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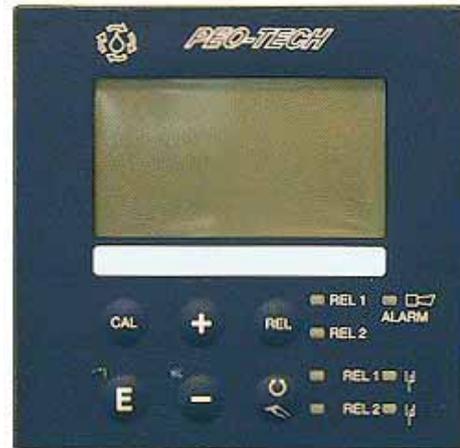
OCM 223 Chlorine and Chlorine Dioxide Transmitter

Features

- Measures Free Chlorine and Chlorine Dioxide including pH or ORP
- 96 X 96 mm Panel Mount Enclosure Takes Up Less Panel Space
- pH Compensation for Free Chlorine
- “Live Check” Continuously Monitors Sensor Performance
- Up To Four Alarm Contacts Including Temperature
- PID Controller
- 2nd Current Output for Temperature

Applications

Potable Water
Cooling Water Treatment
Reverse Osmosis
Food Processing
Swimming Pools



Description

The Model 223 Chlorine and Chlorine Dioxide Transmitter, with the appropriate sensor, measures over the range of 0.01 to 5 mg/l or 0.05 to 20 mg/l. 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.

Base Transmitter (EK)	Plus Package (ES)	Full Expansion (EP)
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	Manual pH Compensation for Free Chlorine Live Check sensor signal monitoring and alarm. Programmable non-linear current output.	Optional pH or ORP Measurement Automatic pH Compensation for Free Chlorine Live Check for pH or ORP Sensor
Code 10	Additional Features	
Two Alarm Contacts for PV and Temperature • On – Off • Timer for cleaning • P(ID) Controller	Concentration Measurement in Other Engineering Units Automatic Cleaning initiated by an internal alarm or limit violation	pH or ORP Limit pH Value Control
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	
Additional Features		
One Current Input • Flow Monitoring • Feed Forward Control		

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Specifications

Chlorine and Chlorine Dioxide Measurement	
Measuring Range	0 to 5 mg/l or 0 to 20 mg/l
Application Range, Sensor Model 140 & 240 Application Range, Sensor Model 141 & 241	0.05 to 20 mg/l 0.01 to 5 mg/l
Resolution, Sensor Model 140 & 240 Resolution, Sensor Model 141 & 241	0.01 mg/l 0.001 mg/l
Sensor Input	0 to 5000 nA
Repeatability	0.2% of Measured Value
Deviation, Output / Input	0.75% of Current Output Range
Temperature Compensation	2 to 45oC (36 to 113oF)
pH Compensation	4 to 9 pH
Maximum Cable Length Sensor to Transmitter	200 meters (656 feet)

pH and ORP Measurement	
Measuring Range	3.5 to 9.5 pH 0 to 1500 mV ORP
Resolution	0.01 pH 1.0 mV ORP
Repeatability	0.2% of Measured Value
Deviation, Output / Input	1.25% of Current Output Range
Maximum Cable Length Sensor to Transmitter	200 meters (656 feet)

Temperature Measurement	
Temperature Sensor	NTC 10K @ 25oC (77oF)
Measuring Range	0 to 50oC (32 to 122oF)
Resolution	0.1oC
Repeatability	1.0% 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. 350Vrms / 500Vdc
Over Voltage Protection	EN 61000-4-5:1995

Model 223 Chlorine and Chlorine Dioxide Transmitter

Specifications Ordering Information

Auxiliary Voltage Output	
Output Voltage	15 V
Output Current	Max. 30mA

Alarms	
Programmable	Turbidity, Suspended Solids, 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
Step Controller	Three Point for Chlorine and Chlorine Dioxide
Control Functions	P, PI, PD, PID
Proportional Band (P)	0.1 to 10.00
Integral (I)	0.0 to 9999 min
Derivative (D)	0.0 to 999.9 min
Period for Pulse Length Controller	0.5 to 999.9 sec
Frequency for Pulse Frequency Controller	60 to 180 min ⁻¹
Motor Run Time for Three Point Step Controller	10 to 999 sec.
Neutral Zone for Three Point Step Controller	0 to 40%

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



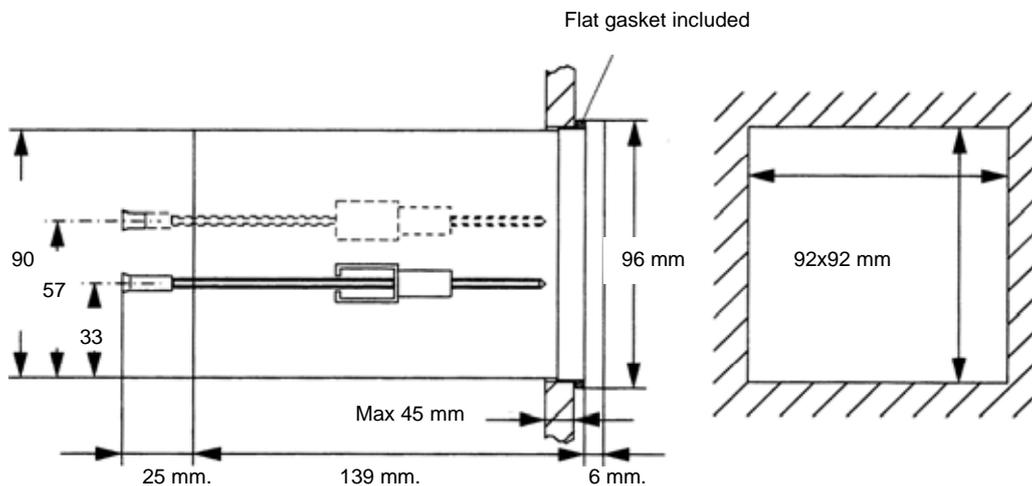
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Model 223 Chlorine and Chlorine Dioxide Transmitter

Model	Description
M - 223 - EK	Chlorine / Chlorine Dioxide Transmitter
M - 223 - ES	Chlorine / Chlorine Dioxide Transmitter with Plus Package
M - 223 - EP	Chlorine / Chlorine Dioxide Transmitter with pH or ORP Measurement
Code	Description
1	115 VAC, 50/60 Hz Power
8	24 VAC or VDC Power
Code	Description
0	Chlorine / Chlorine Dioxide Current Output
1	Chlorine / Chlorine Dioxide and Temperature Output (EP includes pH or ORP)
Code	Description
05	One Alarm
10	Two Alarms
16	Four Alarms
M - 223 - EK - 1 - 1 - 10	Order Number Example

Outline and Mounting Dimensions



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