

Certificate of Compliance

Certificate: 2389070 (LR 034186)

Project: 2389070

Master Contract: 155560

Date Issued:

July 13, 2011

Issued to: Rosemount Analytical Inc.

Uniloc Division 2400 Barranca Pky Irvine, CA 92606 USA Attention: Dana Crowley

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.



Ron Wachowicz Issued by: Ron Wachowicz, C.E.T.

PRODUCTS

CLASS 2258 03	- PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non -
	Incendive Systems - For Hazardous Locations
CLASS 2258 83	- PROCESS CONTROL EQUIPMENT-Intrinsically Safe and Non-
	Incendive - Systems-For Hazardous Locations-Certified to U.S. Standards
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

Part A: Pre-Amplifier Assembly:

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, Groups ABCD; Class II, Division 1, Groups EFG; Class III;



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Class I, Division 2, Groups ABCD; Ambient temperature rating -20°C to +60°C;

Ex ia IIC; T6:

'Smart' preamp, Model 1700702; Entity Parameters: Vmax = 13.1V, Imax = 359 mA, Pmax = 699 mW, Ci = 1.003μ F, Li = 0.089 mH as per Control Drawing 1400333.

Part B: Sensor Apparatus with Preamp:

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, Groups ABCD; Class II, Division 1, Groups EFG; Class III;

Class I, Division 2, Groups ABCD; Ambient temperature rating -20°C to +60°C;

Ex ia IIC; T6:

The following models have the 'Smart' preamp, Model 1700702 with Entity Parameters: Vmax = 13.1V, Imax = 359 mA, Pmax = 699 mW, Ci = 1.003 μ F, Li = 0.089 mH installed as an integral component.

Model 385+-a-b-c. Triple Junction pH/ORP Sensor

- a = Body configuration: 03
- b = Combination electrode: 10, 11
- c = Special cable length: 99CB(XXFT) or blank

Model 389-a-b-c-d-e. pH/ORP Sensor

- a = Preamplifier: 01
- b = Combination electrode: 10, 11
- c = Analyzer/tc compatibility: 50, 54, 55
- d = Options: 62 or blank
- e = Special cable length: 99CB(XXFT) or blank



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Model 389VP-a-b-c. pH/ORP Sensor

a = Combination electrode: 10, 11

b = Analyzer/tc compatibility: 50, 54

c = is Preamplifier: 70

Model 396VP-a-b. Submersion/Insertion pH/ORP Sensor

a = TC compatibility: 50, 54

b = Optional options: 70 (required), 71

Model 396P-a-b-c-d-e. Submersion/Insertion pH/ORP Sensor

a = Preamplifier/cable: 01

- b = Measuring electrode type: 10, 13
- c = Analyzer/tc compatibility: 50, 54, 55
- d = Optional option: 41 or blank
- e = Special cable length: 99CB(XXFT) or blank

Model 396PVP-a-b-c-d. Submersion/Insertion pH/ORP Sensor

- a = Measuring electrode type: 10, 13
- b = Analyzer/tc compatibility: 50, 54, 55
- c = Optional option: 41 or blank
- d = Optional option: 70

Model 396RVP-a-b-c-d. Retraction/Submersion/Insertion pH/ORP Sensor

- a = Measuring electrode type: 10, 13
- b = Sensor length: 21, 25
- c = Analyzer/tc compatibility: 50, 54
- d = Optional options: 70

Model 398RVP-a-b-c-d-e. pH/ORP Sensor

a = Measuring electrode type: 10, 13



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b = Sensor length: 21, 25

c = O-ring material: 30, 31, 32

d = Analyzer/tc compatibility: 50, 54

e = Optional options: 70

Model 399-14-a. pH/ORP Sensor

a =Special cable length: 99CB(XXFT) or blank

Model 399VP-09-70. pH/ORP Sensor

Model 3300HTVP-a-b-c-d. High Performance pH and ORP Sensor

a = Measuring electrode: 10

b = O-ring material: 30, 31, 32

c = Preamplifier: 70

d = Special cable length: blank

Model 3400HTVP-a-b-c-d-e-f. High Performance pH and ORP Sensor

a = Measuring electrode type: 10

b = Sensor length: 21, 25

c = O-ring material: 30, 31, 32

d = Cable length: blank

e = Preamplifier: 70

f = Special cable length: blank

3500-a-b-c-d-e-f. High Performance pH and ORP Sensor

a = Electrolyte selection: HT, BF, PR, OR, SR, MR

b = Preamplifier/cable: 01

c = Measuring electrode: 10

d = Reference type: 21

e = O-ring material: 30, 31, 32



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f =Special cable length: 99CB(XXFT) or blank

3500VP-a-b-c-d-e-f. High Performance pH and ORP Sensor

- a = Electrolyte selection: HT, BF, PR, OR, SR, MR
- b = Preamplifier/cable: 01
- c = Measuring electrode: 10
- d = Reference type: 21
- e = O-ring material: 30, 31, 32
- f = Special cable length: blank

Model 3900-a-b-c. General Purpose pH/ORP Sensor

- a = Preamplifier option: 01
- b = Measuring electrode: 10
- c = Special cable length: 99CB(XXFT) or blank

Model 3900VP-a-b. General Purpose pH/ORP Sensor

- a = Preamplifier option: 01
- b = Measuring electrode: 10

Note: The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition.

