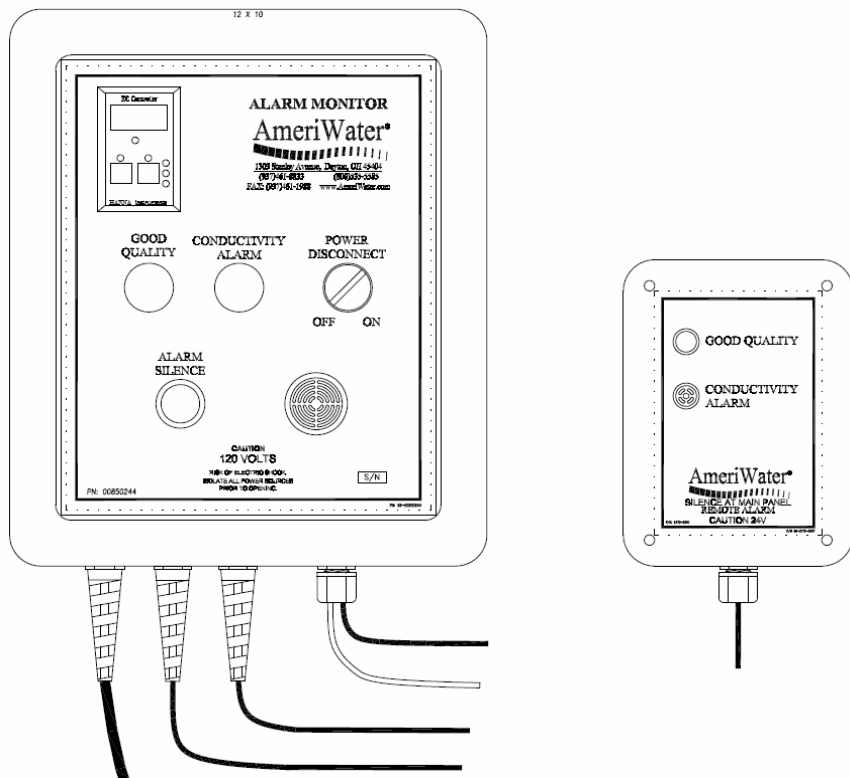




INSTALLATION & OPERATION MANUAL

ALARM, DIVERT TO DRAIN

MODEL: 00850244



**Manufactured With Pride
In The USA**

www.amerewater.com • 800-535-5585

AmeriWater • 3345 Stop 8 Rd. • Dayton, OH 45414

TABLE OF CONTENTS

Theory of Operation.....	1
Installation	1
Start-up	2
Standard Replacement Parts.....	3
Drawings.....	4
70HI983320-1 Manual.....	6

Theory of Operation

The alarm monitor package is designed to let technicians and nurses know when something is not functioning properly with the water equipment. The family of AmeriWater Monitors and Alarms will warn the user by illuminating a red light and sounding an audible alarm that some limit has been exceeded.

All of the Monitors and Alarms are provided with a green “GOOD QUALITY” light to let you know at a glance that the system is operating. The choice of what water properties to be monitored has been chosen in the original purchase of this equipment. The choices of properties that this system can monitor are:

1. High Conductivity #1 (Usually the primary loop; this will warn the user that the measured water conductivity is higher than what has been pre-determined by the facility director.
2. Alarm Silence; when a Nurse’s Station Remote has been included in a Monitoring/Alarm system, there will be a set of lights and audible alarm that will match the same set of lights, and alarm on the main monitor in the water room. There is no “Alarm Silence” on the Remote Panel. To silence alarm, it will require the user’s attention, in the water room. Using the “ALARM SILENCE” button on the main monitoring panel will “silence” the alarm for 3 minutes only. The alarm will re-indicate 3 minutes after each time it is silenced until the condition causing the alarm has been rectified. Time-On delay (TD2) is set at 10 seconds; DO NOT SET HIGHER THAN 30 SECONDS (see drawing on page 4).

Installation

1. Locate the alarm panel in the water room at an easily accessible and highly visual position on the wall, near a 120-volt outlet. (Keep in mind the limited length of the wires on the conductivity probe.)

CAUTION: Disconnect ALL power supplies to the equipment prior to wiring the alarm panel, or electrical shock could result!

2. Install the Remote alarm near the nurse’s station in a highly visible location and run low voltage wire from the alarm panel to the remote box location. Connect the alarm panel to the remote by matching the terminal numbers in the alarm panel to the remote. (e.g.: Connect the same wire to terminal 79 in the remote and in the alarm panel.)
3. Install the conductivity sensor from the alarm panel to the tee of the inlet side of the divert to drain valve assembly (see FIG. 1).

