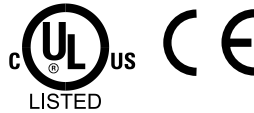


DUAL-INPUT PROCESS METER

PROPLUS



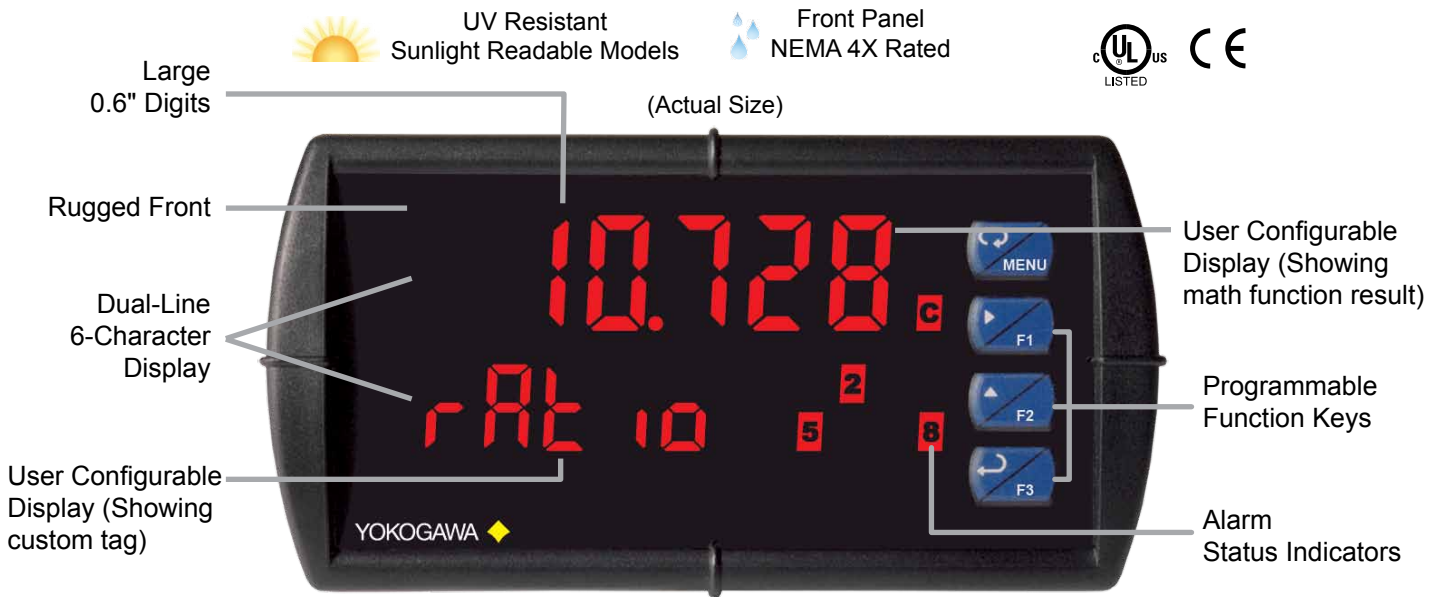
PROPLUS • Model YPP6060

- Dual-Input Process Meter 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
- Large Dual-Line 6-Digit Display, 0.60" & 0.46"
- Sunlight Readable Display Models
- NEMA 4X, IP65 Front
- Universal 85-265 VAC, or 12/24 VDC Input Power Models
- Isolated 24 VDC @ 200 mA Transmitter Power Supply
- Programmable Display & Function Keys
- 32-Point, Square Root, or Exponential Linearization
- Multi-Pump Alternation Control
- 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

YOKOGAWA



2 Dart Road • Newnan, Georgia 30265
770-253-7000 • 800-888-6400
Fax: 770-251-2088 • www.yokogawa-usa.com



ADVANCED, VERSATILE, & CUSTOMIZABLE

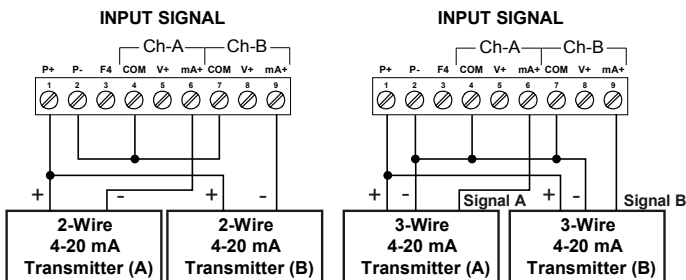
The **PROPLUS** YPP6060 meter combines two independently programmed analog inputs with powerful math functions to make an advanced meter capable of handling complex math requirements common in the process industry. Various math functions may be applied to the inputs including addition, difference, average, multiplication, division, ratio, and more. A customizable dual-line display allows a wide variety of input variables, math calculations, or units and tags to be displayed based on your application needs.