Part C: Sensor Apparatus:

CLASS 2258 03 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems - HazLoc

CLASS 2258 83 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe and Non-Incendive Systems -HazLoc - Certified to U.S. Standards

Class I, Division 1, Groups ABCD; Class II, Division 1, Groups EFG; Class III; Class I, Division 2, Groups ABCD; Ex ia IIC; T6; Ambient temperature rating -20°C to +60°C: (Simple Apparatus)



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Model 328A-a. Steam Sterilizable pH Sensor

a = Cable termination: 07, 08, 09

Electrostatic charge risk not applicable.

Model 370-a. pH Sensor

a = Insertion depth: 120, 225, 300, 361, 425

Electrostatic charge risk not applicable.

Model 371-a-b-c. pH/ORP Low Maintenance Combination Electrode

a = Measuring electrode: 10, 12

b = Plug type: 70, 71

c = Temperature compensation: 54, 56 or blank

Electrostatic charge risk not applicable.

Model 385-a-b-c-d-e. Retractable pH/ORP Sensor

a = Tube material: 02

b = Analyzer/tc compatibility: 04, 06, 07, 08

c = Combination electrode: 10, 11, 12

d = Preamplifier (remote): 52, 53

e = Ball valve kit: 20, 21 or blank

Model 385+-AA-BB-CC Triple Junction pH/ORP Sensor

- a = Body configuration: 04
- b = Combination electrode: 10, 11, 12
- c = Special cable length: 99CB(XXFT) or blank

Model 389-a-b-c-d-e. pH/ORP Sensor

- a = Preamplifier: 02
- b = Combination electrode: 10, 11, 12
- c = Analyzer/tc compatibility: 50, 54, 55



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d = Options: 62 or blank

e = Special cable length: 99CB(XXFT) or blank

Model 389VP-a-b-c. pH/ORP Sensor

- a = Combination electrode: 10, 11, 12
- b = Analyzer/tc compatibility: 50, 54
- c = Preamplifier: blank

Model 396-a-b-c. Submersion/Insertion pH Sensor

- a = TC compatibility: 50, 54
- b = Optional options: 62, 71 or blank
- c = Special cable length: 99CB(XXFT) or blank

Model 396VP-a-b. Submersion/Insertion pH Sensor

- a = TC compatibility: 50, 54
- b = Optional options: 71 or blank

Model 396P-a-b-c-d-e. Submersion/Insertion pH/ORP Sensor

- a = Preamplifier/cable: 02
- b = Measuring electrode type: 10, 12, 13
- c = Analyzer/tc compatibility: 50, 54, 55
- d = Optional option: 41 or blank
- e = Special cable length: 99CB(XXFT) or blank

Model 396PVP-a-b-c-d. Submersion/Insertion pH/ORP Sensor

- a = Measuring electrode type: 10, 12, 13
- b = Analyzer/tc compatibility: 50, 54, 55
- c = Optional option: 41 or blank
- d = Optional options (preamplifier): blank

Model 396R-a-b-c-d-e. Retraction/Submersion/Insertion pH/ORP Sensor



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a = Measuring electrode type: 10, 12, 13

b = Sensor length: 21, 25

c = Analyzer/tc compatibility: 50, 54

d = Optional options: 60, 61 or blank

e = Special cable length: 99CB(XXFT) or blank

Model 396RVP-a-b-c-d. Retraction/Submersion/Insertion pH/ORP Sensor

a = Measuring electrode type: 10, 12, 13

b = Sensor length: 21, 25

- c = Analyzer/tc compatibility: 50, 54
- d = Optional options (preamplifier): blank

Model 397-a-b-c-d-e. pH Sensor

- a = Preamplifier: 02 (no preamplifier)
- b = Measuring electrode: 10, 12
- c = Analyzer compatibility: 50, 54
- d = Options: 62, 64 or blank
- e = Special cable length: 99CB(XXFT) or blank

Model 398-a-b-c-d-e. pH/ORP Sensor

- a = Measuring electrode type: 10, 12
- b = O-ring material: 30, 31, 32
- c = Analyzer/tc compatibility: 50, 54
- d = Optional selection: 62 or blank
- e = Special cable length: 99CB(XXFT) or blank

