



## INDICATOR/ CONTROLLER

# NEMA 4X Panel Mount Multi-Channel Controller

## Tek-LCD 7801C



Technology Solutions



## 1 FEATURES

- Available with programmable displays, function keys, and digital inputs.
- Numeric and bar graph color display (320 x 240 pixels) 5.7" (145mm).
- Sunlight readable display, white backlight.
- Combine multiple alarms into logic AND and/or OR alarms.
- Simulation and manual control modes for testing setup.
- Modular design for inputs and outputs flexibility.
- 50-point linearization, square root, and exponent for open channel flow.
- Round horizontal tank volume calculation is possible.
- Open channel flow math formulas for weirs and flumes.
- Multi-pump alternation control.
- On/off control with the random varying set point.
- Automatic or manual scanning.
- 3-Year Warranty.

## 3 APPLICATIONS

- Oil and Gas Industry
- Water and Wastewater Industry
- Chemical Industry
- Pharmaceutical Industry
- Power Plant

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## 2 SPECIFICATION

<b>Display</b>	Color; QVGA (320x240px), 5.7" (145mm) diagonally, white backlight; Bar Graph: Twenty divisions; Numerical: Up to 15 digits ( $\pm 999,999,999,999,999$ ); Feet & Inches Format: 99,999' 11.9"
<b>Screen Bar Graph</b>	Enable/disable: Channels, totals, timers; Bar Graph scale: 0 – 100%, independent of channel scale; Twenty Divisions: 5% each; Screen: Select to show bar graph or not
<b>Color Selection</b>	65 colors selection, customize bar graph, panel background, and text for normal and alarm conditions
<b>Decimal Point</b>	0 to 15 decimal places, user selectable
<b>Display Update Rate</b>	User selectable: 0.1 to 0.5 sec (10 updates/sec to 2 updates/sec)
<b>Programming Method</b>	Front panel buttons, external buttons
<b>Number of Alarms</b>	Up to 64 high or low, logic AND & OR Automatic (non-latching) or latching, On & Off time delays, can be assigned to one or more relays
<b>Internal Buzzer</b>	60 dBA @ 24 inches (61 cm)
<b>Input &amp; Output Cards</b>	Max Number of I/O Cards: 7; Analog Inputs: 4/card; Pulse Inputs: 4/card; Analog Outputs: 5/card; Relays: 5/card
<b>Number of Screens</b>	Up to 20 screens with 1 to 8PVs or items per screen
<b>Number of Channels</b>	Up to 99 channels; Input Source: 4-20mA, Pulse, Digital, Modbus, another Channel, Total, Timer, Alarm, Date & Time, mA Output, Relay Output, Digital Output, or Modbus Output
<b>Non-Volatile Memory</b>	Settings stored for a minimum of 10 years
<b>Output</b>	4 to 20mA
<b>Accuracy</b>	$\pm 0.03\%$ of full scale $\pm 1$ count
<b>Temperature Drift</b>	Better than: 20ppm/ $^{\circ}\text{C}$ from $-40$ to $60^{\circ}\text{C}$ ambient
<b>Power Supply</b>	Isolated 24VDC @ 200mA/input Max current: 1,600mA (All inputs), (8) Analog Input @ 200mA max, (28) Analog Input @ 20mA max Available on AC or DC powered units
<b>Temperature</b>	Operating Temperature: $-40^{\circ}\text{F}$ to $140^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $60^{\circ}\text{C}$ ) Storage Temperature: $-40^{\circ}\text{F}$ to $140^{\circ}\text{F}$ ( $-40^{\circ}\text{C}$ to $60^{\circ}\text{C}$ )
<b>Relative Humidity</b>	0 to 90% non-condensing
<b>Connections</b>	Removable screw terminal blocks Inputs/Outputs: 12 to 24AWG wire; Digital I/O: 16 to 30AWG; RS-485: 12 to 24AWG wire RJ45 Ethernet connection; USB ports: Micro-USB (Device), cable included
<b>Enclosure</b>	Enclosure Body: Thermoplastic Polyester, Color: Gray; Display Window: Clear Polycarbonate, GE LEXAN HP12W; Front Panel Keys: Silicone rubber
<b>Mounting</b>	Panel-mounting frame and twelve screws (provided) Cut-out: $10 \frac{1}{4}'' \times 10 \frac{1}{4}'' \pm 1/16''$ (254mm x 254mm $\pm 1.3$ mm) (H x W); Panel thickness: $1/16'' - 1/4''$ (1.8mm to 8.9mm); Clearance behind panel: 6" (150mm)
<b>Dimensions</b>	$10 \frac{3}{4}'' \times 10 \frac{3}{4}'' \times 4 \frac{3}{4}''$ (276mm x 276mm x 124mm) (H x W x D)
<b>Weight</b>	7.4lb (3.4kg) approx.
<b>Number of Totalizers</b>	Up to 32 totalizers, 15 digits with comma separator
<b>Date &amp; Time Format</b>	Month, day, year; 24 hour; 00: Midnight hh: mm: ss
<b>Battery</b>	3 V, P/N: CR2032 included
<b>Isolation</b>	1500V: Input-to-power line; 500V: Input-to-input, input-to-output; All analog inputs and analog outputs are isolated from each other