

Multi Channel Controller

DV-10 / DV-100



Available Enclosure



Panel Mount

MULTI-CHANNEL CONTROLLER

- NEMA 4X Panel Mount Multi-Channel Controller
- Convenient Display, Control, & Alarm of Multiple 4-20 mA & Pulse Inputs
- Numeric & Bargraph Color Display (320 x 240 px) 5.7" (145 mm)
- Sunlight Readable Display, White Backlight
- Isolated 24 VDC Transmitter Supplies 200 mA / Analog Input; 1,600 mA Max
- 99 Channels, 32 Totalizers, 32 Timers, & 199 Modbus Slave Inputs
- 64 High & Low Alarms, Combine Multiple Alarms Into Logic AND & OR Alarms
- Simulation & Manual Control Modes for Testing Setup
- Modular Design for Input & Output Flexibility
- Up to (28) 4-20 mA Isolated Inputs or Pulse Inputs
- Up to (25) 10 Amp Form C Relays (With Eight Analog or Pulse Inputs)
- Up to (25) Isolated 4-20 mA Outputs (With Eight Analog or Pulse Inputs)
- Operating Temperature Range: -40 to 60°C (-40 to 140°F)
- Pulse, Analog, & Modbus Input Flow Rate / Total / Grand Total Capability
- 50-Point Linearization, Square Root, and Exponent for Open Channel Flow
- Round Horizontal Tank Volume Calculation; Just Enter Diameter & Length
- Multi-Pump Alternation Control or Simple On / Off Control
- Programmable Displays, Function Keys & Digital Inputs
- Math Functions: Sum, Diff, Average, Multiply, Divide, % Efficiency, & More
- Direct Modbus PV Inputs - Slave Mode
- Customize Modbus Outputs to Read Multiple Registers in One Block
- RS-485 Serial Communication with Modbus RTU
- Field Selectable Input Power: 85-264 VAC or 24 VDC
- (20) Screens with up to Eight PVs Each
- Automatic or Manual Scanning
- ConsoliDator+ Configuration Software
- NEMA 4 Field Mount Enclosure Accessory
- Light / Horn & Control Station Accessory for Remote Operation
- 3-Year Warranty

OVERVIEW

The ConsoliDator+ is a multi-channel controller that is both easy to use and satisfies a wide variety of process display, alarm and control applications. It accepts 4-20 mA inputs, flow meter pulse inputs, digital inputs, and Modbus RTU inputs and displays them both in numeric and bargraph format on a large, 5.7" color display. It can be equipped with multiple relays with user-definable actions, 4-20 mA outputs, digital outputs, Modbus RTU, and Ethernet Modbus TCP/IP protocol communication capabilities. Additionally, the controller is equipped with up to 32 timers that can be used to control many processes or events.

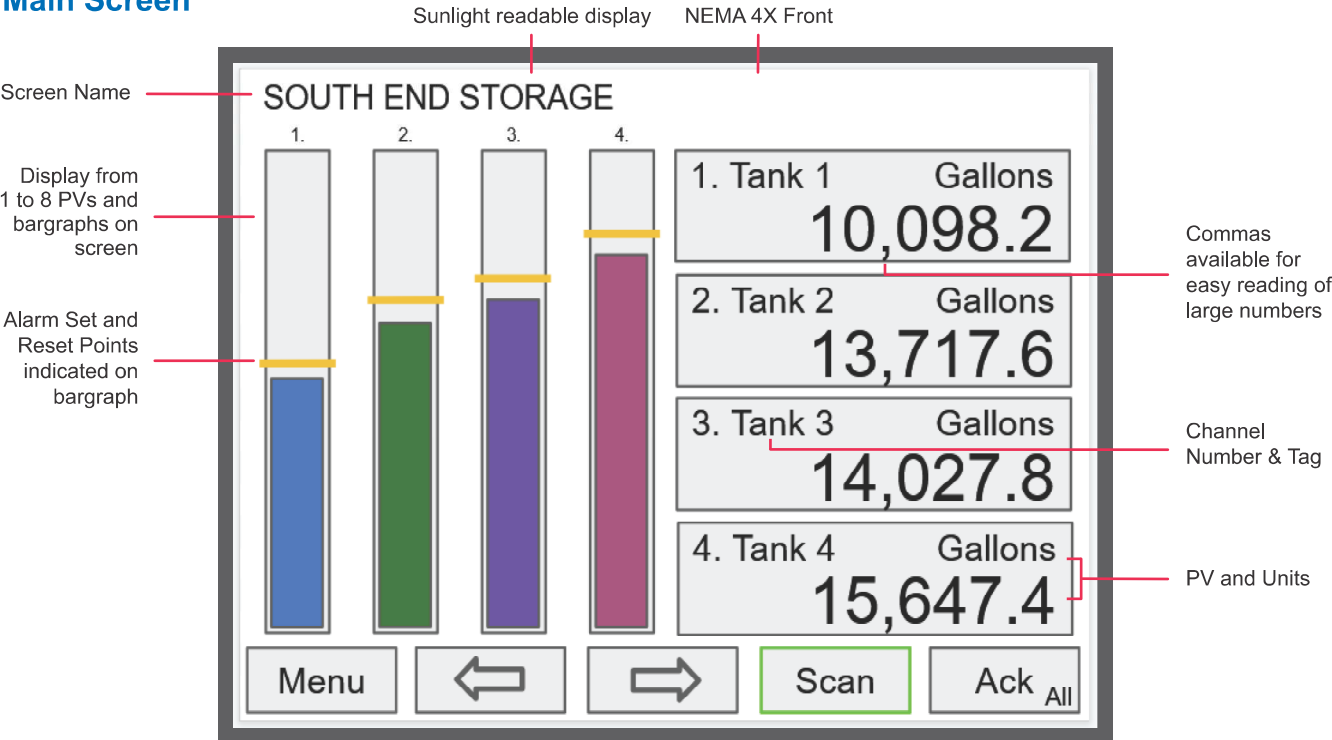
The ConsoliDator+ takes full advantage of its color display by allowing the user to customize screen colors for bargraphs, alarm conditions, and input channels.

