# YOKOGAWA -

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- PROPLUS Series Overview
- PROPLUS Software
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#### **PROPLUS SERIES OVERVIEW**





YPP6000



**Dual-Input** 

YPP6060



**Strain Gauge** 

**YPP6100** 



**Temperature** 

**YPP7000** 



Flow Rate/Total

YPP6200



Flow Rate/Total

YPP6300



**Batch Control** 

YPP6210



**Batch Control** 

YPP6310





#### **PROPLUS COMMON FEATURES**



- Dual-Line 6-Digit Display, 0.60" & 0.46"
- NEMA 4X, IP65 Front
- Universal 85-265 VAC, or 12/24 VDC Input Power Models
- Sunlight Readable Display Models
- Programmable Display & Function Keys
- 2 or 4 Relays + Isolated 4-20 mA
  Output Options

- External 4-Relay & Digital I/O Expansion Modules
- USB, RS-232, RS-485 Serial Communication Options
- Modbus® RTU Communication Protocol Standard
- Free PROPLUS Software for Operation, Monitoring, and Programming





#### **PROPLUS DISPLAY FEATURES**





#### PROCESS METER



**YPP6000** 

- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ±10 V Inputs
- Dual-Scale for Level Applications
  Single Input
- Isolated 24 VDC @ 200 mA
  Transmitter Power Supply
- Signal Input Conditioning for Flow & Round Horizontal Tanks
- 32-Point, Square Root, or Exponential Linearization
- Multi-Pump Alternation Control





YPP6000 Process Meter





YPP6000 Dual-Scale (Gallons & Percent)





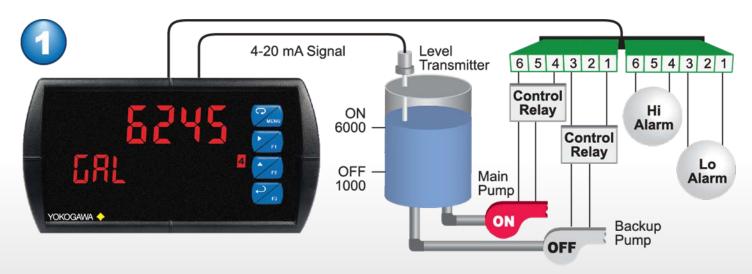
YPP6000 Dual-Scale (Gallons & mA)





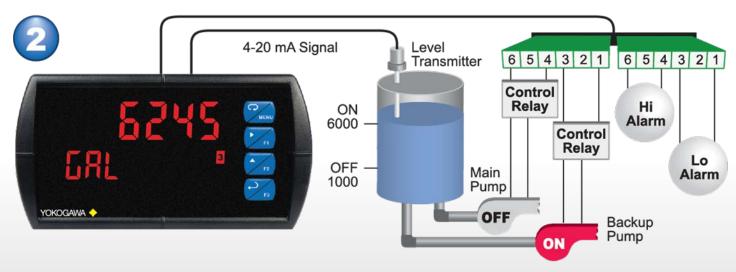
**Pressure Indication** 





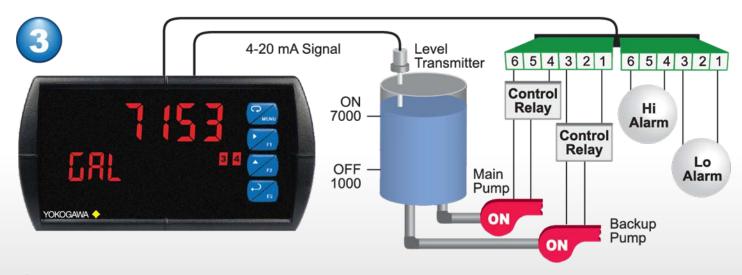
Relay #4 turns the main pump on at 6000 gallons and turns it off at 1000 gallons.





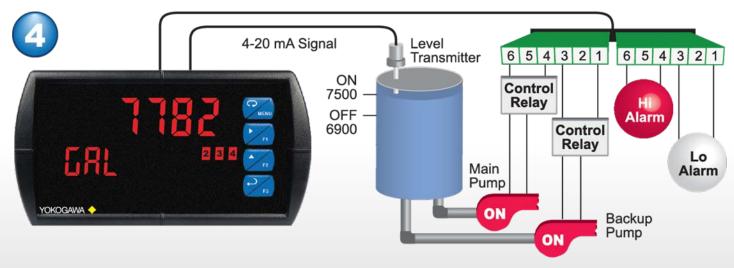
With the Pump Alternation feature activated, the next time the level reaches 6000 gallons, relay #3 transfers and starts the backup pump.





