

Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

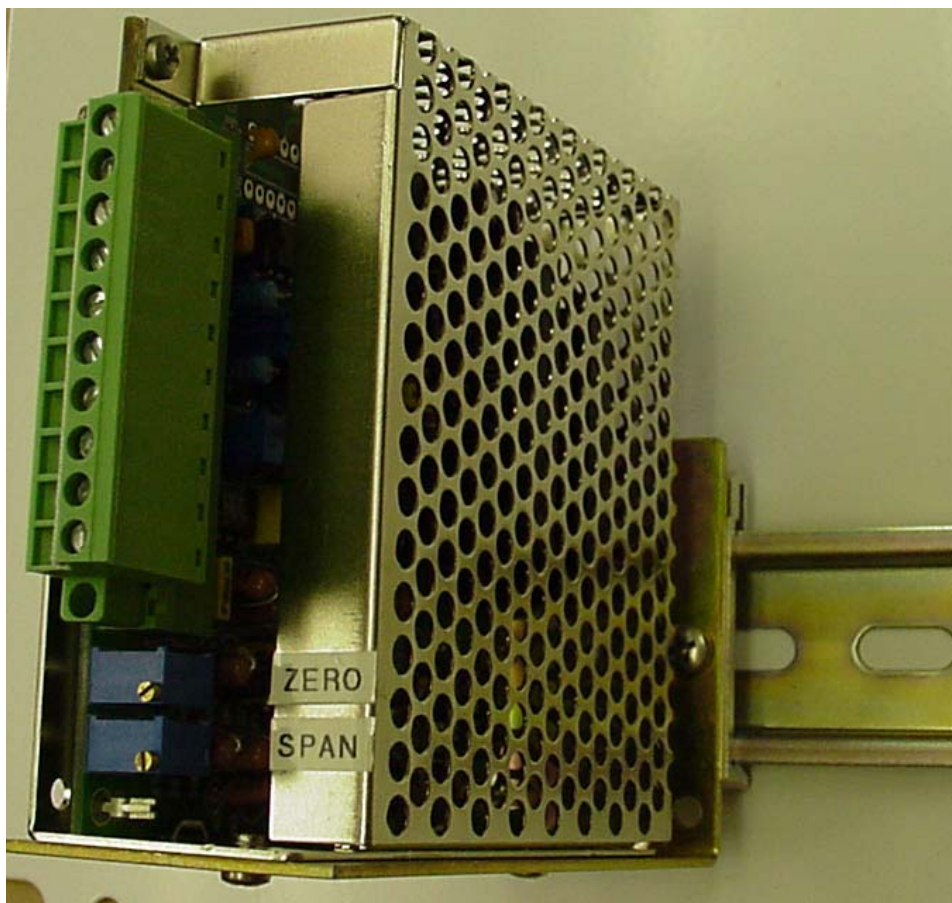
Creation Date: 10/14/2002

Written By: J. Magee

INSTALLATION AND OPERATION MANUAL

PH PROBER

MODEL # PPHA



Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

Creation Date: 10/14/2002

Written By: J. Magee

1) Pre-Installation Setup

The factory setting is 5V 10V or 4/20mA, depending on the part number ordered. If a change is required, perform the following:

- 1.1) Remove cover (one corner screw) for jumper changes.
- 1.2) Set Range Jumpers using the table below. Decide on full scale range desired and set jumpers for that range.
 - 1.2.1) (+) 500.0mV to (-) 500.0mV = 0 to 10V: W1 Jumper OFF and W2 Jumper ON.
 - 1.2.2) (+) 500.0mV to (-) 500.0mV = 0 to 5V: W1 Jumper ON and W2 Jumper ON.
 - 1.2.3) Optional: (+) 500.0mV to (-) 500.0mV = 4 to 20mA DC: W1 Jumper OFF and W2 Jumper OFF.

Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

Creation Date: 10/14/2002

Written By: J. Magee

2) Installation

2.1) Clip prober on to your Din rail.

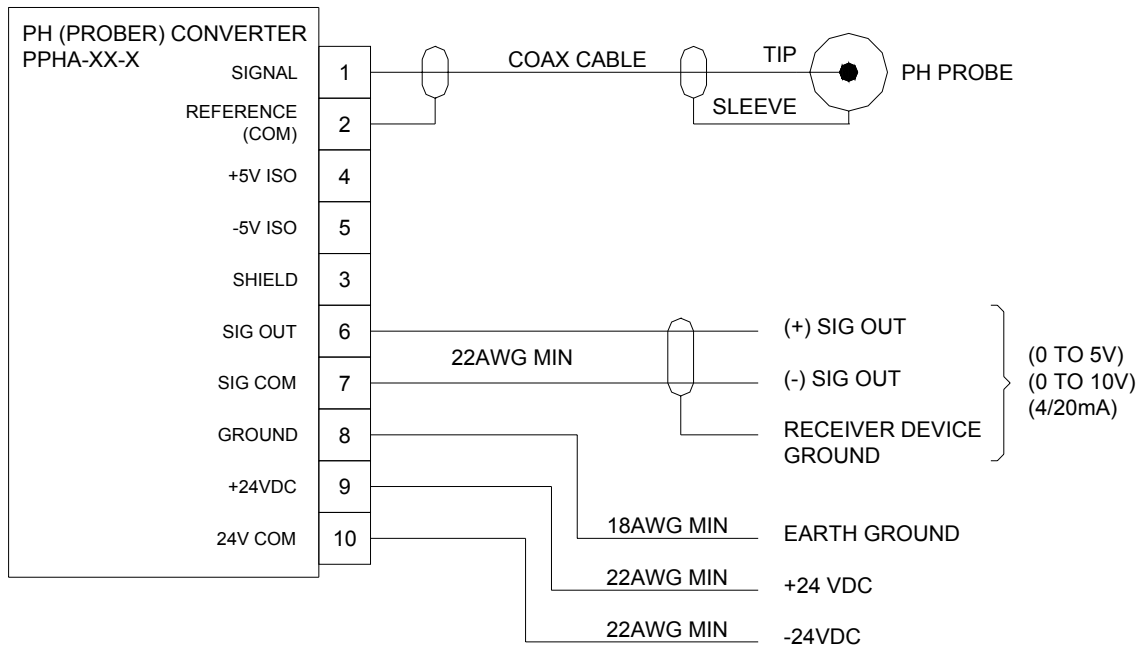
2.2) Wire per drawing below.

2.2.1) Connect pH probe.

2.2.2) Connect 24V DC source, per drawing.

2.2.3) Connect earth ground to TB-8.

2.2.4) Connect shielded 1 pair cable to output. Note: The shield should be connected to receiving device ground.



Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

Creation Date: 10/14/2002

Written By: J. Magee

3) Annual Calibration

3.1) The pH prober is factory calibrated. An annual calibration should be performed following the procedure below. If the equipment is not available, consult factory for recalibration.

- 3.1.1) Power up unit and allow 15 minute warm up.
- 3.1.2) Connect a precise mV source to input to (+) TB-3 and (-) TB-4.
- 3.1.3) Source 0.0mV and adjust Zero potentiometer for 5V or 12 mA output.
- 3.1.4) Source (-) 500.0mV. Adjust span potentiometer for full scale output (5V, 10V or 20mA)
- 3.1.5) Source (+) 500.0mV. Verify output (0V or 4mA). Repeat as required for best-fit linearity.

Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

Creation Date: 10/14/2002

Written By: J. Magee

4) Specifications

4.1) Input

- 4.1.1) Range: (+) 500.0mV to (-) 500.0mV
- 4.1.2) Connector: Isolated Terminal Block
- 4.1.3) Isolated Power Supply for remote pre-amp: (\pm) 5V (\pm) 1%
- 4.1.4) Input Impedance: 1×10^{13} Ohms Isolated

4.2) Output

- 4.2.1) Range: 0 to 5V DC @ (\pm) 0.05%
0 to 10V DC @ (\pm) 0.05%
4 to 20mA DC @ (\pm) 0.1% (50 to 500 Ohm Load Maximum)
- 4.2.2) Linearity: (\pm) 0.02% of Full Scale
- 4.2.3) Resolution: 0.01% of Full Scale
- 4.2.4) Output Noise: Less Than 0.1mV RMS

4.3) Power: 24 V DC or 24V AC

- 4.3.1) 24V DC (\pm) 15% Regulated or Non Regulated Polarity Protected
 - 4.3.1.1) 56mA @ 24V DC (Voltage Mode)
 - 4.3.1.2) 74mA @ 24V DC (Current Mode)
- 4.3.2) 24V AC (\pm) 15%
 - 4.3.2.1) 1.5 VA Maximum @ 24V AC (Voltage Mode)
 - 4.3.2.2) 1.8 VA Maximum @ 24V AC (Current Mode)

4.4) Environmental

- 4.4.1) Temperature: 30 to 120°F
- 4.4.2) Humidity: 0 to 80% Non Condensing

4.5) Physical

- 4.5.1) Termination: Disconnect 10 point screw terminal block with lock down screws
- 4.5.2) Mounting: Standard DIN Rail
- 4.5.3) Overall Size: 1.75" Wide X 3.8" Deep X 5.3" High Including Connector

4.6) General Specifications

- 4.6.1) Input Zero: Adjustment Range 45 to 55% of Full Scale
- 4.6.2) Response Time: 0 to 5 Seconds @ 400nA to 99% Final Value
- 4.6.3) Noise Rejection: (-) 50dB at 60HZ
- 4.6.4) Common Mode Rejection Up to 130V AC @ 60HZ Up to (\pm) 200V DC
- 4.6.5) Isolation (5 Way):
 - Input to Ground
 - Input to Power Supply
 - Input to Output
 - Output to Ground
 - Output to Power Supply

Installation and Operation Manual: pH Prober Model # PPHA

Document: SP0328 Rev 0 PH Prober Manual

Valley Instrument Company, Inc.

Revision: 0

(610) 363-2650

Effective Date: 10/14/2002

Creation Date: 10/14/2002

Written By: J. Magee

5) Part Number

5.1) Versions

- 5.1.1) PPHA-**05**-0: 0 to 5V DC Output
- 5.1.2) PPHA-**10**-0: 0 to 10V DC Output
- 5.1.3) PPHA-**20**-0: 4 to 20mA DC Output