

# Industrial Measurement & Control Instrumentation

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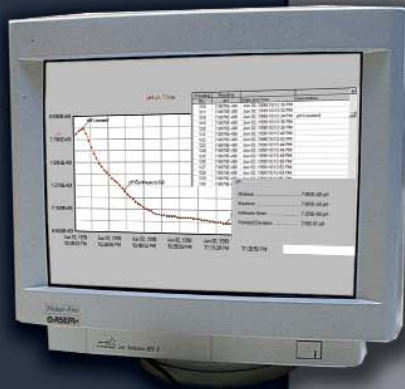
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Customized Control Panels



Dataloggers



Controllers



Industrial Probes

**HANNA**  
instruments  
C A N A D A

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1-800-842-6629

## Specifications

## Datalogger Process 101

|                             |   |
|-----------------------------|---|
| Calibrated current accuracy | 0.1% of F.S.R. at calibration temperature   |
| Current RESOLUTION          | 10 microAmps  |
| Current range               | -20 to +100 milliAmps   |
| INPUT connection            | Removable screw terminal  |
| Input impedance             | 10 Ohm  |
| ADC resolution              | 16 Bits   |
| Current calibration         | Digital calibration is available in software  |
| N.I.S.T. traceable          | N.I.S.T. certificates available   |
| Calibration date            | Automatically recorded within device to alert user when calibration is required   |
| Recording interval          | From 2 sec. to 12 h selectable in software  |
| Memory wrap around          | Selectable in software  |
| Engineering units           | Software programmable. User may program any desired units up to 10 characters in length.<br>This value is stored within the device.                             |
| Scale factor                | Software programmable. User may program any desired scaling factor from $\pm 1.000E+99$ to $\pm 1.000E-99$ .<br>The scaling factor is stored within the device. |
| Offset value                | Software programmable. User may program any desired offset value from $\pm 1.000E+99$ to $\pm 1.000E-99$ .<br>This offset value is stored within the device.    |
| Real time recording         | Device may be used with PC to monitor and record data in real time  |
| Green visual indicator      | LED flashes at selected reading rate  |
| Memory                      | 32,768 readings max   |
| User-replaceable battery    | 1 year typical  |
| Time accuracy               | $\pm 1$ minute per month at 20 °C   |
| Data format                 | Date and time stamped, mA, other engineering units programmable through software  |
| Shock resistance            | drop proof to 5'  |
| Weight                      | 1.5 oz (40g)  |
| Computer interface          | PC serial or RS232C COM   |
| Software                    | Windows® 95/98/NT/2000/XP based software for complete control and operation   |
| Operating environment       | -40 °C to +80 °C, 5 to 95% RH (non-condensing)  |
| Dimensions                  | 1.4" H x 3.6" L x 0.6" D (36mm x 92mm x 16mm)   |
| Material                    | ABS Plastic   |

## Specifications

## pH 502 series controllers

|                            |   |
|----------------------------|---|
| Range                      | 0.00 to 14.00 pH / -9.9 to 120.0 °C   |
| Resolution                 | 0.01 pH / 0.1 °C  |
| Accuracy (@ 20 °C / 68 °F) | $\pm 0.02$ pH / $\pm 0.5$ °C  |
| Typical EMC Deviation      | $\pm 0.2$ pH / $\pm 0.5$ °C   |
| Input                      | High Impedance $10^{12}$ ohm  |
| Calibration                | 1, 2, or 3 points at pH 4.01, 7.01 and 10.01  |
| Temperature Compensation   | Automatic (with Pt100) or manual from -9.9 to 120 °C  |
| Readout                    | 4 1/2-digit dual level LCD with graphic symbols and messages  |
| Outputs                    | Digital: RS232 bi-directional opto-isolated; or Analog: galvanically isolated<br>0 to 1 mA, 0 to 20 mA and 4 to 20 mA (max resistive load 1kW), 0 to 5 VDC,<br>1 to 5 VDC and 0 to 10 VDC (min. resistive load 1kW) |
| Setpoint Relays(s)         | 1 or 2 : SPDT NO contact outputs 5 A - 250 VAC, 5 A - 30 VDC (resistive load)   |
| Power Supply               | 230 V $\pm 10\%$ VAC ; 50 Hz or 115 V $\pm 10\%$ VAC ; 60 Hz  |
| Environment                | 0 to 50 °C (32 to 122 °F); max 85% RH non-condensing  |
| Panel Cutout               | 140 x 140 mm (5.5 x 5.5")   |
| Dimensions                 | 1/2 DIN 144 x 144 x 170 mm (5.7 x 5.7 x 6.7")   |
| Weight                     | 1.6 kg (3.5 lb)   |

## Specifications

## Industrial probes

| Part #                             | Range         | Reference System |         |             | M.Pin | ATC   | AmpHel | T° Range     | Pressure        | Lead      |       | Body |
|------------------------------------|---------------|------------------|---------|-------------|-------|-------|--------|--------------|-----------------|-----------|-------|------|
|                                    |               | Junction         | Type    | Electrolyte |       |       |        |              |                 | Connector | Cable |      |
| Standard glass type pH sensors     |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 6101405                         | 0-13          | Double           | Teflon® | Polymer     | Yes   | Pt100 | Yes    | -5 to 80 °C  | 6 bars (87 PSI) | BNC+ Lead | 5 m   | PVDF |
| Low T° glass type pH sensors       |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 1006-1007                       | 0-12          | Double           | Teflon® | Polymer     | Yes   | -     | -      | -10 to 80 °C | 6 bars (87 PSI) | BNC+ Lead | 5 m   | PVDF |
| High T° glass type pH sensors      |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 1006-3007                       | 0-14          | Double           | Teflon® | Polymer     | Yes   | -     | -      | 0 to 100 °C  | 6 bars (87 PSI) | BNC+ Lead | 5 m   | PVDF |
| HF resistant glass type pH sensors |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 1006-4005                       | 0-10          | Double           | Teflon® | Polymer     | Yes   | -     | -      | -5 to 60 °C  | 6 bars (87 PSI) | BNC+ Lead | 5 m   | PVDF |
| Platinum type ORP sensors          |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 2004-1007                       | $\pm 2000$ mV | Double           | Teflon® | Polymer     | Yes   | -     | -      | -5 to 100 °C | 6 bars (87 PSI) | BNC       | 5 m   | PVDF |
| Gold type ORP sensors              |               |                  |         |             |       |       |        |              |                 |           |       |      |
| HI 2004-2007                       | $\pm 2000$ mV | Double           | Teflon® | Polymer     | Yes   | -     | -      | -5 to 100 °C | 6 bars (87 PSI) | BNC       | 5 m   | PVDF |