



Certificate of Compliance

Certificate: 70176105

Master Contract: 220495

Project: 80061416

Date Issued: 2021-08-26

Issued To: RHEONIK Messtechnik GmbH
Rudolf Diesel Strasse 5
Odelzhausen, Bavaria, 85235
Germany

Attention: Kay Stegmann

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: Peter Do
Peter Do

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

Class I, Division 1, Group A, B, C & D, T4;
Ex db [ia Ga] IIC T4 Gb;
Class I, Zone 1, AEx db [ia Ga] IIC T4 Gb;

Class I, Division 2, Group A, B, C & D, T4;
Ex nA [ia Ga] IIC T4 Gc;
Class I, Zone 2, AEx nA [ia Ga] IIC T4 Gc;

Model RHE 21 Flow transmitter. Provides associated Intrinsically Safe outputs to a coriolis mass flow meter in Division 1 / Zone 0 locations when installed according to control drawing RHE 21 Safety Instruction.



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Housed in a flame proof stainless steel enclosure rated IP66, Type 4. Incorporates factory installed conduit seal for IS connection.

Rated: 12 to 24 V dc, 5W max.

Tamb.: -40°C to +60°C

Conditions of Acceptability:

1. Unused conduit openings shall be plugged with certified blanking component.
2. For installations in Zone 1 / Division 1 locations, a conduit seal shall be installed within 50 mm from the enclosure.
3. Potential equalization shall be provided along intrinsically safe circuits grounding.
4. This equipment may only be powered by a power supply unit with a limited energy electric circuit in accordance with CAN/CSA C22.2 No. 61010-1-12 and ANSI/UL 61010-1, or Class 2 as defined in the Canadian Electrical Code C22.1, Section 16-200 and/or National Electrical Code (NFPA 70), article 725.121

[Ex ia Ga] IIC

[Ex ia]

Model RHE 21 Flow transmitter. Provides associated Intrinsically Safe outputs to a coriolis mass flow meter in Division 1 / Zone 0 locations when installed according to control drawing RHE 21 Safety Instruction.

Housed in a stainless-steel enclosure rated IP66, Type 4. Incorporates factory installed conduit seal for IS connection.

Rated: 12 to 24 V dc, 5W max.

Conditions of Acceptability:

1. Shall be installed in ordinary (Non-Hazardous) location only.
2. Potential equalization shall be provided along intrinsically safe circuits grounding.
3. This equipment may only be powered by a power supply unit with a limited energy electric circuit in accordance with CAN/CSA C22.2 No. 61010-1-12 and ANSI/UL 61010-1, or Class 2 as defined in the Canadian Electrical Code C22.1, Section 16-200 and/or National Electrical Code (NFPA 70), article 725.121

Class I, Division 2, Group A, B, C & D, T4;

Ex nA [ia Ga] IIC T4 Gc;

Class I, Zone 2, AEx nA [ia Ga] IIC T4 Gc:

Model RHE 28 Flow transmitter. Provides Intrinsically Safe associated outputs to a coriolis mass flow meter in Division 1 / Zone 0 locations when installed according to control drawing RHE 28 Safety Instruction.

Housed in an aluminum enclosure rated IP66, Type 4.

Rated: 12 to 24 V dc, 5W max., or 100 to 240 V ac, 48 to 62 Hz, 6 W max.



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Tamb.: -40°C to +60°C

Conditions of Acceptability:

1. Shall be installed in Class I, Division 2 / Zone 2 location.
2. Potential equalization shall be provided along intrinsically safe circuits grounding.
3. For DC model: This equipment may only be powered by a power supply unit with a limited energy electric circuit in accordance with CAN/CSA C22.2 No. 61010-1-12 and ANSI/UL 61010-1, or Class 2 as defined in the Canadian Electrical Code C22.1, Section 16-200 and/or National Electrical Code (NFPA 70), article 725.121

[Ex ia Ga] IIC

[Ex ia]

Model RHE 28 Flow transmitter. Provides associated Intrinsically Safe outputs to a coriolis mass flow meter in Division 1 / Zone 0 locations when installed according to control drawing RHE 28 Safety Instruction.