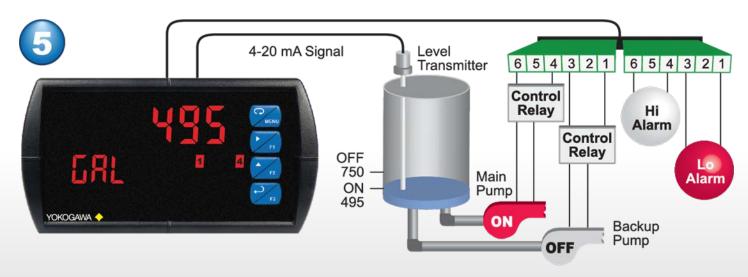
If the backup pump is not able to keep up, and the level reaches 7000 gallons, relay #4 transfers and starts the main pump as well.





Relay #2 trips the High Level Alarm at 7500 gallons and resets at 6900 gallons.





Relay #1 trips the Low Level Alarm at 495 gallons and resets at 750 gallons.



### DUAL-INPUT PROCESS METER



**YPP6060** 

- Dual Process Inputs with Math Functions
- Addition, Difference, Average, Multiplication, Division, Min, Max, Weighted Average, Ratio, Concentration, & More
- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ±10 V Inputs
- 32-Point, Square Root, or Exponential Linearization
- Multi-Pump Alternation Control





Math Function & Tag





Math Function & Inputs A & B





Input Channels A & B



#### STRAIN GAUGE METER



**YPP6100** 

- 0-10, 0-20, ±10, ±20, ±100, ±200 mV
  Inputs
- Selectable 5, 10, or 24 VDC Excitation Power Supply
- Capture or Programmable Tare Feature
- Ratiometric Operation
- Dual-Scale Feature Single Input
- Rouding Function 1, 2, 5, 10, 20, 50, or 100
- Auto-zero Feature Eliminates Zero Drift



### ANALOG INPUT RATE/TOTALIZER



**YPP6200** 

- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, ±10 V
  Inputs
- Isolated 24 VDC @ 200 mA
  Transmitter Power Supply
- Signal Input Conditioning for Flow & Round Horizontal Tanks
- Rate Displayed as Units per Second, Minute, Hour, or Day
- Total, Grand Total or Non-Resettable Grand Total
- 9-Digit Totalizer with Total Overflow Feature
- 32-Point Linearization, Square Root, or Programmable Exponent
- Multi-Pump Alternation Control







Flow Rate Indication





Flow Total Indication





Rate / Total Indication





**Total & Grand Total Indication** 



#### PULSE INPUT RATE/TOTALIZER



**YPP6300** 

- Pulse, Open Collector, NPN, PNP, TTL, Switch Contact, Sine Wave (Coil), Square Wave Inputs
- Gate Function for Rate Display of Slow Pulse Rates
- Isolated 24 VDC @ 200 mA
  Transmitter Power Supply
- Rate Displayed as Units per Second, Minute, Hour, or Day
- Total, Grand Total or Non-Resettable Grand Total
- 9-Digit Totalizer with Total Overflow Feature
- K-Factor Calibration or Scale with up to 32-Point Linearization



#### ANALOG INPUT BATCH CONTROL



**YPP6210** 

- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, ±10 V
  Inputs
- Start/Pause/Stop, Change Batch with Front Panel Buttons
- Single or Multi-Stage Batch Control (Up to 8 Relays)
- Automatic Overrun Correction
- Rate in Units per Second, Minute,
  Hour, or Day
- Automatic or Manual Batch Control
- Low or High Flow Alarms
- 9-Digit Grand Total with Overflow Feature
- Count Up or Down with Each Batch







