BL931700

# pH Mini Controller

with 4-20 mA Recorder Output

- Large Clear LCD
- Fire Retardant Casing
- BNC Connection
- Splash-Resistant Cover

The BL931700 is a compact single setpoint pH controller designed for applications where space and/or cost are important. Users may choose from automatic or manual dosing modes allowing for easy maintenance and troubleshooting. The device contains a high impedance pH input and may be used with any pH electrode that has a standard BNC connector.

### Enhanced Accuracy & Precision

The BL931700 model offers a manual two-point calibration with pH values displayed out to two decimal places.

### **External Disabling Feature**

A normally open contact may connect to a level controller or flow monitor. This safety feature may be used to prevent continuous dosing in the event of specific or undesired system conditions.

# Adjustable Dosing Relay

The BL931700 features a dosing relay which may be configured to dose above or below a user programmable pH setpoint.

### Selectable Overdose Protection

The mini controller may be programmed to deactivate a valve, pump, or connected device if its activation continues over a selected time; adjustable from 5 to 30 minutes.

### **Relay Control Override**

With the flick of a switch the mini controller's relay can be disabled (OFF), placed in control (AUTO), or be activated for manual operation (ON) which is useful for priming a dosing pump.

### Analog Output Communication

The BL931700 features a 4 - 20 mA analog output for connection to a data logger, chart recorder, or other device.

### Matching Pin Connection

A built-in matchin pin helps protect the sensor from ground loop effects that may lead to erratic readings or system damage.

### **Fuse Protected Dosing Contacts**

The relay dosing contact is rated for up to a 2A load and is fuse protected.

### Easy Peripheral Connection

Quick-connect terminal blocks provide for easy connection to power, communication, dosing control, or sensors.

See HI1001 pH probe on page 15.84; pH solutions begin on page2.174; see rear connections on page 15.92

BL931700-0 (12 VDC) and BL931700-1 (115/230 VAC)

are supplied with mounting brackets, transparent cover

HI1001 PVDF body pH electrode with 1/2" NPT thread,

BNC connector and 3 m (9.8') cable for continuous flow-

ติดต่อบริษัท นีโอนิคส์ จำกัด Tel: 098-479-5684 หรือ 061-8268939 E-mail: sale@tools.in.th เว็บไซต์ www.tools.in.th

15



BL931700

0.01 pH

±0.02 pH

acid or alkaline

1012 Ohm

measurement > setpoint

measurement < setpoint

adjustable from 0 to 14 pH

0.00 to 14.00 pH

manual, through offset and slope trimmers

contact closed=alkaline dosage=relay ON if

adjustable, from 5 to approximately 30 minutes

BL931700-0: 12 VDC adapter (included);

BL931700-1: 115/230 VAC; 50/60Hz

83 x 53 x 99 mm (3.3 x 2.1 x 3.9") BL931700-0: 200 g (7.1 oz.);

BL931700-1: 300 g (10.6 oz.)

thru monitoring (not included).

and instruction manual.

4 to 20 mA, accuracy  $\pm 0.20$  mA, 500  $\Omega$  maximum load

contact open=acid dosage=relay ON if

maximum 2A (fuse protected), 250 Vac, 30 VDC

Specifications

Range

Resolution

(@25°C/77°F) Calibration

Dosing Relay

Dosing Selection

Recorder Output

Input Impedance

Power Supply

Dimensions

Ordering

Probe

Information

Recommended

Weight

Setpoint

Overtime

Accuracy



# **Rear Connections**

# BL981411

 $\odot$ 

### BL931700



### BL982411



- BNC plug for ORP electrode
- 2. Connection for electrode reference
- Connection for potential Matching Pin З. Rdx/Oxd dosage selection terminal: 4.
- contact open = reductant selection contact closed = oxidant selection
- Not Used contact
- 6
- Power supply terminal: for BL982411-0 model: 12 Vdc adapter for BL982411-1 model: 115 Vac or 230 Vac option
- 7 This contact acts as a switch for driving the dosing system (e.g. dosing pump)
- 8. Not Used contact

**HANNA** Instruments

- 9. Jumper for enabling (jumper in) or disabling (jumper removed) the overtime control
- 10. Trimmer for overtime setting (typically from 5 to 30 minutes)



۲

- 2. Connection for electrode reference
- Connection for potential Matching Pin З.
- Acid/Alkaline dosage selection terminal: 4
- contact open = acid selection contact closed = alkaline selection Not Used contact
- 6.
- Power supply terminal: for BL981411-0 model: 12 Vdc adapter • for BL981411-1 model: 115 Vac or 230 Vac option
- 7 This contact acts as a switch for driving the dosing system (e.g. dosing pump)
- Not Used contact
- 8 9. Jumper for enabling (jumper in) or disabling (jumper
- removed) the overtime control
- 10. Trimmer for overtime setting (typically from 5 to 30 minutes)