Housed in aluminum enclosure rated IP66, Type 4.

Rated: 12 to 24 V dc, 5W max., or 100 to 240 V ac, 48 to 62 Hz, 6 W max.

Tamb.: -40°C to +60°C

Conditions of Acceptability:

1. Shall be installed in ordinary (Non-Hazardous) location only.
2. Potential equalization shall be provided along intrinsically safe circuits grounding.
3. For DC model: This equipment may only be powered by a power supply unit with a limited energy electric circuit in accordance with CAN/CSA C22.2 No. 61010-1-12 and ANSI/UL 61010-1, or Class 2 as defined in the Canadian Electrical Code C22.1, Section 16-200 and/or National Electrical Code (NFPA 70), article 725.121

[Ex ia Ga] IIC

[Ex ia]

Models RHE 26 / 27 Flow transmitters. Provides associated Intrinsically Safe outputs to a coriolis mass flow meter in Division 1 / Zone 0 locations when installed according to control drawing RHE26/27 Ex-Safety Instructions.

Housed in polymeric enclosure

Rated: RHE27 – 12 to 24 V dc, 5W max., or 100 to 240 V ac, 48 to 62 Hz, 6 W max.

RHE26 – 12 to 24 V dc, 5W max.

Tamb.: -20°C to +60°C

Conditions of Acceptability:

1. Shall be installed in ordinary (Non-Hazardous) location only.
2. Potential equalization shall be provided along intrinsically safe circuits grounding.



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3. For DC model: This equipment may only be powered by a power supply unit with a limited energy electric circuit in accordance with CAN/CSA C22.2 No. 61010-1-12 and ANSI/UL 61010-1, or Class 2 as defined in the Canadian Electrical Code C22.1, Section 16-200 and/or National Electrical Code (NFPA 70), article 725.121

Entity parameters:

Circuit	Pins	U _o (V)	I _o (mA)	P _o (mW)	L _o (mH)	C _o (μF)
Drive	1-2	8.1	136	275	1.9	2
Pickup	6-7, 8-9	2.4	9	5.4	100	2
Temperature Sensor	3-4, 5-4	6.1	45.7	69.7	1	2
4-20 mA Active Input	60-61	24.7	91.5	565	4	0.1



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APPLICABLE REQUIREMENTS

CAN/CSA C22.2 No 61010-1-12	- Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 1: General Requirements
ANSI/UL 61010-1 3rd Ed.	- Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 1: General Requirements
CSA C22.2 No 30-M1986 (R2012)	- Explosion-proof enclosures for use in class I hazardous locations
ANSI/UL 1203, 5 th Ed.: 2018	- Explosion-Proof and Dust-Ignition-Proof Electrical Equipment for Use in Hazardous (Classified) Locations
CAN/CSA C22.2 No 60079-0:15, 6 th Ed.	- Explosive atmospheres – Part 0: Equipment – General requirements
ANSI/UL 60079-0-2013, 6th Ed.	- Explosive atmospheres – Part 0: Equipment – General requirements
CAN/CSA C22.2 No 60079-1:16, 7 th Ed.	- Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
ANSI/UL 60079-1-2015 7 th Ed.	- Explosive atmospheres — Part 1: Equipment protection by flameproof enclosures “d”
CAN/CSA C22.2 No 60079-11, 6 th Ed.	- Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”
ANSI/UL 60079-11-2018, 6 th Ed.	- Explosive atmospheres — Part 11: Equipment protection by intrinsic safety “i”
CAN/CSA C22.2 No 60079-15:16, 4 th Ed.	- Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection “n” electrical apparatus
ANSI/UL 60079-15-2013 4 th Ed.	- Electrical apparatus for explosive gas atmospheres – Part 15: Construction, test and marking of type of protection “n” electrical apparatus
CAN/CSA C22.2 No 213-17	- Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations
ANSI/UL 121201-2017, 9 th Ed.	- Nonincendive electrical equipment for use in Class I and II, Division 2 and Class III, Divisions 1 and 2 hazardous (classified) locations
CAN/CSA C22.2 No 60529:16	- Degrees of protection provided by enclosures (IP Code)
ANSI/ISA 60529 Ed. 2.2	- Degrees of protection provided by enclosures (IP Code)
CSA C22.2 No. 94.2-07 (R2012)	- Enclosures for electrical equipment, environmental considerations



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ANSI/UL 50E-2015 - Enclosures for Electrical Equipment, Environmental Considerations

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.

