



HI 710

Advanced Conductivity & TDS Controller

- Accurate, reliable and simple to install
- Extensive range for both conductivity and TDS
- Completely programmable through menu driven display
- On/Off, proportional, PI and PID Controls
- Automatic or manual temperature compensation



The Hanna Instruments HI 710 is the preferred choice for process control



Recalls the calibration data to insure accuracy and compliance with procedures

Displays the various parameters and returns to normal operation mode

A 4-digit password protects the setup parameters to prevent tampering

Simple automatic calibration and temperature compensation with visual prompts

Hi-tech microprocessor puts a host of variables at your disposal to fine tune your process, save on chemicals and meet regulatory requirements

17 mm high 4 1/2 digit primary display visible from a distance

10 mm high 3 1/2 digits secondary display showing temperature or calibration data

Fixed or intermittent red, green and yellow LED's signal status from a distance

CFM key confirms calibration data and acts as the ENTER key

The Hanna line of industrial microprocessor-based controllers offers a multitude of possibilities such as single and dual setpoints, ON/OFF, proportional and PID control, relay outputs, user-selectable zoom, bidirectional isolated RS232, isolated recorder outputs in mAmps and volts, differential input, control through analog output and Fail-Safe Features.

Simple to Use

The large, dual-level LCD shows both EC or TDS and temperature and guides operators through calibration and programming with step-by-step prompts. The choice of ON/OFF, proportional and PID control provides extra versatility and makes it possible to pick the process controller that best fits your application. Keeping track of multiple controllers in different plants is made easy. These advanced controllers can be identified with both a factory and process ID.

Fail-Safe Protection

The Fail-Safe alarms protect processes against critical errors arising from power interruptions, surges and human errors. The sophisticated yet easy-to-use system resolves these problems on two fronts: hardware and software. To eliminate blackout and line failure problems, the alarm function operates in a "Normally Closed" state and goes off if the wires are accidentally tripped or when the power is down. This is an

important feature since it solves the common process problem where the alarm terminals close in abnormal situations, but no alarm is sounded with a line interruption, causing extensive damage. With our controllers, software is employed to set off the alarm in abnormal circumstances. For example, if the dosing terminals are closed too long, red LED's will provide a visual warning signal.



Save Money with Custom Programs

The HI 710 controller puts a host of parameters at your disposal to prevent overdosing or costly system failures. You can set your high and low setpoint hysteresis bands independently to fine tune dosing processes with the ON/OFF controllers. Similarly, the proportional band and time period are user-programmable to save on slow reacting chemicals which are

commonly overdosed. This advanced series of controllers also includes models featuring PID (Proportional Integrative Derivative) control. The instrument can be set to P, PI and PID to suit your application. The HI 710 offers an adjustable timer from 10 minutes to 7 days as the maximum time that the relay contacts may remain closed, an important feature in case of sudden chemical depletion, truncated intake or discharge tubing and other calamities. With these silicon guardians, users can rest assured that processes are operating efficiently and safely.

Galvanically Isolated Outputs with Zoom

Some models incorporate hardware, selectable isolated current or voltage output. These can drive auxiliary devices, chart recorders and provide remote monitoring. Users can also zoom on to any 2 points from the full measurement scale. This line of industrial controllers includes models that provide control through analog output. Now any compatible device such as electrovalves or pumps may be driven with these advanced controllers.

Password Protection

Hanna's password protection feature keeps these controllers safe from tampering. Only users with the proper password can change the settings of these hi-tech controllers.



HI 710

Advanced Conductivity & TDS Controller

The HI 710 conductivity and TDS controller offers state-of-the-art technology for your process control. The HI 710 can be configured for ON/OFF, Proportional, PI or PID control. Thanks to Hanna's exclusive technology, they can be customized to best fit your application. A menu-driven display aids the user throughout the operations with running messages and clear prompts. All relevant parameters can be simply adjusted and will remain memorized until overwritten. Bright LED lights show the current status even from a distance. With self-diagnostic features and extractable terminals, installation and maintenance are rapid and simple. Password protection guarantees that the calibration and predetermined parameters cannot be altered unnecessarily. The controllers can operate with 4-ring probe or 4-20 mA signal. They accept probes with or without a built-in Pt 100 temperature sensor. HI 710 monitors and controls both conductivity and TDS. If you only need conductivity or TDS, then order HI 700 or HI 705, respectively.



A short list of the outstanding features of the HI 710

- Two ID numbers to identify a specific process in a particular factory
- High and low setpoints can be adjusted with 0.01 pH, 1 mV, 0.1 μ S and 0.01 ppm resolution
- The hysteresis bands in ON/OFF controls can be regulated with 0.01 pH, 1 mV, 0.1 μ S and 0.01 ppm resolution
- The span in proportional controls can be fine tuned in all measurement ranges
- Relays reset and rate time for PID setting
- Two independent alarm bands for high and low setpoints to guarantee a timely warning
- Choose the max. time, the relay contacts may remain closed before the alarm is sounded off
- Choose from six mA or VDC analog outputs and fine tune the pH/mV/EC/TDS range (e.g. 4.00-11.00)
- Setting date and time of last calibration. The data is retained for 3 months even with power off