- BNC plug for ORP electrode Connection for electrode reference
- 2. Connection for potential Matching Pin З.
- Rdx/Oxd dosage selection terminal: 4.
- contact open = reductant selection
- contact closed = oxidant selection
- 4-20 mA output terminal for recorder connection 6
- Power supply terminal: for BL932700-0 model: 12 Vdc adapter
- for BL932700-1 model: 115 Vac or 230 Vac option
- This contact acts as a switch for driving the dosing system 7 (e.g. dosing pump)
- External control and disabling of dosing system
- Jumper for enabling (jumper in) or disabling (jumper removed) 9.
- the overtime control 10. Trimmer for overtime setting (typically from 5 to 30 minutes)



- BNC plug for pH electrode
- 2. Connection for electrode reference Connection for potential Matching Pin З.
- Acid/Alkaline dosage selection terminal: 4.
- contact open = acid selection contact closed = alkaline selection
- 4-20 mA output terminal for recorder connection
- Power supply terminal:
  for BL931700-0 model: 12 Vdc adapter • for BL931700-1 model: 115 Vac or 230 Vac option 7
- This contact acts as a switch for driving the dosing system (e.g. dosing pump)
- External control and disabling of dosing system 8. Jumper for enabling (jumper in) or disabling (jumper removed) 9.
- the overtime control 10. Trimmer for overtime setting (typically from 5 to 30 minutes)



HI983320-1 rear connections example shown

ติดต่อบริษัท นี่โอนิคส์ จำกัด Tel: 098-479-5684 หรือ 061-8268939 E-mail: sale@tools.in.th เว็บไซต์ www.tools.in.th

# **Process Instrumentation**

controllers

15





HI1001 • HI2001

# pH Electrode and ORP Electrode with Pt sensor for Continuous Flow-thru Monitoring

Specifically Built for Industrial Applications

The HI1001 (pH) and HI2001 (ORP) are flow-thru monitoring electrodes with BNC connection and 3 m cable that have been specifically built for industrial applications. These durable electrodes have a PVDF body with a protective PEI sleeve around the glass bulb for resistance against mechanical stress. This sensor provides a rapid response and high accuracy measurements for industrial applications.

### Spherical Glass Tip

The spherical shaped tip design allows for a wide area of contact with the sample. This permits a faster electrode response with a higher degree of stability.

### **PVDF Body**

Resistant to most chemicals and solvents, the PVDF body has high abrasion resistance, mechanical strength, and resistance to ultraviolet and nuclear radiation. PVDF is also resistant to fungal growth.

### **PTFE** Junction

ANNAH

This type of junction is often used on electrodes with polymer electrolytes. Porous polytetrafluoroethylene (PTFE) is a hydrophobic material that is available with different porosities that helps to minimize clogging. Because of its chemical advantages, PTFE is widely used in industrial applications.

### Double Junction Reference

The double junction design presents a silver-free electrolyte solution interacting with the sample, making the electrode less susceptible to

clogging and guaranteeing a fast response and stable reading. This design allows measurement in applications where silver ions in the sample are undesirable or silver precipitates on the junction are likely to form.

### **BNC** Connector

HI1001 and HI2001 use a BNC connector. This type of connector is universal in that it can be used on any pH meter that has the female BNC probe input.

### External Thread

The top  $\frac{1}{2}$ " NPT thread of the HI1001 and HI2001 allows for in-line installation while the bottom  $\frac{3}{4}$ " thread (cable side) allows for submersion mounting.

Specifications	HI1001	HI2001
Measurement	рН	ORP
Junction	double, PTFE	double, PTFE
Electrolyte	polymer	polymer
Temperature	-5 to 80°C (23 to 176°F) - HT	-5 to 80°C (23 to 176°F)
Max Pressure	6 bar (87 psi)	6 bar (87 psi)
Connector	BNC	BNC
Cable	3 m	3 m
Ordering Information	HI1001 with 3 m (9.84') of cable attached	HI2001 with 3 m (9.84') of cable attached
Recommended Controllers	BL981411, BL931700	BL982411, BL932700

ติดต่อบริษัท นีโอนิคส์ จำกัด Tel: 098-479-5684 หรือ 061-8268939 E-mail: sale@tools.in.th เว็บไซต์ www.tools.in.th