YPP6060 KEY FEATURES

The YPP6060 meter is the mathematician of the **PROPLUS** family. Its two process input channels and math functions make it unique while still maintaining all the great features of the **PROPLUS** family.

Dual-Input Process Meter

The YPP6060 has two process input channels (A & B) capable of accepting current (0-20, 4-20 mA) and voltage (± 10 , 0-5, 1-5, 0-10 VDC). Each input is programmed separately, with independent input type selection and scaling. These inputs may be displayed individually as part of the customizable dual-line display, or used with a wide range of math functions. Each input has a custom unit or tag that may be displayed. A 24 V transmitter power supply is standard and may be used to power the inputs.



Powerful Math Functions

The YPP6060 uses two process input channels (A & B) in a variety of powerful math functions designed for a wide range of process applications. Programmable adder (P) and factor (F) constants allow each formula to be customized as needed for a specific application. The math function (C) may be displayed with units, tags, channel A or B, and in other useful combinations.

Math Function Summary

Name	Function	Setting
Addition	$(A+B+P)*F$	Sum
Difference	$(A-B+P)*F$	dif
Absolute diff.	$((Abs(A-B))+P)*F$	difAbs
Average	$((A+B)/2+P)*F$	Avg
Multiplication	$((A*B)+P)*F$	mult
Divide	$((A/B)+P)*F$	div
Max of A or B	$((AB-Hi)+P)*F$	Hi-Ab
Min of A or B	$((AB-Lo)+P)*F$	Lo-Ab
Draw	$((A/B)-1)*F$	draw
Weighted Avg.	$((B-A)*F)+A$	W.Avg
Ratio	$(A/B)*F$	rAt
Concentration	$(A/(A+B))*F$	Conc

Note: The F constant can be any value from 0.00001 to 999999. If the value is less than 1, it will have the same effect as a divider. For example, the average could also be derived by using $(A+B)*F$, where $F = 0.500$.

Customizable Displays

The **PROPLUS** has two red LED displays, an Upper display 0.60" (15 mm) high, and a Lower display 0.46" (12 mm) high. Each display is a full 6 digits (-99999 to 999999).

The displays can be set up to read input channels (A or B), math function channel C, toggle between A & B, B & C, A & C, A & B & C, toggle between channels A, B, or C & units, the max/min of any of the channels, including the math channel (C), set points, gross (without tare) or net (with tare) & gross values of channel A or B, or the Modbus input.

This allows the display to be setup to display whatever variables are most valuable to the application. Here are just a few examples.



Math Function & Tag

The Upper display shows the math function result (C). The Lower display shows a custom label, in this case the math function used.



Math Function & Inputs A & B

The Upper display shows the math function result (C). The Lower display alternates between channels A and B, with an indicator for each when being displayed.



Input Channels A & B

Both input channels are displayed, input A on the Upper display and input B on the Lower display. Indicators show A or B to label the display.

Alternation Display

Certain display options alternate the display information. A single display can show input variable information as well as that channel's unit or tag. Input and math function channels, gross and net values, and select inputs and the math result may also alternate on a single display. Below are just a few of the options for setting up a single display to alternate information.



Lower Display Alternating Input Channels A & B



Both Displays Alternating Input Value and Unit

Optional SunBright Display Models

PROPLUS's SunBright display models have an extraordinarily bright LED display. They are perfect for applications where the meter is in direct sunlight or in applications where visibility may be impaired by smoke, fog, dust, or distance. This option is available on all **PROPLUS** models.

Function Keys

There are three front panel function keys, and a standard external digital input, which can be used as an external function "key" (F4). The external input is located on the rear signal connector (ground to trigger). The keys and external input trigger certain programmed events (i.e. acknowledge alarms, reset max and/or min, disable/enable output relays, and much more), provide direct menu access points, and more.



Rugged

A unique front panel design makes the **PROPLUS** nearly impenetrable in typical applications. Here, the **PROPLUS** easily survives a direct hit on the display from a heavy 2" solid stainless steel ball dropped from eight feet.

Easy to Use

The user friendly dual-line display makes the **PROPLUS** easy to set up & program. No jumpers to set for input selection. All setup & programming are done via the front panel. Three levels of password protection help maintain the reliability of the programming.



Input Setup



Display Setup

Three Tier Password Protection

The **PROPLUS** offers 3 levels of password protection:

- Level 1 protection allows the operator use of only the 3 pre-configured function keys on the front panel without a password.
- Level 2 protection allows the operator use of only the function keys and the ability to change set points without a password.
- Level 3 protection restricts the operator from using the function keys and all meter configuration menus without a password.