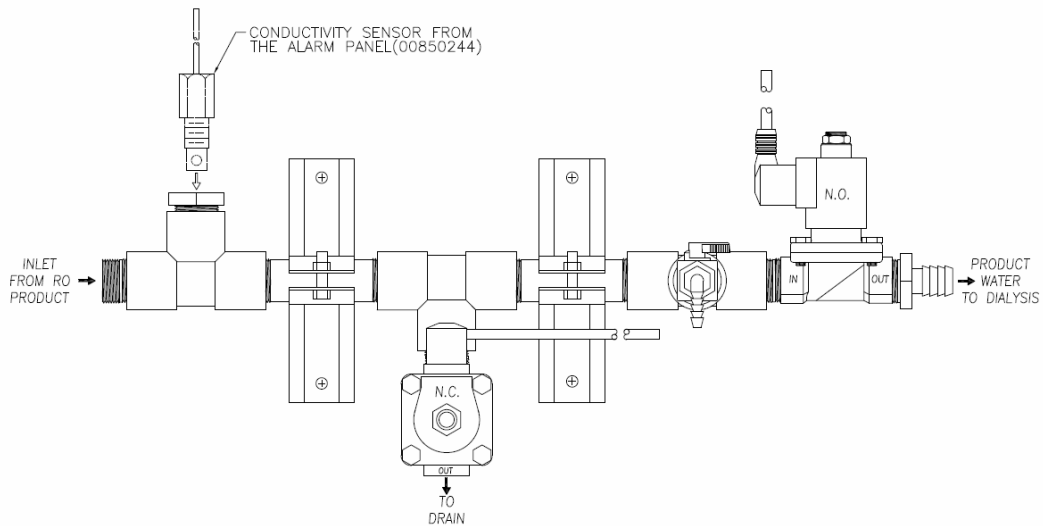


FIG. 1

CAUTION: Delay timer TD2 is set for 10 seconds at the factory. DO NOT make readjustments to the timer above 30seconds! (See note on sheet 1 drawing on page 4).

