN/CSA-C22.2 No. 0-10 - General Requirements Canadian Electrical Code, Part II.



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C22.2 No 30-M1986 (R2012) - Explosion-proof Enclosures for Use in Class I Hazardous Locations.

C22.2 No. 0.4-04 (R2009) - Bonding and Grounding of Electrical Equipment (Protective Grounding).

C22.2 No 0.5-1982 (R2003) - Threaded Conduit Entries.

CAN/CSA-C22.2 No. 94-M91 (R2006) - Special Purpose Enclosures.

CAN/CSA-C22.2 No. 157-92 (R2012) - Intrinsically Safe and Non-Incendive Equipment for use in Hazardous Locations.

C22.2 No. 142-M1987 (R2009) - Process Control Equipment.

CAN/CSA-60079-0-11 - Electrical apparatus for explosive gas atmospheres - Part 0: General requirements.

CAN/CSA-60079-1-11 - Electrical apparatus for explosive gas atmospheres - Part 1: Flameproof Enclosures “d”

CAN/CSA-60079-7-12 - Electrical apparatus for explosive gas atmospheres - Part 7: Increased safety “e”.

CAN/CSA-60079-11-11 - Electrical apparatus for explosive gas atmospheres Part 11: Intrinsic safety “i”.

CAN/CSA-C22.2 No. 61010-1-04 - Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 1: General Requirements.

CAN/CSA-C22.2 No. 60529 - Degrees of protection provided by enclosures (IP code).

ANSI/ISA 12.27.01 – 2003 - Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids.



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
2679734	Nov 22, 2013	Update to report 1921040 to update drawings due to change to module CAN-1WL, based on testing performed by KEMA.
History		
1921040 Junction Box	September 19, 2007 Type SmartConn.	Original certification of Radar Level Gauge, Display Type SmartView, and
2117799	August 12, 2009	Update to report 1921040 to add “dual seal” approval.
2222055	October 13, 2009	Addition of module FII-RTD (also named CAN-RTD).
2247001	January 21, 2010	Addition of 1WL option providing a wireless control connection.
2425117	October 3, 2011	Update of marking and control drawings.