**Batch & Total Preset** 





**Batch Total & Batch Count** 





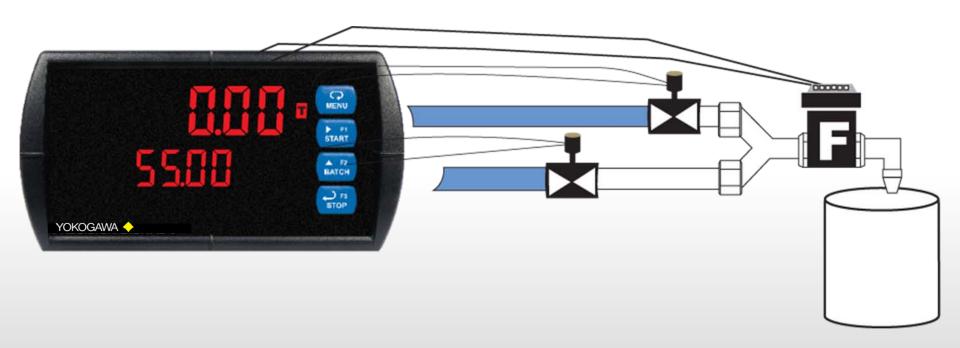
**Batch Total & Rate** 





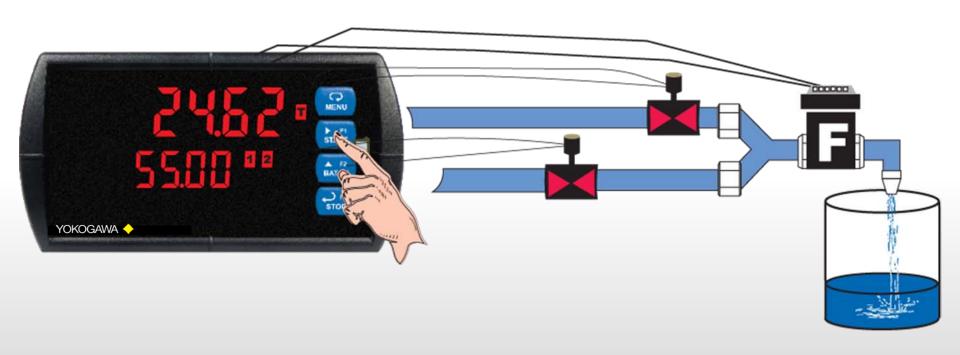
**Batch Total & Grand Total** 





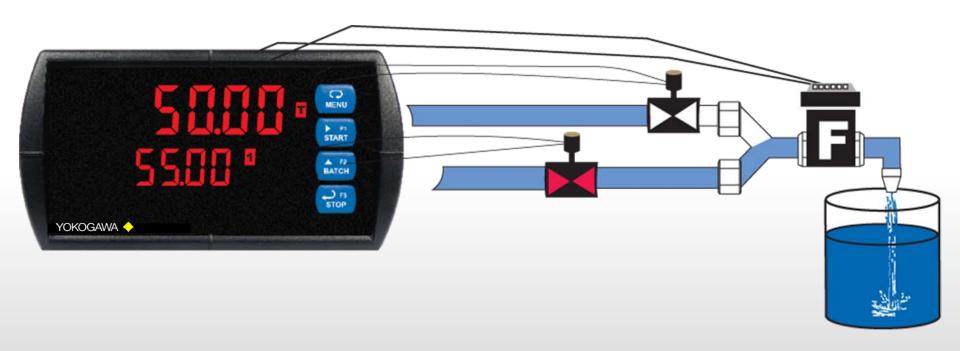
Both valves are closed with an empty barrel in place. The batched total is displayed in the upper display, the preset is selected for the lower display.





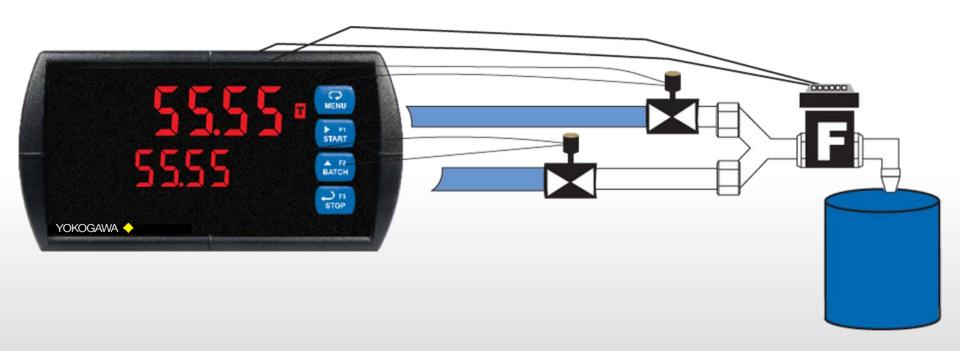
The START button is pressed. Both valves open. The barrel begins to fill.