All this functionality is easily programmed using free software or via the front panel pushbuttons. Choose the model that best suits your application, from monitoring only to fully loaded controllers with an extensive combination of inputs, outputs and communication protocols. The standard product offering is listed in the ordering guide and other models are available for special order.

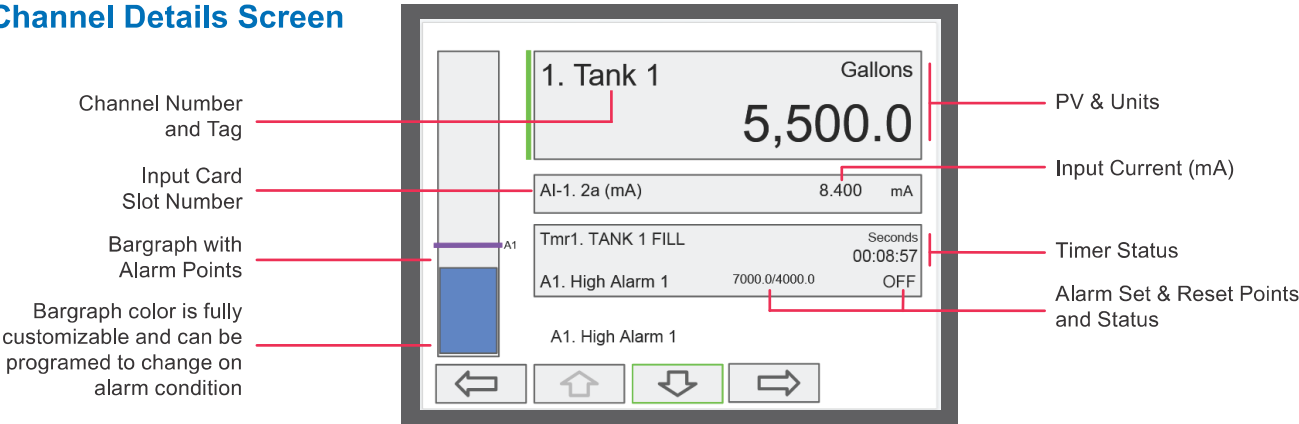
SCREENS

The ConsoliDator+ can be programmed to display the data on up to 20 different screens in a variety of formats and colors, with and without bargraphs. The following screens show a typical main screen and channel details screen:

Main Screen



Channel Details Screen

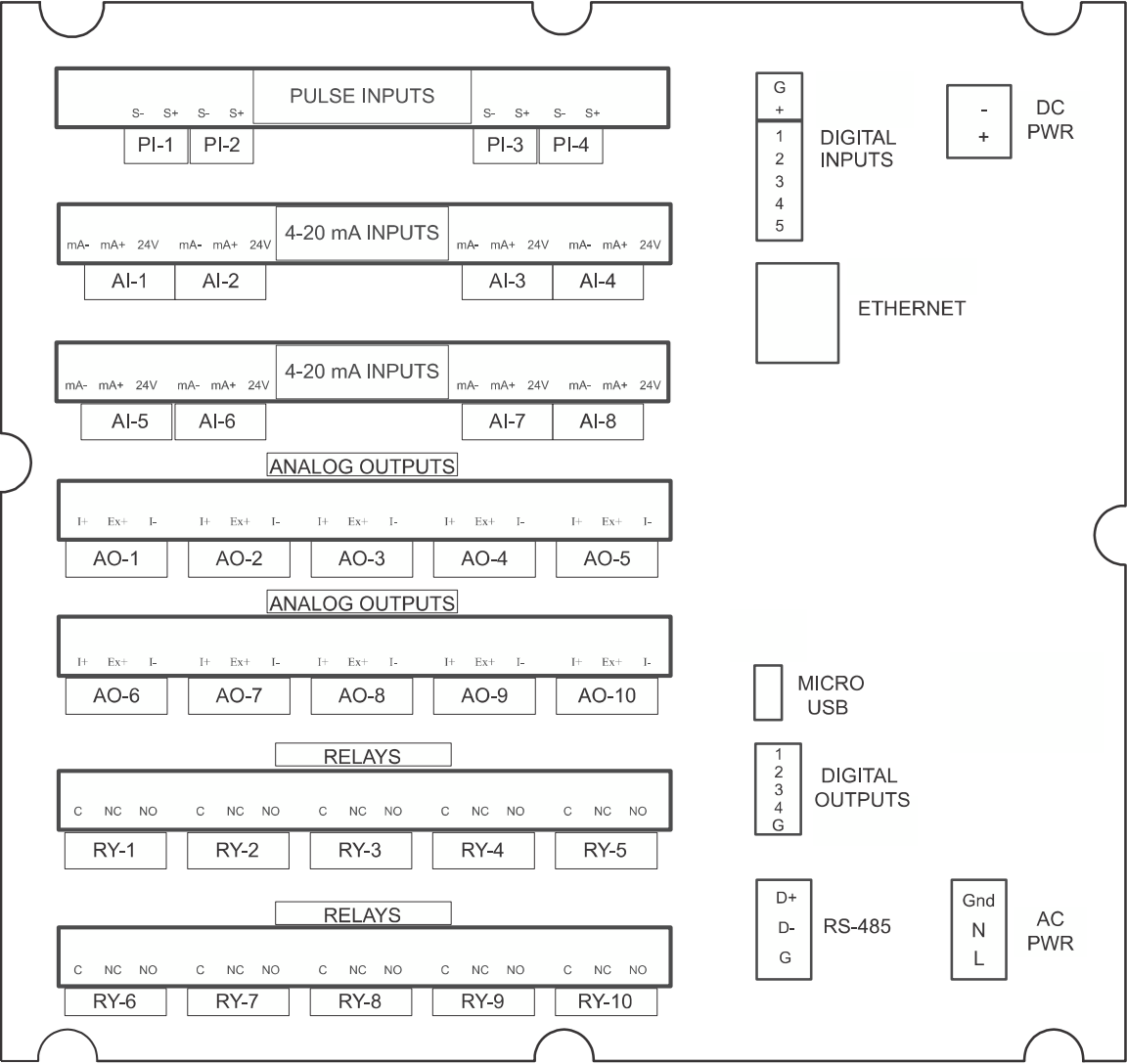


INPUTS & OUTPUTS

The back panel is labeled with the I/O boards that were installed at the factory. The removable connectors are labeled with the connection signal for each terminal. The following diagram shows what the back of the model PD9000-GP-4PI-8AI-10AO-10RY looks like. This model accepts (4) pulse and (8) analog inputs and has (10) 4-20 mA outputs and (10) relays. (5) digital inputs, (4) digital outputs, RS-485 serial capability and USB connections are standard on all ConsoliDator+ models. Ethernet is an option.

If all Input / Output slots are used exclusively for one function, the ConsoliDator+ can accept up to (28) isolated 4-20 mA inputs, (28) pulse inputs, (25) isolated 4-20 mA outputs, and (25) relays. If used as a Modbus slave only: (35) 4-20 mA outputs, (30) relays.

All units can be powered from AC or DC; both power connections can be used at the same time. The DC power supply can serve as backup power if the voltage is 24 V or less, otherwise the controller will run on DC power.



- Notes:**
1. Each 4-20 mA input has its own isolated 24 VDC power supply to power the transmitter.
 2. Each 4-20 mA output has its own isolated 24 VDC power supply to power the output loop.
 3. Each relay is Form C and rated at 10 A.
 4. Input / output connections are made to removable screw connectors.
 5. Every ConsoliDator+ has five digital inputs (additional digital inputs can be obtained by using the Pulse Inputs).
 6. Every ConsoliDator+ has four digital outputs.
 7. Every ConsoliDator+ has RS-485 with Modbus.
 8. All ConsoliDator+ models can be powered from either AC or DC Power.
 9. Ethernet with Modbus TCP is an option.
 10. Micro USB is used for programming the ConsoliDator+.