Advanced Linearization Capability

The **PROPLUS** includes a 32-point linearizer for each input. In non-linear level applications (i.e. some pumping or lift stations), it can easily compensate for submerged equipment or plumbing that displace usable volume. In addition to the 32-point linearization, the **PROPLUS** can perform a square root or programmable exponent function on one or both inputs, or automatically calculate level in round horizontal tanks by inputting the length and height of the tank. Each input's linearization is performed independently prior to the input value being used in any math function. Yokogawa's free **PROPLUS** PC-based software greatly simplifies the construction of the linearization tables. The software can save this data to the meter and/or PC.

Simplified & Dynamic Menu System

The **PROPLUS** minimizes the menu selections by auto-detecting the installed options to determine what menu navigation is required. For example, extra menu items for the relay expansion module, I/O expansion, etc. are not present unless those options have been installed. This is an example of keeping the product *simply sophisticated*.

Max/Min Display

Max/Min (or Peak/Valley) is standard on the **PROPLUS** YPP6060. Either display can be configured to show either input's maximum or minimum value since last reset. The displays can also be configured to toggle between Max and Min values. Both values can be simply reset from the front panel.

Environmentally Protected

The **PROPLUS** has standard UV protection, a NEMA 4X front panel, extremely durable faceplate, performs in wide ambient operating temperatures, and is CE Certified (high noise and RF immunity).

DIGITAL COMMUNICATIONS

Modbus® RTU Serial Communications

With the purchase of a serial communication adapter, **PROPLUS** meters can communicate with any Modbus Master device using the ever-popular Modbus communications protocol that is included in every **PROPLUS**. This greatly increases the flexibility of the meter. Modbus provides much more capability than read PV and write set points. Below are some examples of other things that can be done with **PROPLUS**'s Modbus communications.

- Send a 6-character message to the lower display upon an event
- Convert a digital value to a 4-20 mA signal
- Remote user control (i.e. change set points, acknowledge alarms)
- Input a Modbus digital PV (in place of one analog input)
- Remote override of any, or all, relays and analog outputs



Modbus PV Input



Remote Message

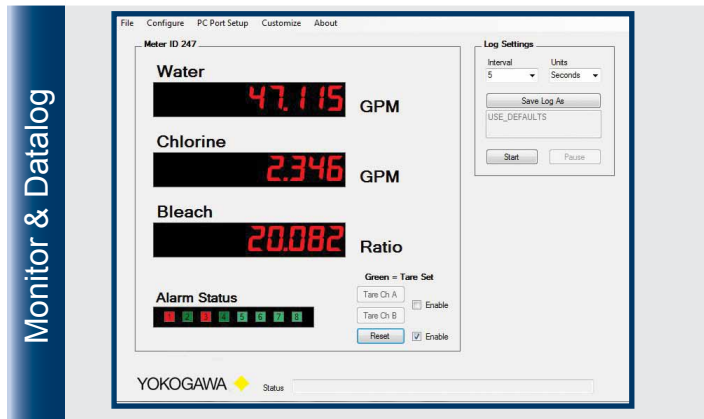
Meter Copy

The Copy feature is used to copy (or clone) all the settings from one **PROPLUS** meters to other **PROPLUS** meters in about 20 seconds! The Copy function is a standard feature on all meters. It does not require a communications adapter, only an optional cable assembly, P/N YPPA1200. See the ordering information for complete details.



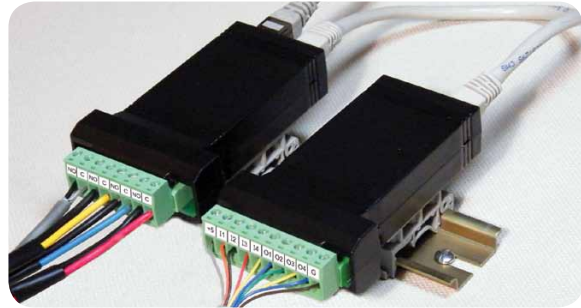
PROPLUS SOFTWARE

Configure, monitor, and datalog a **PROPLUS** YPP6060 from a PC using **PROPLUS** Software (available for download at www.yokogawa-usa.com) and a serial adapter.



FIELD EXPANSION MODULES

Add functionality to the **PROPLUS** in the field with easy-to-install external expansion modules. Add RS-232 or RS-485 communications, I/O modules (up to 2), and 4-relay expansion module. The menu items for these modules do not appear until the module is connected, simplifying the basic menu. Relay and digital I/O modules are shown below with optional DIN rail mounting kit, P/N YPPA1002.