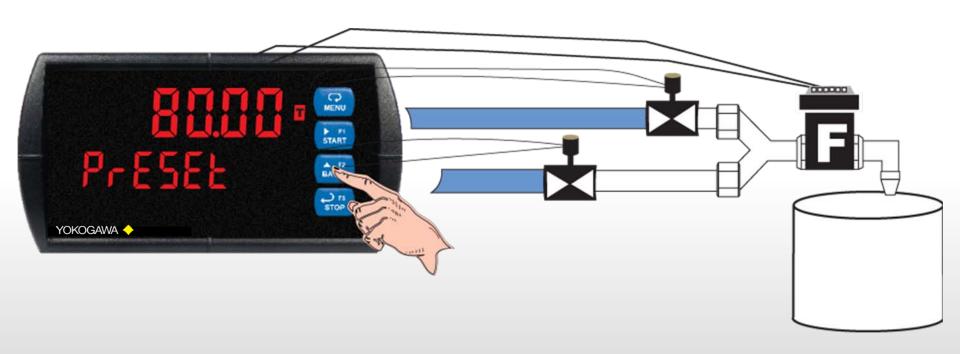
When the batch total reaches a value of 50.00 (Preset [55.00] – Preclose [5.00]) the full-flow valve closes. The fill rate of the tank slows as a result.





When the batch total equals the preset amount, the restricted-flow valve closes. The barrel is now full. If some overrun occurs, the next batch will adjust for this offset amount to maintain accuracy.

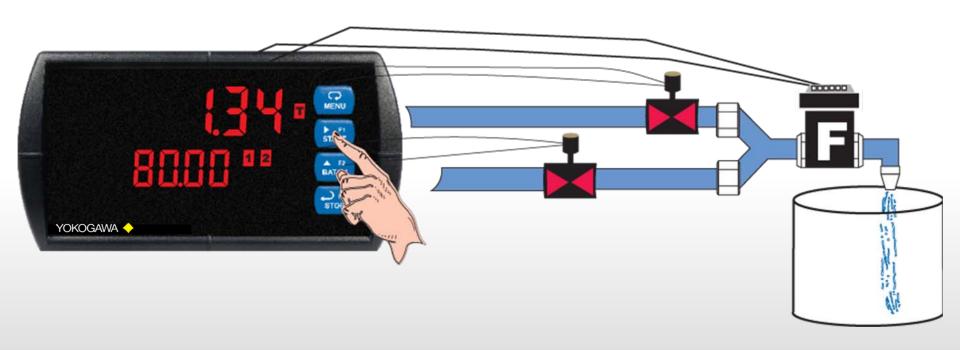




After placing a new, empty barrel, a new preset fill amount may be selected with the Batch key, while the process is stopped.



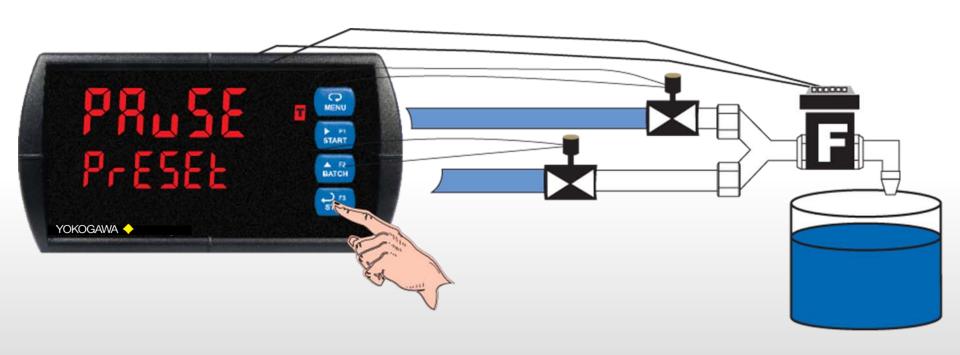
# MANUAL MULTI-STAGE BATCH CONTROL OPERATION



Press the START key and a new batch will begin. With both valves open, the process continues.



# MANUAL MULTI-STAGE BATCH CONTROL OPERATION



At any time, the STOP button may be pressed, once to Pause the process, or twice to cancel the batch, which stops the process.