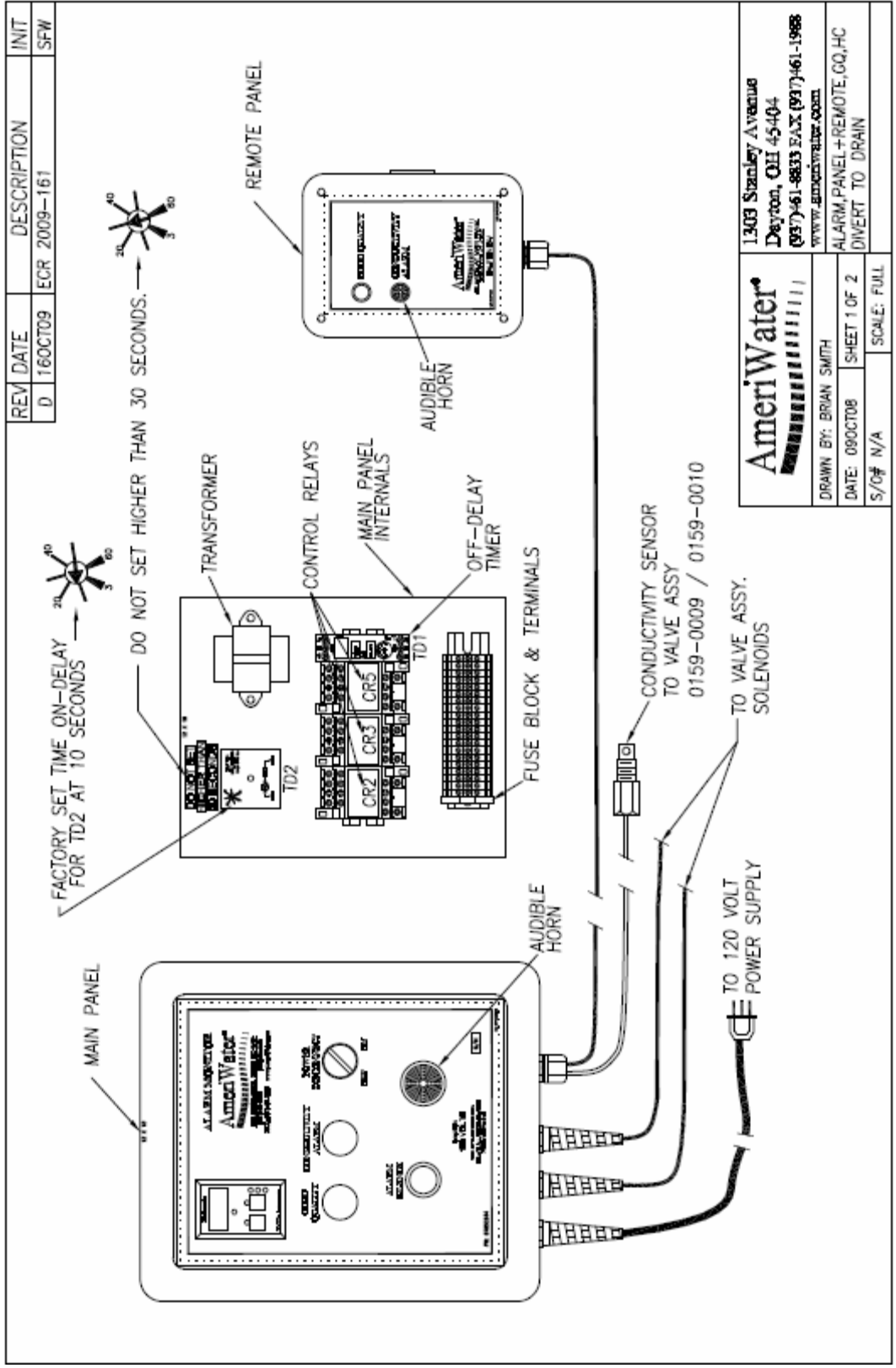
Start-up

1. Plug the alarm panel into a 120-volt outlet; then apply power to all other equipment.
2. Make sure the alarm panel operates correctly by creating faults with the equipment connected with the alarm panel and then clearing them.

Standard Replacement Parts

Part #	Name
62760177	Transformer 120/208/240-24V 40VA
63760133	Fuse, 2A, 250V
64-0003	TIMER,OFF-DELAY,.15-3MIN,FSB3FU23
64760098	TIMER,TOD,SPST,120V-3A,3-60SEC
64760134	RELAY,OMRON,14PIN,4PDT,LY4120V
64760155	BASE,14 PIN,RELAY
65511220	SWITCH,PB,MOM,NO,AB,BLACK
65511221	SWITCH 2-POS MAINTAIN AB BLACK
65511223	LIGHT RED PILOT 120V
65511225	LIGHT GREEN PILOT 120V
65511230	SWITCH CONTACT NO MAINTAIN AB
65760126	LIGHT 24V PILOT RED
65760204	HORN PIEZO 120VAC,80-95DB
65760206	HORN PIEZO 24VDC CONT. 85 DB
65760216	LIGHT 24V GREEN Remote light
70HI983320-1	METER,CONDUCTIVITY HANNA 0-199.9uS