FREE CONSOLIDATOR+ CONFIGURATION SOFTWARE



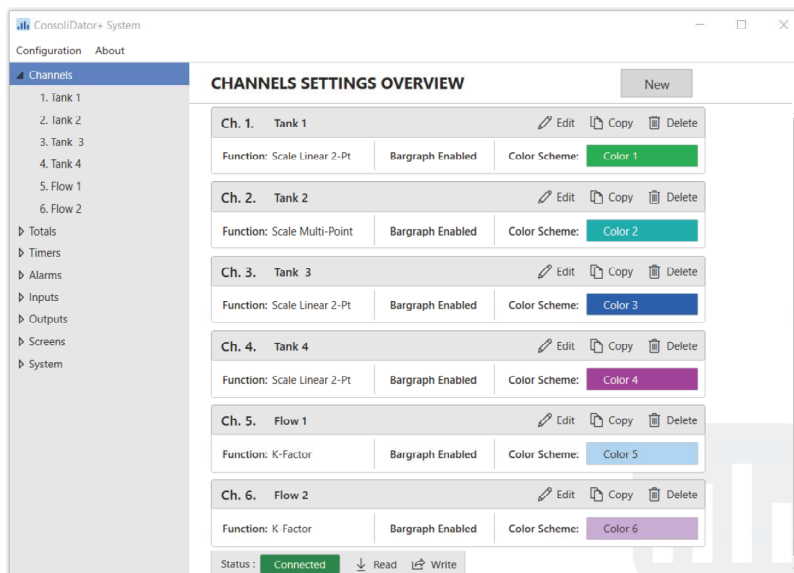
The easiest and quickest way to program your ConsoliDator+ multivariable controller is to use the FREE ConsoliDator+ configuration software.

The ConsoliDator+ configuration software is intuitive, and most customers can get their controller programmed as they like without even looking in the manual.

Once your controller is programmed the way you want it, you can wire it up for your application per the instructions in this manual and install it. If you find that you need to adjust the programming after the controller is installed, you can use the front panel soft keys and the instructions in the manual to do so.

Channel Settings

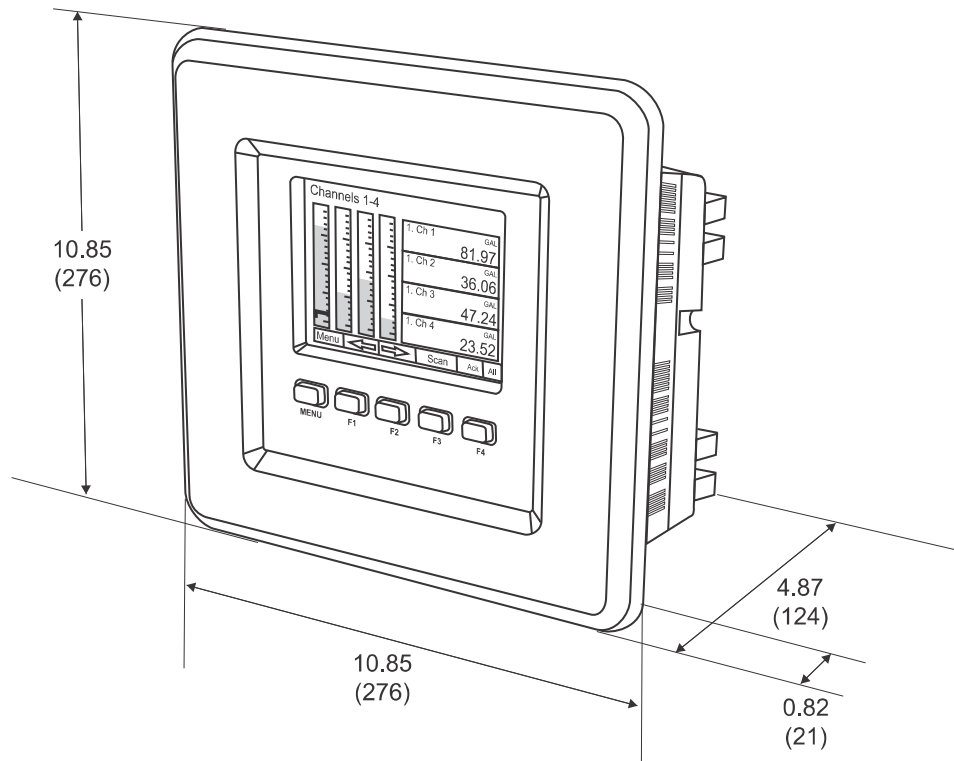
- Enter Display Tag Name for Channel
- Select a Function
- Select Input
- Select Units
- Select Decimal Position
- Select Color Scheme for Text, Background, and Bargraph
- Check Box to Display Bargraph
- Enter Scaling for Bargraph



DIMENSIONS

Overall Dimensions

Units: Inches (mm)



Panel Mount Controller



Download free 3-D CAD files of these instruments to simplify your drawings!

predig.com/documentation-cad