



Member of the FM Global Group

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: 781 762 4300 F: 781-762-9375 www.fmapprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

Sensors with Model 1700702 Preamplifier:

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Body configuration: 03

b = Combination electrode: 10, 11

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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

0003039322

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Combination electrode: 10, 11

b = Analyzer/tc compatibility: 50, 54

c = is Preamplifier: 70

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = TC compatibility: 50, 54

b = Optional options: 70 (required), 71

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Measuring electrode type: 10, 13

b = Analyzer/tc compatibility: 50, 54, 55

c = Optional option: 41 or blank

d = Optional option: 70

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Measuring electrode type: 10, 13

b = Sensor length: 21, 25

c = Analyzer/tc compatibility: 50, 54

d = Optional options: 70

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Measuring electrode type: 10, 13

b = Sensor length: 21, 25

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

d = Analyzer/tc compatibility: 50, 54

e = Optional options: 70

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

Model 399-14-a. pH/ORP Sensor

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Measuring electrode: 10

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

c = Preamplifier: 70

d = Special cable length: blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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: 99CB(XXFT) or blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Preamplifier option: 01

b = Measuring electrode: 10

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0.968μF, Li = 0.1mH.

a = Preamplifier option: 01

b = Measuring electrode: 10

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

Sensors without Model 1700702 Preamplifier (Simple Apparatus):

Model 328A-a. Steam Sterilizable pH Sensor

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Cable termination: 07, 08, 09

Model 370-a. pH Sensor

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Measuring electrode: 10, 12

b = Plug type: 70, 71

c = Temperature compensation: 54, 56 or blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGF/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Body configuration: 04

b = Combination electrode: 10, 11, 12

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGF/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Preamplifier: 02

b = Combination electrode: 10, 11, 12

c = Analyzer/tc compatibility: 50, 54, 55

d = Options: 62 or blank

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGF/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Combination electrode: 10, 11, 12

b = Analyzer/tc compatibility: 50, 54

c = Preamplifier: blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = TC compatibility: 50, 54

b = Optional options: 62, 71 or blank

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = TC compatibility: 50, 54

b = Optional options: 71 or blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Measuring electrode type: 10, 12, 13

b = Sensor length: 21, 25

c = Analyzer/tc compatibility: 50, 54

d = Optional options (preamplifier): blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

a = Measuring electrode type: 10, 11, 12

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

c = Analyzer/tc compatibility: 50, 54

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFG/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

Model 399VP-09. pH/ORP Sensor

Model 3200HP-00. High Purity Water pH Sensor

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Measuring electrode type: 10, 12

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

c = Preamplifier: blank

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

a = Measuring electrode type: 10, 12

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

c = Preamplifier: blank

d = Special cable length: blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

Ui = 13.1V, Ii = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;

Entity Parameters:

U_i = 13.1V, I_i = 358mA, P_i = 698mW, C_i = 0μF, L_i = 0mH.

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

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

Model 3800-a. Autoclaveable and Steam Sterilizable pH Sensors

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;

I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;

NI/I/2/ABCD/T6 Ta = 60°C;

S/II,III/2/EFG/T6 Ta = 60°C;
Entity Parameters:
Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.
a = Insertion length: 01, 02, 03

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;
I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;
NI/I/2/ABCD/T6 Ta = 60°C;
S/II,III/2/EFG/T6 Ta = 60°C;
Entity Parameters:
Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.
a = Insertion length: 01, 02, 03

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;
I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;
NI/I/2/ABCD/T6 Ta = 60°C;
S/II,III/2/EFG/T6 Ta = 60°C;
Entity Parameters:
Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.
a = Pre-amplifier option: 02
b = Measuring electrode: 10, 12
c = Special cable length: 99CB(XXFT) or blank

Special Conditions of Use:

1. *The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

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

IS/I,II,III/1/ABCDEFGH/T6 Ta = 60°C - 1400332; Entity;
I/O/AEx ia IIC/T6 Ta = 60°C - 1400332; Entity;
NI/I/2/ABCD/T6 Ta = 60°C;
S/II,III/2/EFG/T6 Ta = 60°C;
Entity Parameters:
Ui = 13.1V, li = 358mA, Pi = 698mW, Ci = 0μF, Li = 0mH.
a = Pre-amplifier option: 02
b = Measuring electrode: 10, 12

Special Conditions of Use:

- The polymeric surface of all the apparatus listed above may store electrostatic charge and become a source of ignition. Clean surface should only be done with a damp cloth.*

Equipment Ratings:

Intrinsically Safe (Entity) for use in Class I, II and III, Division 1, Groups A, B, C, D, E, F and G;
Temperature Class T6 Ta = -20°C to +60°C in accordance with Control Drawing No. 1400332;



Member of the FM Global Group

Intrinsically safe (Entity) for use in Class I, Zone 0, AEx ia IIC T6 Ta = -20°C to +60°C in accordance with Control Drawing No. 1400332; Nonincendive for use in Class I, Division 2, Groups A, B, C, and D; Temperature Class T6 Ta = -20°C to +60°C; Suitable for use in Class II and III, Division 2, Groups E, F and G; Temperature Class T6 Ta = -20°C to +60°C Hazardous (Classified) Locations.

FM Approved for:

Emerson Process Mngmt-Rosemount Analytic
Irvine, CA United States



Member of the FM Global Group

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3610	2010
Class 3611	2004
Class 3810	2005

Original Project ID: 3039322

Approval Granted: May 11, 2011

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
---------------	------	---------------	------

FM Approvals LLC

J. E. Marquedant
Group Manager

11 May 2011
Date