#### PULSE INPUT BATCH CONTROL



**YPP6310** 

- Pulse, Open Collector, NPN, PNP, TTL, Switch Contact Sine Wave (Coil), Square Wave Inputs
- Start/Pause/Stop, Change Batch with Front Panel Buttons
- Single or Multi-Stage Batch Control (Up to 8 Relays)
- Automatic Overrun Correction
- Rate in Units per Second, Minute, Hour, or Day
- Automatic or Manual Batch Control
- Low or High Flow Alarms
- 9-Digit Grand Total with Overflow Feature
- Count Up or Down with Each Batch





#### TEMPERATURE METER



- J, K, T, E, R, S, B, N, CThermocouples
- 100 or 1000 Ω Platinum, 10 Ω Copper,
  120 Ω Nickel RTDs
- 1° or 0.1° Resolution
- Averages up to 10 RTD Sensors
- Automatic Cold Junction Compensation

**YPP7000** 



## DUAL-LINE DISPLAY MAKES ALL THE DIFFERENCE!



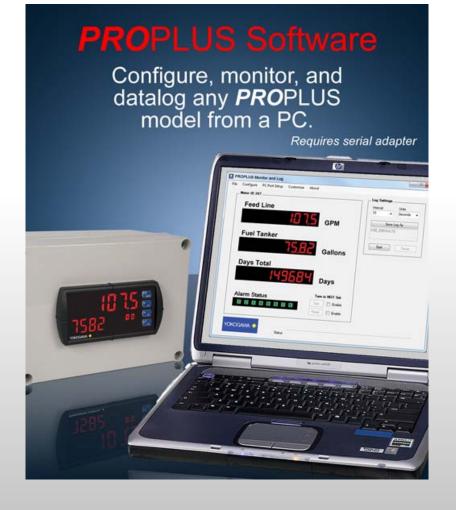
PD7000 Temperature Meter



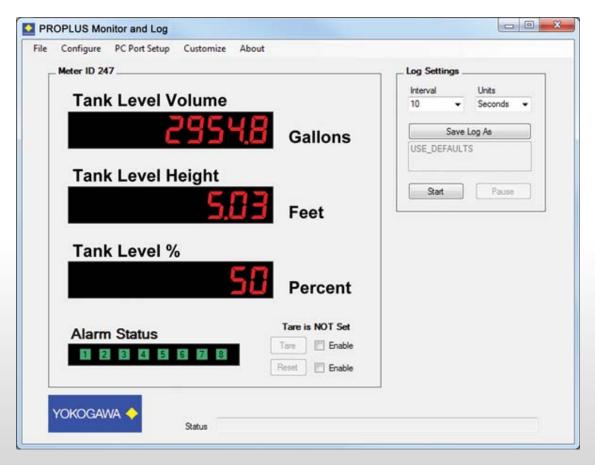
#### Communicate from a PC to

- Configure the Meter
- Monitor Present Trends
- Log to as Large of a File as Needed

