

# Certificate of Compliance

**Certificate:** 1878089

**Master Contract:** 235214

**Project:** 2207391

**Date Issued:** August 24, 2009

**Issued to:** Rosemount Tank Radar AB  
Gamlestadsvagen 18B  
Goteborg, 402 51  
Sweden

**Attention:** Per-Olof Hagglund

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



**Issued by:** K. Atkins

  
**Authorized by:** Stephen Morley  
Product Group Manager

## PRODUCTS

### SECTION A

#### CLASS 2252 05 - PROCESS CONTROL EQUIPMENT

Two Wire Ultrasonic Level Transmitter, Models 3102 Level transmitter with 2 integral relays, 4-20mA/HART, 11m range 4-20mA/HART communication, 3101 Entry level transmitter, 4-20mA, 8m range 4-20mA output Input Rated 12-40Vdc, 4-20mA, maximum, Relay Contacts Rated 2A, 30Vdc Resistive, 1A, 30Vdc Inductive, Working Pressure 15PSI, -40°C to 70°C Ambient; Pollution Degree 2, Installation Category I. Enclosure Type 4X.

2120, 2130 Vibrating Fork Point Level Switch; Input Rated 20 - 264Vac maximum, 2VA, 50/60Hz, 20- 60Vdc maximum, 500mA max, Relay Contacts Rated 250Vac/30Vdc, 5Amps, Working Pressure 1668psi, Enclosure Type 4X, -40 to 80C ambient; Temperature Code for H version: -40 to 80C ambient; Pollution Degree 4, Installation Category II; Single Seal.

Certificate: 1878089

Project: 2207391



Master Contract: 235214

Date Issued: August 24, 2009

### **APPLICABLE REQUIREMENTS**

- 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. 94-M91 (R2006) - Special Purpose Enclosures
- ANSI/ISA - 12.27.01-2003 - Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids

### **MARKINGS**

The following markings shall appear in a visible and permanent manner on the units.

- CSA Monogram;
- Company's identification - Company name, trade name and/or CSA Master Contract No. 235214;
- Factory identifier; [if required]
- Model name /number
- Serial Number /date of manufacturing
- Complete electrical ratings
- Enclosure Type 4X
- CSA certificate number

Method of Marking: CSA Certified adhesive polyester film pressure sensitive label by Brady Worldwide Inc., type B-432 or B422 or Brady NV type B7536. Alternatively the markings may be etched or engraved or stamped on metallic nameplates mechanically secured on enclosure by welding, drive screws or rivets, or secured to the integral cable.

### **SECTION B**

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

Class 1, Division 1, Groups A, B, C, D  
Ex ia IIC

- Two-Wire Ultrasonic Level Transmitter, Model 3105, Intrinsically Safe when installed with certified barrier meeting transmitter Entity Parameters  $U_i=30V$ ,  $I_i=120mA$ ,  $P_i=0.82W$ ,  $C_i=0$ ,  $L_i=108\mu H$ . When connected per installation drawing 71097/1218. Temperature Code T4 at  $T_a=-40^\circ C$  to  $60^\circ C$  or T6 at  $T_a=-40^\circ C$  to  $55^\circ C$ . Enclosure Type 4X.

Certificate: 1878089

Project: 2207391



Master Contract: 235214

Date Issued: August 24, 2009

Class I, Division 1, Groups A, B, C, D:

Ex ia IIC T3, T4, T5

2120, 2130 Vibrating Fork Point Level Switch, input rated 20mA maximum, 12Vdc maximum, intrinsically safe with entity parameters  $V_{max}, U_i=15V$ ,  $I_{max}, I_i=32mA$ ,  $P_i=0.1W$ ,  $C_i=211nF$ ,  $L_i=0.06mH$  when connected per installation drawing 71097/1177; Maximum Working Pressure 1668psi; Temperature Code for T version: T3 (-40<Tamb<+50°C; Tproc<150°C), T4 (-40<Tamb<+60°C; Tproc<115°C), T5 (-40<Tamb<+80°C; Tproc<60°C); Temperature Code for H version: T2 (-50<Tamb<+65°C; Tproc<260°C), T3 (-50<Tamb<+71°C; Tproc<185°C), T4 (-50<Tamb<+77°C; Tproc<115°C), T5 (-50<Tamb<+80°C; Tproc<80°C); Single Seal.

