Model A6-223 pH / ORP Transmitter

Features

- 96 X 96 mm Panel Mount Enclosure Takes Up Less Panel Space
- Simple Calibration with Automatic Buffer Recognition
- “Sensor Check” pH Glass Electrode and Reference Cell Diagnostics
- “Live Check” Continuously Monitors Sensor Performance
- Automatic Sensor Cleaning
- Up To Four Alarm Contacts Including Temperature
- Dedicated Fault Alarm
- NAMUR Fault Current Alarm
- PID Controller
- 2nd Current Output for Temperature



Applications

- Water & Wastewater Treatment
- Coagulation & Flocculation
- Acid / Caustic Neutralization

Description

The Model 223 pH / ORP Transmitter is ideal for use where economy and reliability are the prime considerations. The basic transmitter is available with either a 115 VAC or 24 Volt AC/DC power supply, linear isolated current output and one alarm. Features include the addition of a second output for temperature and up to four alarms which may be configured for on-off control functions, alarm limits, timer for cleaning or PID control functions. The PS version adds the diagnostic functions Sensor Check and Live Check as well as a non-linear programmable current output. Sensor Check provides pH glass electrode and reference cell diagnostics and Live Check signals an alarm when the sensor signal does not change over a defined period. The PS version features an acid, caustic neutralization control function that combines direct and reverse P(ID) controllers having a single set point.

Base Transmitter (PR)	**Plus Package (PS)**
Measurement, display and calibration of the process variable (PV) and temperature. Isolated current output (Code 0) Temperature output (Code 1) One alarm (Code 05) • On – Off Dedicated fault alarm (Standard) NAMUR fault current (Standard) • 2.4 or 22.0 mA	Sensor Check pH glass and reference diagnostics. Live Check sensor signal monitoring and alarm. Programmable non-linear current output.
Code 10	**Additional Features**
Two Alarm Contacts for PV and Temperature • On – Off • Timer for cleaning • P(ID) Controller	Neutralization controller Automatic Cleaning initiated by an internal alarm or limit violation
Code 16	**Additional Features**
Four Alarm Contacts for PV and Temperature • On – Off • Timer for cleaning • P(ID) Controller	Cleaning initiated externally or automatically by an internal alarm or limit violation

Cancoppas Limited 2595 Dunwin Dr. Unit #2 Mississauga, On, L5L 3N9 Phone: (905) 569-6246 (800) 595-0514 Fax (905) 569-6244
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Model A6-223 pH / ORP Transmitter

Specifications

pH Measurement	
Measuring Range	0 to 14 pH
Resolution	0.01 pH
Repeatability	0.03 pH
Deviation, Output / Input	0.1 pH
Zero	Glass; 5.0 to 9.0 pH (nominal 7.0 pH) Antimony; 1.0 to 3.0 pH (nominal 1.0 pH)
Slope	Glass; 38.0 to 65.0 mV/pH Antimony; 25.0 to 65.0 mV/pH (nominal 59.16 mV/pH)
Input Impendence	> 1 X 10^{12} Ohms
Reference Temperature	25°C (77°F)
Maximum Cable Length Sensor to Transmitter	50 meters (164 feet)

ORP (REDOX) Measurement	
Measuring Range	-1500 mV to +1500 mV or 0 to 100%
Resolution	1.0 mV / 0.1%
Repeatability	0.2% of Measuring Range
Signal Input	> 1 X 10^{12} Ohm

Temperature Measurement	
Temperature Sensor	Pt 100
Measuring Range	-20 to 150°C (-4 to 302°F)
Resolution	0.1°C
Repeatability	0.2% of Measuring Range

Digital Inputs 1 and 2	
Voltage	10 to 50 V
Power Consumption	Maximum 10 mA

Current Output	
Range	Selectable 0 to 20 mA or 4 to 20 mA
NAMUR Fault Current	2.4 or 22.0 mA
Maximum Load	500 Ohms
Output Scale Expansion	10% to 100%
Output Isolation	Max. 350V_{rms} / 500Vdc
Over Voltage Protection	EN 610005:1995