Requires a YPPA8008 USB Serial Adapter

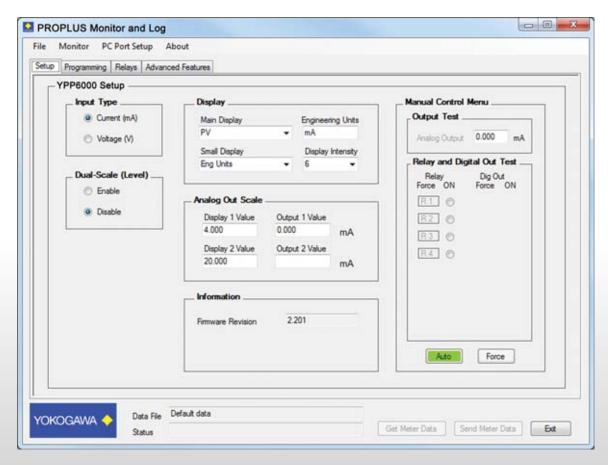






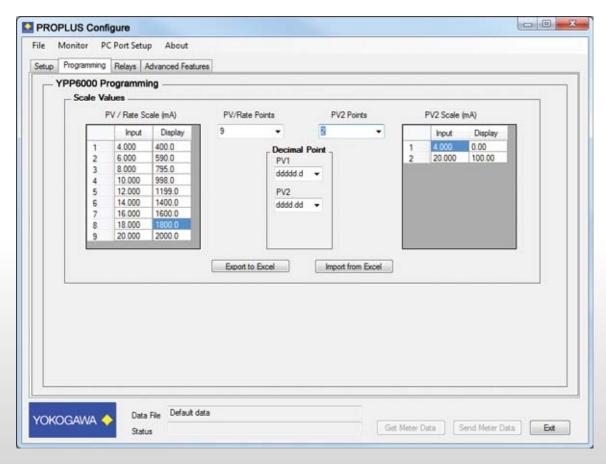
Monitor and Datalog Screen





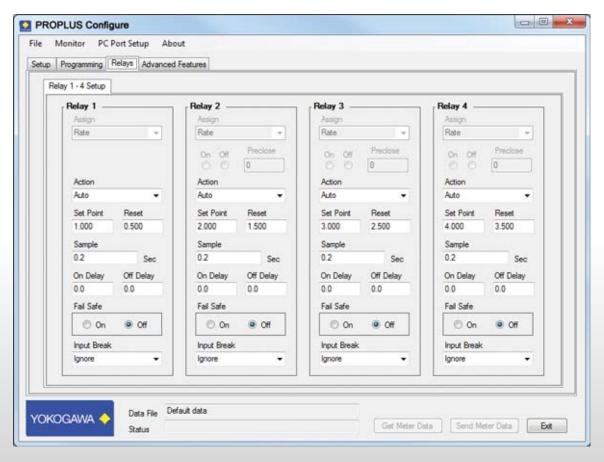
Setup Screen





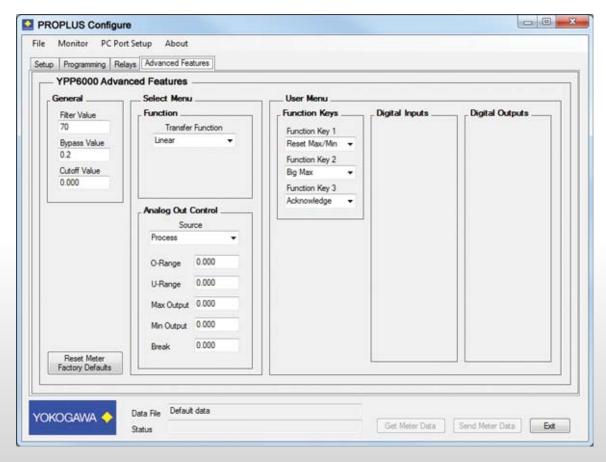
Linearization Utility Screen





Relays Screen





Advanced Features Screen



### **PROPLUS ACCESSORIES**



**YPPA1004** 

4-Relay Expansion Module



**YPPA7485** 

RS-232 to RS422/485 Converter



**YPPA1044** 

4 Digital I/O Expansion Module



**YPPA8232** 

USB to RS-232 Converter



**YPPA1232** 

RS-232 Serial Adapter



**YPPA8485** 

USB to RS-422/485 Converter



**YPPA1485** 

RS-485 Serial Adapter



**YPPA8008** 

USB Serial Adapter



#### **PROPLUS EXPANSION MODULES**



**EXPANSION MODULES** 

- Expansion modules add functionality to any PROPLUS in the field and are easy-to-install.
- 4-relay expansion module has four 3 amp Form A (SPST) relays.
- The I/O module has four digital inputs and four digital outputs per module.
- Add up to two I/O modules.
- The menu items for these modules do not appear until the module is connected, simplifying the basic menu.
- External digital inputs can function similarly to the front panel function keys.



### YPPA8008 USB SERIAL ADAPTER



**USB SERIAL ADAPTER** 

- The YPPA8008 PROPLUS to USB Serial Adapter allows for direct connection of a PROPLUS meter to the USB port of a PC.
- Use it with *PROPLUS* Software to configure a meter.



### PLASTIC NEMA 4X ENCLOSURES



**YPPA2811** 

1 Meter Enclosure



**YPPA2812** 

2 Meter Enclosure



#### **PROPLUS DEMO**

- Demonstrates both YPP6000
   Process Meter and YPP6200

  Analog Input Rate/Totalizer
- Easy to Carry and Demonstrate
- Connect your Transmitter or Flowmeter to Double the Productivity of your Sales Call
- Use with PROPLUS Software and a YPPA8008 USB Adapter