The following markings are laser engraved on a 0.5mm stainless steel plate either welded to the enclosure or secured by screws. Models suitable for ordinary locations only may utilize an appropriately rated CSA Accepted adhesive nameplate.

- Manufacturer's name "Rheonik Messtechnik GmbH", or CSA master contract number "220459" adjacent to the CSA mark in lieu of the manufacturer's name.
- Model Number, as specified in the PRODUCTS section, above.
- Serial Number, Date Code or Month and Year of Manufacture.
- Ambient temperature range, as specified in the PRODUCTS section, above.
- Hazardous Location designation: As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Division" may be abbreviated "DIV", and the word "Groups" may be abbreviated "GRP" or "GP".
- Method of Protection markings (Ex – markings): As specified in the PRODUCTS section, above. The word "Class" may be abbreviated "CL", the word "Zone" may be abbreviated "ZN".
- The CSA Mark, with or without the "C" and "US" indicators, as shown on the Certificate of Conformity.
- Certificate number "CSA18CA70176105"
- The words "ASSOCIATED EQUIPMENT", "ASSOCIATED APPARATUS", or the symbol "[Ex ia]"
- The words: "CAUTION – DO NOT OPEN WHEN EXPLOSIVE ATMOSPHERE IS PRESENT" and "ATTENTION – NE PAS OUVRIR EN PRÉSENCE D'UNE ATMOSPHÈRE EXPLOSIVE", or "OPEN CIRCUIT BEFORE REMOVING COVER", and "OUVRIR LE CIRCUIT AVANT DE RETIRER LE COUVERCLE", or "KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE", and "ATTENTION: NE PAS OUVRIR SAUF DE TENSION OU ZONE EST CONNU POUR ÊTRE NON DANGEREUX", or equivalent for Model RHE21.



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- The words: “WARNING: CONDUIT SEAL SHALL BE INSTALLED WITHIN 50 MM FROM THE ENCLOSURE” and “AVERTISSEMENT: UN SCÉLLEMENT DOIT ÊTRE INSTALLÉ À MOINS DE 50 mm DU BOÎTIER” or equivalent for Model RHE21.
 - The words “INSTALL PER DRAWING”, or equivalent, followed by the drawing number specified in the PRODUCTS section, above.



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
80061416	2021-08-26	Evaluation of report 70176105 to update drawings to include alternative Ground Plane for RHE 21 flow transmitter (DC Model).
70176105	2018-12-06	<p>Certification of model RHE 21 associated apparatus [Ex ia] installed in Division 1 / Zone 1 locations housed in flame proof enclosure for marking Class I, Div. 1, Group A, B, C & D, T4; Class I, Zone 1, AEx/Ex db [ia Ga] IIC T4 Gb; Class I, Div. 2, Group A, B, C & D, T4; Class I, Zone 2, AEx/Ex nA [ia Ga] IIC T4 Gc; AEx/Ex [ia Ga] IIC based on acceptance of IECEx ExTR.</p> <p>Certification of model RHE 28 associated apparatus [Ex ia] installed in Division 2 / Zone 2 locations for marking Class I, Div. 2, Group A, B, C & D; Class I, Zone 2, AEx/Ex na [ia Ga] IIC T4 Gc; AEx/Ex [ia Ga] IIC based on acceptance of IECEx ExTR.</p> <p>Certification of model RHE 26 / 27 associated apparatus [Ex ia] installed in ordinary locations for marking Class I, Div. 1, Group A, B, C & D; Class I, AEx/Ex [ia Ga] IIC.</p>