Drawings

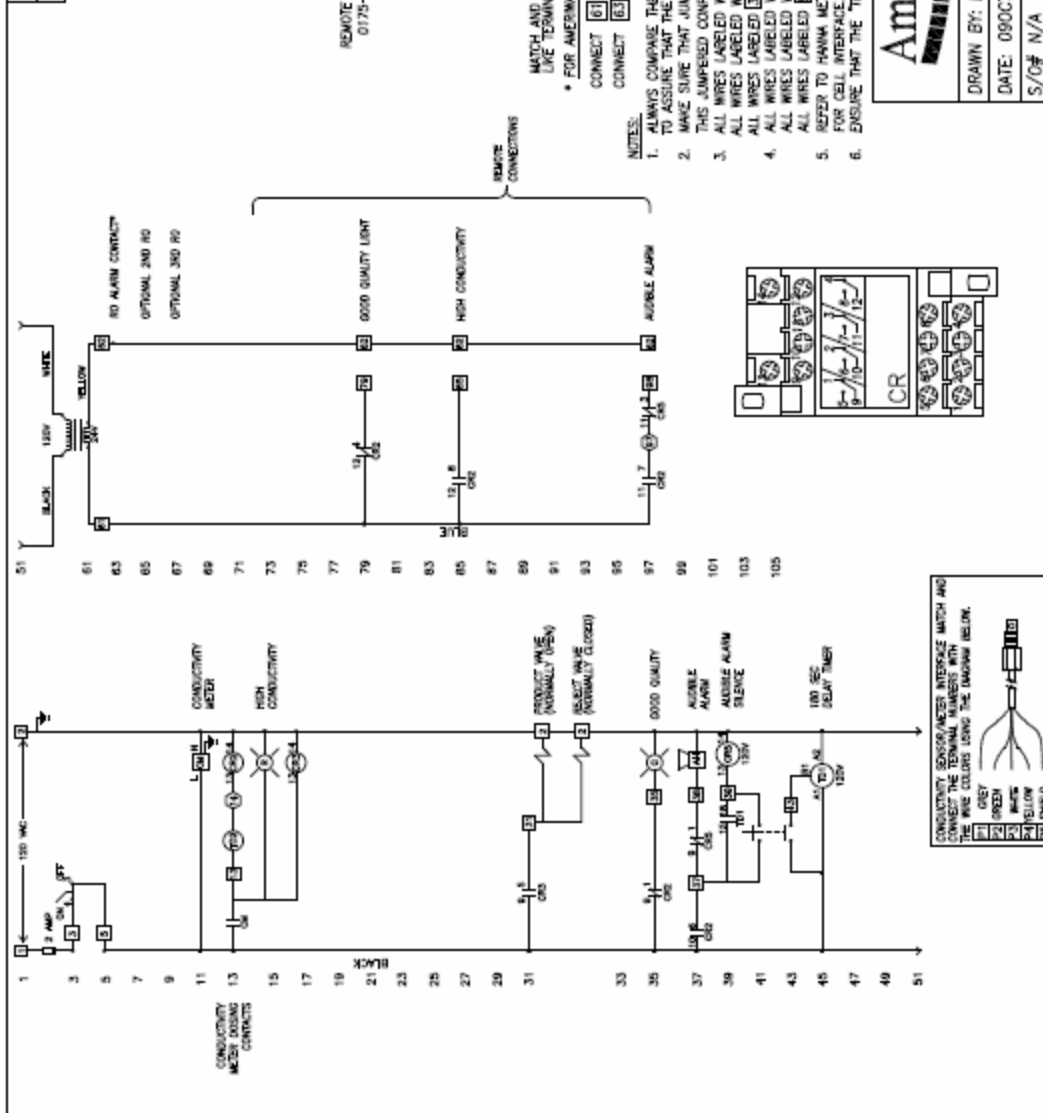


AmeriWater
 1303 Stanley Avenue
 Dayton, OH 45404
 (937) 61-8833 FAX (937) 61-1988
 www.amerewater.com

DRAWN BY: BRIAN SMITH
 DATE: 09OCT08 SHEET 1 OF 2
 S/C# N/A SCALE: FULL

ALARM, PANEL+REMOTE, CQ, HC
 DIVERT TO DRAIN

REV	DATE	DESCRIPTION	INIT
D	16OCT09	ECR 2009-161	SFW



AmeriWater
1303 Stanley Avenue
Dayton, OH 45404
(937)461-8833 FAX (937)461-1988
WWW.AMERIWATER.COM

DRAWN BY: BRIAN SMITH
DATE: 09OCT08
S/O# N/A

SCALE: FULL

ALARM+REMOTE_GQ,HC,DMV
TO DRAIN_WIRING DIAGRAM

SHEET 2 OF 2

70HI983320-1 Manual

Instruction Manual

BL 983320-0
BL 983320-1

**Panel-Mounted
EC Indicators &
Controllers**



WARRANTY

These instruments are warranted for two years against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. Probes are warranted for six months. This warranty is limited to repair or replacement free of charge. Damages due to accident, misuse, tampering or lack of prescribed maintenance are not covered. If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization Number from the Customer Service department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

Recommendations for Users

Before using these products, make sure that they are entirely suitable for the environment in which they are used. Operation of these instruments in residential areas could cause unacceptable interferences to radio and TV equipment. Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance. To avoid electrical shock, do not use these instruments when voltages at the measurement surface exceed 24 Vdc or 60 Vdc. To avoid damages or burns, do not perform any measurement in microwave ovens.

Dear Customer,

Thank you for choosing a Hanna product. This manual will provide you with the necessary information for the correct operation of the meter. Please read it carefully before using the instrument. If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com. These instruments are in compliance with the CE directives.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center.

Each meter is supplied with:

- Mounting brackets
- Instruction manual

Note: Conserve all packing material until the instrument has been observed to function correctly. Any defective item must be returned in its original packing.