Model 398VP-a-b-c. pH/ORP Sensor

- a = Measuring electrode type: 10, 11, 12
- b = O-ring material: 30, 31, 32



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c = Analyzer/tc compatibility: 50, 54

Model 398R-a-b-c-d-e-f. pH/ORP Sensor

a = Measuring electrode type: 10, 12

- b = Sensor length: 21, 25
- c = O-ring material: 30, 31, 32
- d = Analyzer/tc compatibility: 50, 54
- e = Optional selection: 60, 61, 62 or blank
- f = Special cable length: 99CB(XXFT) or blank

Model 398RVP-a-b-c-d-e. pH/ORP Sensor

- a = Measuring electrode type: 10, 11, 12
- b = Sensor length: 21, 25
- c = O-ring material: 30, 31, 32
- d = Analyzer/tc compatibility: 50, 54
- e = Optional options (preamplifier): blank

Model 399-09-62-a. pH/ORP Sensor

a =Special cable length: 99CB(XXFT) or blank

Model 399VP-09. pH/ORP Sensor

Model 3200HP-00. High Purity Water pH Sensor

Model 3300HT-a-b-c-d. High Performance pH and ORP Sensor

- a = Measuring electrode type: 10, 12
- b = O-ring material: 30, 31, 32
- c = Preamplifier: blank
- d = Special cable length: 99CB(XXFT) or blank

Model 3300HTVP-a-b-c-d. High Performance pH and ORP Sensor

a = Measuring electrode type: 10, 12



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b = O-ring material: 30, 31, 32

c = Preamplifier: blank

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d = Special cable length: blank

Model 3400HT-a-b-c-d-e-f. High Performance pH and ORP Sensor

- a = Measuring electrode type: 10, 12
- b = Sensor length: 21, 25
- c = O-ring material: 30, 31, 32
- d = Cable length: 61, 62
- e = Preamplifier: blank
- f = Special cable length: 99CB(XXFT) or blank

Model 3400HTVP-a-b-c-d-e-f. High Performance pH and ORP Sensor

- a = Measuring electrode type: 10, 12
- b = Sensor length: 21, 25
- c = O-ring material: 30, 31, 32
- d = Cable length: blank
- e = Preamplifier: blank
- f = Special cable length: blank

Model 3500-a-b-c-d-e-f. High Performance pH and ORP Sensor

- a = Electrolyte selection: HT, BF, PR, OR, SR, MR
- b = Preamplifier/cable: 02
- c = Measuring electrode: 10, 12
- d = Reference type: 21
- e = O-ring material: 30, 31, 32
- f = Special cable length: 99CB(XXFT) or blank

Model 3500VP-a-b-c-d-e-f. High Performance pH and ORP Sensor



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a = Electrolyte selection: HT, BF, PR, OR, SR, MR

b = Preamplifier/cable: 02

c = Measuring electrode: 10, 12

d = Reference type: 21

e = O-ring material: 30, 31, 32

f = Special cable length: blank

Model 3800-a. Autoclaveable and Steam Sterilizable pH Sensors

a = Insertion length: 01, 02, 03

Electrostatic charge risk not applicable.

Model 3800VP-a. Autoclaveable and Steam Sterilizable pH Sensors

a = is Insertion length: 01, 02, 03

Electrostatic charge risk not applicable.

Model 3900-a-b-c. General Purpose pH/ORP Sensor

a = is Preamplifier option: 02

b = Measuring electrode: 10, 12

c = Special cable length: 99CB(XXFT) or blank

Model 3900VP-a-b. General Purpose pH/ORP Sensor

a = Preamplifier option: 02

b = Measuring electrode: 10, 12

Note: The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. This does not apply to the models 328A, 370, 3800 and 3800VP since they are constructed from either Glass or Ceramic material.

APPLICABLE REQUIREMENTS

C22.2 No 0 - 10 - General Requirements - Canadian Electrical Code Part II.

C22.2 No 0.4 - M2004 - Bonding and Grounding of Electrical Equipment (Protective Grounding)

C22.2 No 94 - M1991 - Special Purpose Enclosures



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C22.2 No. 142 - M1987 - Process Control Equipment Industrial Products

C22.2 No 157 - M1992 - Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations

CAN/CSA E60079-0:07 - 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"

UL 50 - 11th Ed - Enclosures for Electrical Equipment

UL 508 - 17th Ed. - Industrial Control Equipment

UL 913 - 7th Ed - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II and III Division 1 Hazardous (Classified) Locations

UL 60079-0: 2005 - Electrical Apparatus for Explosive Gas Atmospheres - Part 0: General Requirements

UL 60079-11: 2002 - Electrical Apparatus for Explosive Gas Atmospheres - Part 11: Intrinsic Safety "i"