Auxiliary Voltage Output	
Output Voltage	15 V
Output Current	Max. 10mA

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Specifications

Alarms	
Programmable	pH, ORP, Temperature
Alarm Delay	0 to 2000 sec
Contacts	Dry, SPDT, NO / NC
Resistive Load, Current Rating	2.0 Amps
Inductive Load, Current Rating	2.0 Amps
Voltage Rating	250 VAC, 30 VDC
Resistive Load, Power Rating	1250 VA AC, 150 Watts DC
Inductive Load, Power Rating	500 VA AC, 90 Watts DC

Controller	
Pulse Length	Solenoid Valves
Pulse Frequency	Solenoid Operated Metering Pumps
Control Functions	P, PI, PD, PID
Proportional Gain (P)	0.01 to 20.00
Integral (I)	0.0 to 999.0 min
Derivative (D)	0.0 to 999.0 min
Period for Pulse Length Controller	0.5 to 999.9 sec
Frequency for Pulse Frequency Controller	60 to 180 min^{-1}

Physical Specifications	
Dimensions (H X W X L)	96 X 96 X 145 mm (3.8 X 3.8 X 5.7 in.)
Mounting Depth	165 mm (6.5 in.)
Weight	0.7kg (1.54 lb.)
Housing	Polycarbonate
Front Panel	Polyester, UV resistant

Operating Conditions	
Temperature	-10 to 55°C
Storage and Transport	-25 to 65°C
Relative Humidity	10 to 95%, non-condensing
Enclosure Rating	IP54 (front panel), IP30 (housing)
EMI / RFI	EN 61326-1:1997

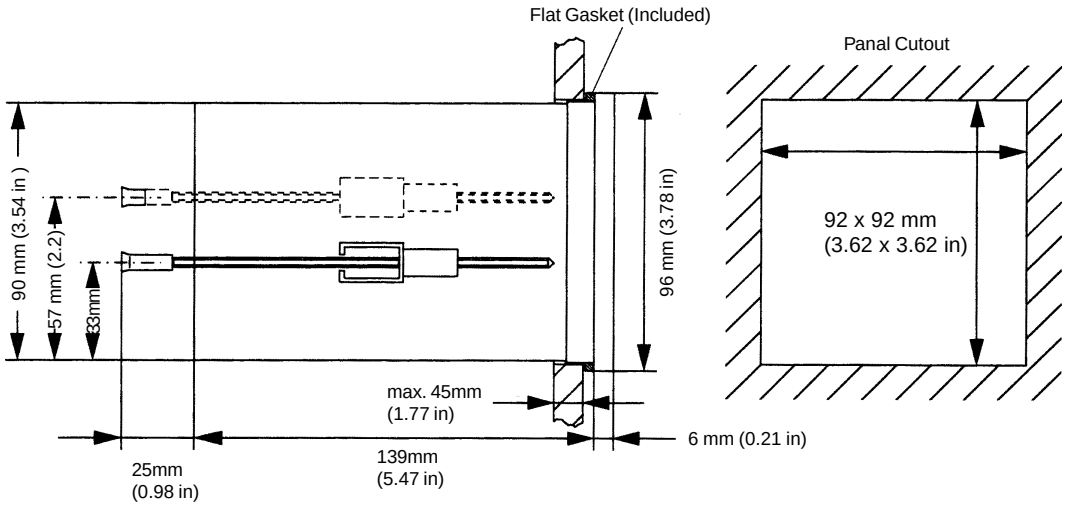
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Ordering Information

Model	Description
M – 223 - PR	pH / ORP Transmitter
M – 223 - PS	pH / ORP Transmitter with Plus Package
Code	**Description**
1	115 VAC, 50/60 Hz Power
8	24 VAC or VDC Power
Code	**Description**
0	pH / ORP Current Output
1	pH / ORP and Temperature Output
Code	**Description**
05	One Alarm
10	Two Alarms
16	Four Alarms
M – 223 – PR - 1 - 1 - 10	**Order Number Example**

Outline and Mounting Dimensions



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