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - For Hazardous Locations

Class 1, Division 2 Groups A, B, C, D

Ex nL IIC

- Two-Wire Ultrasonic Level Transmitter, Model 3105, Non-Incendive device and wiring when connected per installation drawing 71097/1218 with Entity Parameters  $U_i=30V$ ,  $I_i=120mA$ ,  $P_i=0.82W$ ,  $C_i=0$ ,  $L_i=108uH$ . Temperature Code T4 at  $T_a=-40^{\circ}C$  to  $60^{\circ}C$  or T6 at  $T_a=-40^{\circ}C$  to  $55^{\circ}C$ . Enclosure Type 4X.

CLASS 2258 02 - PROCESS CONTROL EQUIPMENT - For Hazardous Locations

Class I, Division 1, Groups A, B, C, D:

2120, 2130 Vibrating Fork Point Level Switch, input rated 264Vac maximum, 60Vdc maximum, 500mA max. Maximum Working Pressure 1668psi; Enclosure Type 4X; Temperature Code for T version: T3 (-40<Tamb<+50°C; Tproc<150°C), T4 (-40<Tamb<+65°C; Tproc<125°C), T5 (-40<Tamb<+70°C; Tproc<90°C), T6 (-40<Tamb<+75°C; Tproc<75°C); Temperature Code for H version: T2 (-50<Tamb<+65°C; Tproc<260°C), T3 (-40<Tamb<+69°C; Tproc<185°C), T4 (-50<Tamb<+73°C; Tproc<125°C), T5 (-50<Tamb<+74°C; Tproc<95°C), T6 (-50<Tamb<+75°C; Tproc<80°C); Single Seal.

Certificate: 1878089

Project: 2207391



Master Contract: 235214

Date Issued: August 24, 2009

### **APPLICABLE REQUIREMENTS**

CAN/CSA-E60079-0:02 - Electrical Apparatus for Explosive Gas Atmospheres--Part 0: General Requirements  
CAN/CSA-E60079-11:02 - Electrical Apparatus for Explosive Gas Atmospheres--Part 11: Intrinsic Safety "i"  
CSA C22.2 No. 142-M1987 - Process Control Equipment  
CSA Std C22.2 No.213-M1987 - Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations  
CSA C22.2 No. 157-M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous locations.  
CAN/CSA E60079-15:02 - Electrical Apparatus for Explosive Gas Atmospheres - Part 15: Type of protection "n"  
CAN/CSA C22.2 No. 0-M91 (R2001) - General Requirements - Canadian Electrical Code, Part II  
CSA Std C22.2 No. 30-M1986 - Explosion-Proof Enclosures for Use in Class I Hazardous Locations  
ANSI/ISA - 12.27.01-2003 - Requirements for Process Sealing Between Electrical Systems and Flammable or Combustible Process Fluids

### **MARKINGS**

Markings are done on CSA accepted adhesive polyester film pressure sensitive label by Brady Worldwide Inc., type B-432 or B422 or Brady NV type B7536. Alternatively the markings may be etched or engraved or stamped on metallic nameplates mechanically secured on enclosure by welding, drive screws or rivets, or secured to the integral cable.

- CSA Monogram
- Company name, trade name and/or CSA Master Contract No.235214;
- Model name / number
- Serial number or Date of manufacturing
- Entity Parameters (As Applicable)
- Maximum Working Pressure
- Hazardous Location Designations with Temperature Code
- Ex ia IIC T3, T4, T5 (as applicable)
- CSA certificate number (as applicable)
- Reference to installation drawing (as applicable)
- Ambient temperature range
- Maximum Working Pressure
- Enclosure Type 4X rating (as applicable)
- Caution re substitution of components (as applicable)
- Warning: Do not open when an explosive atmosphere may be present (as applicable)





## CERTIFICATION RECORD

---

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

---

Alternate File: 235214

Class No: 2252 05 PROCESS CONTROL EQUIPMENT

LISTEE

4501632      Rosemount Tank Radar AB  
                 Gamlestadvagen 18B  
                 Goteborg, 402 51  
                 Sweden

August 24, 2009 (Replaces: July 30, 2008)

2120 Vibrating Fork Point Level Switch; Input Rated 20 - 264Vac maximum, 2VA, 50/60Hz, 20 - 60Vdc maximum, 500mA max, Relay Contacts Rated 250Vac/30Vdc, 5Amps, Working Pressure 1450psi, Enclosure Type 4X, -40 to 80C ambient; Pollution Degree 4, Installation Category II.