Specifications	HI 710	μ S	mS	ppm	ppt	$^{\circ}$ C
Range		0.0 to 199.9/0 to 1999	0.00 to 19.99/0.0 to 199.9	0.0 to 100.0/0 to 1000	0.00 to 10.00/0.0 to 100.0	-10.0 to 100.0
Resolution		0.1/1	0.01/0.1	0.1/1	0.01/0.1	0.1
Accuracy (@20 $^{\circ}$ C/68 $^{\circ}$ F)		\pm 0.5% F.S. (EC & TDS); \pm 0.5 $^{\circ}$ C (0 to 70 $^{\circ}$ C); \pm 1 $^{\circ}$ C (outside)				
Typical EMC Deviation		\pm 2% F.S. (EC & TDS); \pm 0.5 $^{\circ}$ C				
Calibration		Automatic or manual single point				
Temp. Compensation		Automatic (with Pt100) or manual from -10 to 100 $^{\circ}$ C with coeff. from 0.00 to 10.00%/ $^{\circ}$ C				
TDS Ratio		Adjustable from 0.00 to 1.00				
Display		Dual-level LCD with graphic symbols & messages				
Output		Analog: isolated 0 to 1 mA, 0 to 20 mA, and 4 to 20 mA (max. resistive load 1 K Ω); 0 to 5VDC, 1 to 5VDC, and 0 to 10VDC (min. resistive load 1K Ω)				
Analog Input		4 to 20 mA				
Set Relay		2 SPDT 5A-250 VAC contact outputs, 5A-30VDC (resistive load)				
Alarm Relay		SPDT 5A-250 VAC contact outputs, 5A-30VDC (resistive load)				
Environment		32 to 122 $^{\circ}$ F (0 to 50 $^{\circ}$ C); max. RH 95% non-condensing				
Power Supply		115V \pm 10% or 230V \pm 10% VAC; 50/60Hz				
Dimensions		1/2 DIN 5.7 x 5.7 x 6.7" (144 x 144 x 170 mm)				
Panel Cutout		5.5 x 5.5" (140 x 140 mm)				
Weight		3.5 lb. (1.6 Kg)				

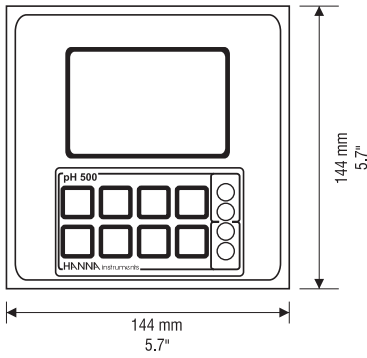
Ordering Information

HI 710 EC & TDS controller, dual setpoint, On/Off & PID control, analog output.

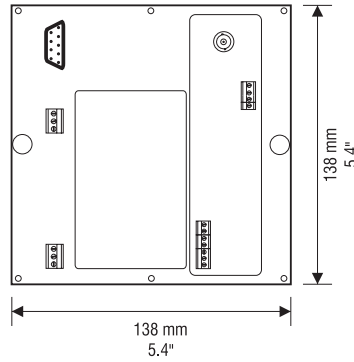
Recommended Accessories

HI 3011 Flow-thru, 4-ring conductivity probe with platinum sensor + 10' (3 m) cable
 HI 7639 Conductivity/TDS Pt100 probe + 10' (3 m) cable
 HI 5001/5 Stainless steel Pt100 probe

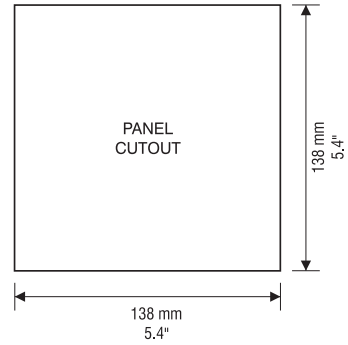
Mechanical Dimensions for HI 710



Front View



Back View

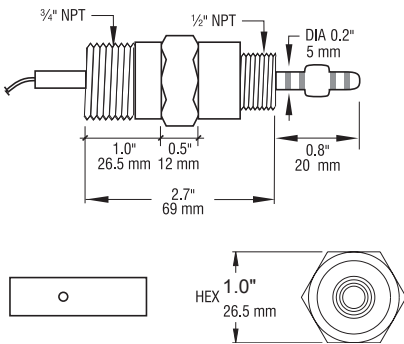


Panel Cutout

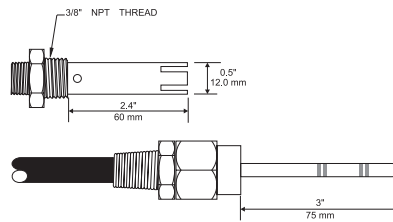
Quality electrodes for high pressure industrial applications.

Specifications for recommended HI 710 Probes

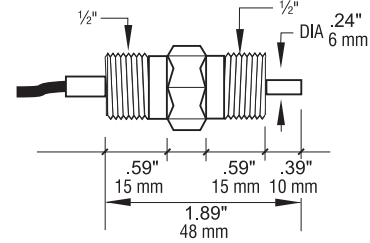
HI 3011 Flow-thru Conductivity Probe



HI 7639 Submersion/in-line Conductivity Probe



HI 5001/5 Stainless Steel Pt 100 probe



Specifications	HI 3011*
Body Material	Ultem®
Working Temperature	32 to 176°F (0 to 80°C)
Max Pressure (@25°C/77°F)	87 psi (6 bar)

*no temperature compensation.
Use HI 5001/5 for temperature compensation.

Specifications	HI 7639
Temp. Comp.	Auto, 32 to 122° (0 to 50 °C)
Body Material	Ultem®
Working Temperature	32 to 248°F (0 to 120°C)
Max Pressure (@25°C/77°F)	72.5 psi (5 bar)

Authorized Distributor:

