

# 414R

## RESISTIVITY

### MONITOR-CONTROLLERS

*for High Purity Water*

*System Application:*

Mixed Bed DI  
Two Bed Strong Base DI  
Two Bed Weak Base DI  
Distillation  
Double Pass RO



High purity deionized (DI) water is essential to an incredible number of products and services... from ultrapure water used in semiconductor manufacturing, to spot free rinsing of cars. Application specifications, as well as system service requirements, make water quality monitoring a must for both the end user and service provider.

The 414R-HP and 414R-K Resistivity Monitor-Controllers are designed for water systems employing mixed-bed DI, two bed DI, or distillation. They are the ideal specification for the OEM, Engineer, or Service Dealer.

Featuring advanced temperature compensation and microprocessor based circuitry, the 414R provides high accuracy at a reasonable cost. Two models are available, the -HP for mixed-bed applications, the -K for two-bed systems. Both models utilize 2 range auto-ranging for increased precision, whether the water is 18 megohm or 15 kilohm.

Temperature may be momentarily displayed in °C and °F. Large ½ inch digits make the LCD easy to read at a distance.

The 414's also feature a High/Low Set-Point Controller for connection of valves, alarms, etc. Activation of the SPDT relay may be delayed from 0 to 120 sec to compensate for any anticipated equipment rinse-up times. All is easily programmed via just 3 pushbuttons. Front panel red and green LEDs indicate water quality relative to the set-point.

Field selectable 0-5VDC/4-20mA/0-20mA isolated outputs are available on both models.

## MONITOR

Resistivity Range:

Model 414R-HP:



Model 414R-K:



Temperature Display:

0 - 50.0°C or 32 - 122°F

Accuracy:

Resistivity,  $\pm 1\%$  of Reading; Repeatability,  $\pm 1\%$   
Temperature,  $\pm 0.1^\circ\text{C}$

Temperature Compensation:

Automatic to 25°C from 5 to 50°C

Display:

1/2 inch, 4 digit LCD

## CONTROLLER

Relay:

1 SPDT rated 1 amp resistive @ 28VDC; 0.5 amp resistive @ 120VAC

Function:

Adjustable High/Low Set-Point

Status Indicators:

Green LED / Above Set-Point

Red LED / Below Set-Point

Relay Activation Delay:

Adjustable from 0 - 120 seconds

Memory:

non-volatile EEPROM

## OPTIONAL OUTPUTS

Isolated, 0-5 VDC / 4-20 mA / 0-20 mA, Field Selectable

## GENERAL

Power Input: Selectable 110 or 220 VAC; 50 - 60 Hz (24VAC available)

Power Consumption: 2.4 watts; 20mA @ 110 VAC

Enclosure: ABS, Panel or Wall Mount

## RESISTIVITY CELL, CS10S

Type: Insertion Style, 1/2" & 3/4" mNPT fitting included

Resistivity Cell: 0.05 Cell Constant

Temperature Sensor: Linear Thermistor Network, LTN

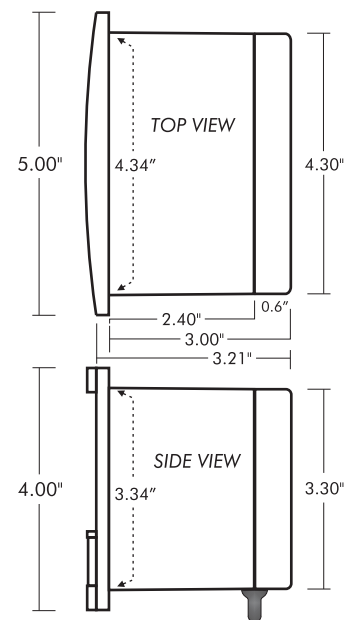
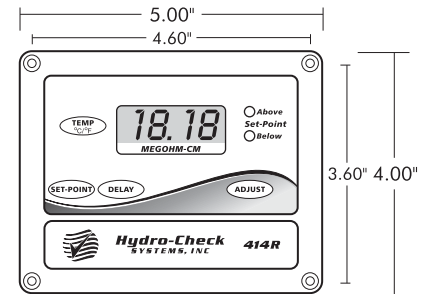
Maximum Pres/Temp: 100PSIG @ 100°C

Maximum Sensor Deployment: 100ft of cable

Wetted Materials: 316SS, Polypropylene, Teflon®<sup>1</sup>(PTFE) , EPR/EPDM

<sup>1</sup>Teflon® is a registered trademark of DuPont Company

actual size



## ORDERING INFORMATION

MEGOHM MODEL: **414R-HP**

KILOHM MODEL: **414R-K**

OPTIONAL OUTPUTS: **-520** (add to monitor model number)

RESISTIVITY CELL: **CS10S-10** (std 10ft cable)

Optional: **-25/50/100 feet**

ACCESSORIES: Wall Mount Adapter  
110VAC Powercord

DISTRIBUTED BY:

Warranty: The Hydro-Check Systems 414 Monitor-Controllers, and Sensors have a warranty against defects in materials and workmanship for a period of 2 years from the date of manufacture. Warranty items returned prepaid will be repaired or replaced by the factory at no charge. Warranty applies only to product defects and Hydro-Check Systems, Inc. accepts no other liability.

**Hy-Lite** RESISTIVITY INDICATORS,  
REMOTE ALARM & RELAY MODULES



**Hydro-Check Systems, Inc**

5931 Sea Lion Place, Suite 100, Carlsbad, CA, USA, 92010

tel 760-930-1924

760-930-1934 fax

www.hydrocheck.com