Two Wire Ultrasonic Level Transmitter, Models 3102 Level transmitter with 2 integral relays, 4-20mA/HART, 11m range 4-20mA/HART communication , 3101 Entry level transmitter, 4-20mA, 8m range 4-20mA output Input Rated 12-40Vdc, 4-20mA, maximum, Relay Contacts Rated 2A, 30Vdc Resistive, 1A, 30Vdc Inductive, Working Pressure 15PSI, -40°C to 70°C Ambient; Pollution Degree 2, Installation Category I  
Enclosure Type 4X.

2120, 2130 Vibrating Fork Point Level Switch; Input Rated 20 - 264Vac maximum, 2VA, 50/60Hz, 20-60Vdc maximum, 500mA max, Relay Contacts Rated 250Vac/30Vdc, 5Amps, Working Pressure 1668psi, Enclosure Type 4X, -40 to 80C ambient; Temperature Code for H version: -40 to 80C ambient; Pollution Degree 4, Installation Category II' Single Seal.

/ka



# CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

Alternate  
File: 235214

Class No: 2258 04 PROCESS CONTROL EQUIPMENT Intrinsically Safe, Entity - For Hazardous Locations

## LISTEE

4501632 Rosemount Tank Radar AB  
Gamlestadsvagen 18B  
Goteborg, 402 51  
Sweden

August 24, 2009 (Replaces: July 30, 2008)

Class I, Division 1, Groups A, B, C, D:

Ex ia IIC T3, T4, T5

- 2120 vibrating fork point level switch, input rated 20mA maximum, 12Vdc maximum, intrinsically safe with entity parameters  $V_{max,Ui} = 15V$ ,  $I_{max,Ii} = 32mA$ ,  $P_i = 0.1W$ ,  $C_i = 211nF$ ,  $L_i = 0.06mH$  when connected per installation drawing 71097/1177, Ambient Temperature Range -40 + 80°C, T3 (Tproc < 150°C), T4 (Tproc < 115°C) T5 (Tproc < 80°C), max. working pressure 1450psi.

Class I, Division 2, Groups A, B, C, D:

- 2120 vibrating fork point level switch, input rated 20mA maximum, 12Vdc maximum, with entity parameters  $V_{max,Ui} = 15V$ ,  $I_{max,Ii} = 32mA$ ,  $P_i = 0.1W$ ,  $C_i = 211nF$ ,  $L_i = 0.06mH$  when connected per installation drawing 71097/1185, Ambient Temperature Range -40 + 80°C, T3 (Tproc < 150°C), T4 (Tproc < 115°C) T5 (Tproc < 80°C), max. working pressure 1450psi.

Associated Apparatus for Class I, Division 1, Groups A, B, C, D:

349\* Universal Controller, input rated 115/230Vac, 18VA, or 30Vdc, 9W maximum, intrinsically safe associated equipment with entity parameters  $V_{oc} = 27.3V$ ,  $I_{sc} = 96.9mA$ ,  $C_a = 70nF$ ,  $L_a = 2.26mH$ ,  $P_o = 0.66W$  when connected per installation drawing 71097/1201, Maximum Ambient Temperature 55° C, Wall Mounted Model Type 4X.

Class 1, Division 1, Groups A, B, C, D

Ex ia IIC

- Two-Wire Ultrasonic Level Transmitter, Model 3105, Intrinsically Safe when installed with certified barrier meeting transmitter Entity Parameters  $U_i=30V$ ,  $I_i=120mA$ ,  $P_i=0.82W$ ,  $C_i=0$ ,  $L_i=108\mu H$ . When connected per installation drawing 71097/1218. Temperature Code T4 at  $T_a=-40^{\circ}C$  to  $60^{\circ}C$  or T6 at  $T_a=-40^{\circ}C$  to  $55^{\circ}C$ . Enclosure Type 4X.