GENERAL DESCRIPTION

BL983320-0 and BL983320-1 are conductivity indicators and controllers with a relay output designed for simplicity of use in a wide range of applications.

Connections and wiring to probe, power supply and contacts are made via the terminal blocks on the rear panel.

The probe is easy to clean and requires little maintenance. Other features include: automatic temperature compensation of readings, single point calibration, overtime control system, multi-colour LED for indicating if the meter is in measurement/dosing/alarm condition, possibility to set (Off-Auto-On switch) dosing action mode.

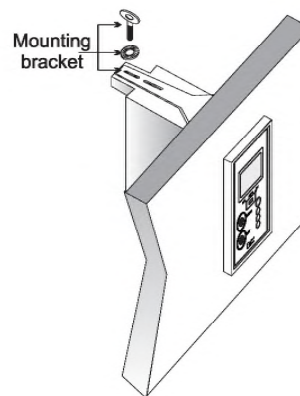
Two models are available:

- **BL 983320-0** powered at 12 Vdc
- **BL 983320-1** powered at 115 or 230 Vac

SPECIFICATIONS

Range	0.0 to 199.9 μ S/cm
Resolution	0.1 μ S/cm
Accuracy (@ 20°C/68°F)	\pm 2% f.s.
Typical EMC Deviation	\pm 2% f.s.
Probe	HI 7634-00 EC/TDS probe (not included)
Temp. Compensation	Automatic from 5 to 50°C (41 to 122°F); β = 2%/°C
Calibration	Manual, through CAL trimmer
Dosing Contact	Maximum 2A (fuse protected), 250 Vac, 30 Vdc Contact close when measure > setpoint
Setpoint	Adjustable, from 0 to 199.9 μ S/cm
Overtime	Adjustable, typically from 5 to approx. 30 minutes
Power Consumption	10 VA
Installation Category	I
Power supply:	External (fuse protected)
BL983320-0	12 Vdc
BL983320-1	115/230 Vac ; 50/60Hz
Dimensions	83 x 53 x 99 mm (3.3x2.1x3.9")

ASSEMBLING VIEW



CE DECLARATION OF CONFORMITY

HANNA
instruments

CE
DECLARATION OF CONFORMITY

We
Hanna Instruments Italia Srl
viale delle Industrie, 12/A
35010 Ronchi di Villafranca - PD
ITALY

herewith certify that the EC and TDS controllers:

BL983313, BL983315, BL983317, BL983318, BL983319, BL983320, BL983321, BL983322, BL983324, BL983327, BL983329

have been tested and found to be in compliance with EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC according to the following applicable normative:

EN 50082-1: Electromagnetic Compatibility - Generic Immunity Standard
IEC 61000-4-2 Electrostatic Discharge
IEC 61000-4-3 RF Radiated
IEC 61000-4-4 Fast Transient

EN 50081-1: Electromagnetic Compatibility - Generic Emission Standard
EN 50022 Radiated, Class B

EN 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use

Date of Issue: 12.11.2003

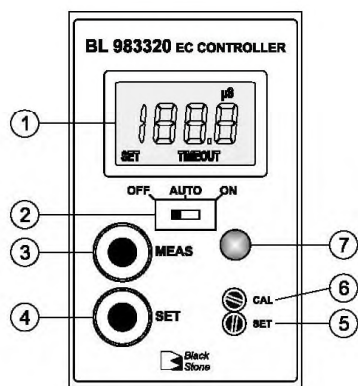
A. Manilio
A. Manilio - Technical Director
On behalf of
Hanna Instruments S.r.l.

ACCESSORIES

HI 7634-00	EC/TDS probe
HI 70033P	84 μ S/cm calibration solution, 20 mL sachet (25 pcs)
HI 7033M	84 μ S/cm calibration solution, 230 mL
HI 7033L	84 μ S/cm calibration solution, 500 mL
HI 7061M	Probe cleaning solution, 230 mL bottle
HI 7061L	Probe cleaning solution, 500 mL bottle
HI 710005	12 Vdc power adapter, US plug
HI 710006	12 Vdc power adapter, European plug
HI 710012	12 Vdc power adapter, Australian plug
HI 710013	12 Vdc power adapter, South African plug
HI 710014	12 Vdc power adapter, UK plug
HI 731326	Calibration screwdriver (20 pcs)
HI 740146	Mounting brackets

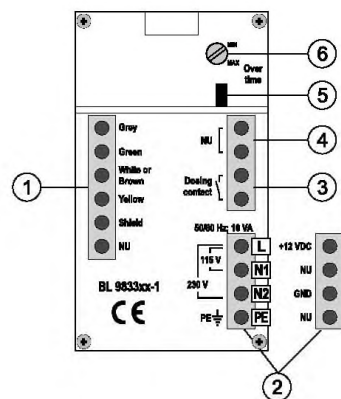
FUNCTIONAL DESCRIPTION

Front panel



1. Liquid Crystal Display
2. Switch for selecting dosing mode:
 - OFF = dosing disabled
 - Auto = automatic dosage, depending on setpoint value
 - ON = dosing always active
3. "MEAS" key to set the instrument to measurement mode
4. "SET" key to display and set the setpoint value
5. "SET" trimmer to adjust the setpoint value
6. "CAL" trimmer
7. 3-colour LED indicator:
 - Green = meter in measurement mode
 - Orange/Yellow = dosing in progress
 - Red, blinking = indicates an alarm condition

Rear panel



1. Connections for EC probe
2. Power supply terminal:
 - for BL983320-0 model: 12 Vdc adapter
 - for BL983320-1 model: 115 Vac or 230 Vac option
3. This contact acts as a switch for driving the dosing system (e.g. dosing pump)
4. Not used contact
5. Jumper for enabling (jumper in) or disabling (jumper removed) the overtime control
6. Trimmer for overtime setting (typically from 5 to 30 minutes)



All external cables connected to the rear panel should end with cable lugs.



A circuit breaker (rated 6A max.) must be connected in close proximity to the equipment, and in a position easy to reach by the operator, for disconnection of the instrument and of all the devices connected to the relays.

OPERATIONS

REAR PANEL CONNECTIONS

Terminals #1: Probe

- Connect the HI 7634-00 probe by following the wires colour indications.

Terminals #2: Power Supply

- Model BL983320-0: connect the 2 wires of a 12 Vdc power adapter to the terminals +12 Vdc and GND.
- Model BL983320-1: connect a 3-wire power cable to the terminals while paying attention to the correct earth (PE), line (L) and neutral (N1 for 115 V or N2 for 230 V) contacts.

Terminals #3: Dosing Contact

- This contact drives the dosing system, accordingly to the selected setpoint.

Note: The setpoint has a typical hysteresis value comparable to the meter accuracy.

Terminals #4: Not Used Contact

Overtime system: jumper (#5) and trimmer (#6)

- This system allows the user to set a maximum dosing period, by adjusting the rear trimmer from 5 (min) to approx. 30 (max) minutes.
- When the set time is exceeded, any dosing action stops, the LED indicator on the front panel will blink Red and the LCD will show the "TIMEOUT" warning message. To exit the overtime condition, set the OFF/Auto/ON switch to "OFF" position, and then to "Auto" again.
- For disabling the overtime feature, simply remove the jumper on the rear panel.

Note: The overtime system works only if the OFF/Auto/ON switch is in "Auto" position.

OPERATING THE METER

Before proceeding make sure that:

- the meter has been calibrated;
- the setpoint value has been properly adjusted;
- all rear panel wiring and selections are correct;
- the Auto/OFF/ON switch is in the desired position.

Install or immerse the probe in the solution to be monitored, then press the "MEAS" key (if necessary).

The LCD will show the EC ($\mu\text{S}/\text{cm}$) value. The LED indicator will light up Green when the meter is in measurement mode and dosing is not active, while will light up Orange/Yellow for signaling that a dosing action is in progress.

CALIBRATION

To calibrate the meter, proceed as follows:

- ensure the meter is in measurement mode;
- immerse the probe in HI 7033 calibration solution (84 $\mu\text{S}/\text{cm}$);
- shake briefly and wait for reading to stabilize;
- adjust the "CAL" trimmer to read "84.0 μS " on the LCD.

SETPOINT

Press the "SET" key: the display will show the default or previously adjusted value, together with the "SET" indication. Using a small screwdriver adjust the "SET" trimmer until the desired setpoint value is displayed.

After 1 minute the meter automatically returns to the normal mode; or press the "MEAS" key.

PROBE MAINTENANCE

To improve the probe performance and prolong its life, it is recommended to clean it regularly.

- Immerse the tip of the probe in HI 7061 Cleaning Solution at least for one hour.
- If a more thorough cleaning is required, brush the metal pins with very fine sandpaper.
- After cleaning, rinse the probe with tap water and recalibrate the meter.
- When not in use, clean the probe before storing it.