Class I, Division 1, Groups A, B, C, D:

Ex ia IIC T3, T4, T5

2120, 2130 Vibrating Fork Point Level Switch, input rated 20mA maximum, 12Vdc maximum, intrinsically safe with entity parameters  $V_{max}, U_i=15V$ ,  $I_{max}, I_i=32mA$ ,  $P_i=0.1W$ ,  $C_i=21nF$ ,  $L_i=0.06mH$  when connected per installation drawing 71097/1177; Maximum Working Pressure 1668psi; Temperature Code for T version: T3 ( $-40 < T_{amb} < +50^{\circ}C$ ;  $T_{proc} < 150^{\circ}C$ ), T4 ( $-40 < T_{amb} < +60^{\circ}C$ ;  $T_{proc} < 115^{\circ}C$ ), T5 ( $-40 < T_{amb} < +80^{\circ}C$ ;  $T_{proc} < 60^{\circ}C$ ); Temperature Code for H version: T2 ( $-50 < T_{amb} < +65^{\circ}C$ ;  $T_{proc} < 260^{\circ}C$ ), T3 ( $-50 < T_{amb} < +71^{\circ}C$ ;  $T_{proc} < 185^{\circ}C$ ), T4 ( $-50 < T_{amb} < +77^{\circ}C$ ;  $T_{proc} < 115^{\circ}C$ ), T5 ( $-50 < T_{amb} < +80^{\circ}C$ ;  $T_{proc} < 80^{\circ}C$ ); Single Seal.

/ka



# CERTIFICATION RECORD

The company named below has been authorized by CSA International to represent the products listed in this record as "CSA Certified" and to affix the CSA Mark to these products according to the terms and conditions of the CSA Service Agreement and applicable CSA program requirements (including additional Markings).

Alternate File: 235214

Class No: 2258 02 PROCESS CONTROL EQUIPMENT For Hazardous Locations

LISTEE

4501632 Rosemount Tank Radar AB  
Gamlestadsvagen 18B  
Goteborg, 402 51  
Sweden

August 24, 2009 (Replaces: July 30, 2008)

Class I, Division 1, Groups A, B, C, D:

Ex ia IIC T3, T4, T5

- 2120 vibrating fork point level switch, input rated 20mA maximum, 12Vdc maximum, intrinsically safe with entity parameters  $V_{max}, U_i = 15V$ ,  $I_{max}, I_i = 32mA$ ,  $P_i = 0.1W$ ,  $C_i = 211nF$ ,  $L_i = 0.06mH$  when connected per installation drawing 71097/1177, Ambient Temperature Range -40 + 80°C, T3 (Tproc < 150°C), T4 (Tproc < 115°C) T5 (Tproc < 80°C), max.working pressure 1450psi.

Class I, Division 2, Groups A, B, C, D:

- 2120 vibrating fork point level switch, input rated 20mA maximum, 12Vdc maximum, with entity parameters  $V_{max}, U_i = 15V$ ,  $I_{max}, I_i = 32mA$ ,  $P_i = 0.1W$ ,  $C_i = 211nF$ ,  $L_i = 0.06mH$  when connected per installation drawing 71097/1185, Ambient Temperature Range -40 + 80°C, T3 (Tproc < 150°C), T4 (Tproc < 115°C) T5 (Tproc < 80°C), max.working pressure 1450psi.

Class I, Division 1, Groups A, B, C, D:

- 2120 vibrating fork point level switch, input rated 264V ac maximum, 60V dc maximum, 500mA max. Ambient Temperature Range -40 + 80°C, T3 (Tproc < 150°C), T4 (Tproc < 125°C), T6 (Tproc < 75°C), MWP 1450 psi, Enclosure Type 4X.

Class I, Division 1, Groups A, B, C, D:

2120, 2130 Vibrating Fork Point Level Switch, input rated 264Vac maximum, 60Vdc maximum,

500mA max. Maximum Working Pressure 1668psi; Enclosure Type 4X; Temperature Code for T version: T3 (-40<Tamb<+50°C; Tproc<150°C), T4 (-40<Tamb<+65°C; Tproc<125°C), T5 (-40<Tamb<+70°C; Tproc<90°C), T6 (-40<Tamb<+75°C; Tproc<75°C); Temperature Code for H version: T2 (-50<Tamb<+65°C; Tproc<260°C), T3 (-40<Tamb<+69°C; Tproc<185°C), T4 (-50<Tamb<+73°C; Tproc<125°C), T5 (-50<Tamb<+74°C; Tproc<95°C), T6 (-50<Tamb<+75°C; Tproc<80°C); Single Seal.

/ka