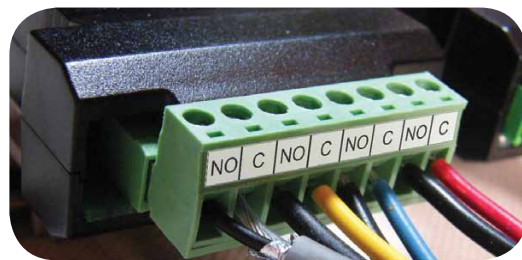
YPPA1044 I/O Expansion Module

Four digital inputs and four digital outputs are available per expansion module. The **PROPLUS** meter will accept two of these modules. External digital inputs can function similarly to the front panel function keys. They can be configured to trigger certain events (i.e. acknowledge/reset alarms, reset max and/or min values, disable/enable all output relays, and hold current relay states), provide direct menu access point, or mimic front panel keys. The I/O module can be used to configure the **PROPLUS** remotely, in essence giving the user control of the four front panel push buttons. This feature is particularly useful if the meter is mounted inside an explosion-proof enclosure.

Digital outputs can be used to remotely monitor **PROPLUS**'s alarm relay output states, or the states of a variety of actions and functions executed by the meter.

YPPA1004 Relay Expansion Module

An external module containing four 3 A Form A (SPST) relays can be added to the **PROPLUS** at anytime. Removable screw terminal blocks accept 12 to 22 AWG wire.



YPPA1232 & YPPA1485, & YPPA8008 Communication Modules

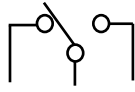
Serial communications on the **PROPLUS** can be added anytime with external YPPA1232 (RS-232) or YPPA1485 (RS-485), or YPPA8008 (USB) communication adapters.

Free Modbus protocol with purchase of **PROPLUS** serial communications modules.



OUTPUTS

Relay Outputs



The **PROPLUS** has up to four 3 A Form C relays (SPDT) with multiple power loss fail-safe options. Each relay may be assigned to input channel A or B, or math result (C). Relays can be configured for proper protective action upon input loop break. Relay ON and OFF delay times are user adjustable. Up to eight front panel indicators show alarm and/or relay state. All relays can be configured for 0-100% deadband.

Relay Operation/Configuration

There are powerful relay functions that can be configured in the **PROPLUS** meter, including:

- Automatic reset only (non-latching)
- Automatic + manual reset at any time (non-latching)
- Latching (manual reset only)
- Latching with clear (manual reset only after alarm condition has cleared)
- Pump alternation control (automatic reset only)
- Sampling (activated for a user-specified time)
- User selectable fail-safe operation
- Relay action for loss (break) of 4-20 mA input signal
- Time delay (on and off), independent for each relay
- Manual control mode
- Interlock relay mode

Analog Output

The isolated analog retransmission signal can be configured to represent process input channel A or B, math result (C), max or min for channel A, B, or highest or lowest max or min of A and B, set points 1-8, Modbus input, or manual control mode. While the output is nominally 4-20 mA, the signal will accurately accommodate under- and over-ranges from 1 to 23 mA.

Manual Output Control

Take control of any output with this feature. All relays can be forced ON or OFF, and the 4-20 mA output signal can be set to any value within its range. When the relays and 4-20 mA output are controlled manually, an LED labeled "M" is turned on and the associated Alarm LEDs (1-8) flash every 10 seconds indicating that the meter is in manual control mode.



Isolated Transmitter Power Supplies

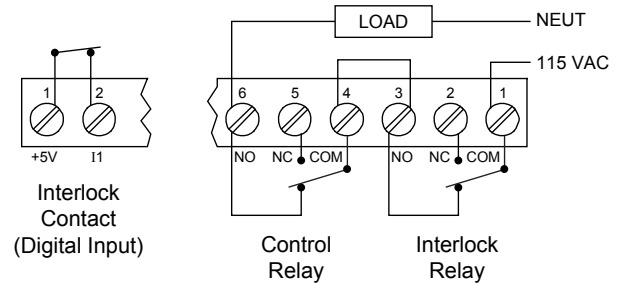
A powerful 24 V @ 200 mA power supply is a standard feature on the **PROPLUS** meter. It can be configured for 5, 10, or 24 V (default) by means of a simple internal jumper (see manual). An additional power supply (24 V @ 40 mA) is standard with the 4-20 mA output option.

Sampling Function (PV Triggered Timed Relay)

The sampling function allows the operator to set a set point for a "sampling" relay. The relay can be assigned to input channels A or B, or the math result (C). When the PV reaches that set point, it will close that relay's contacts for a preset period of time (0.1 to 5999.9 seconds). An example of its use may be for beer/ale fermentation. When the batch reaches a certain pH, the relay contacts would close and alert someone or automatically take a sample of the batch. This function can be used whenever a timed relay output closure is required when the PV reaches a certain set point.

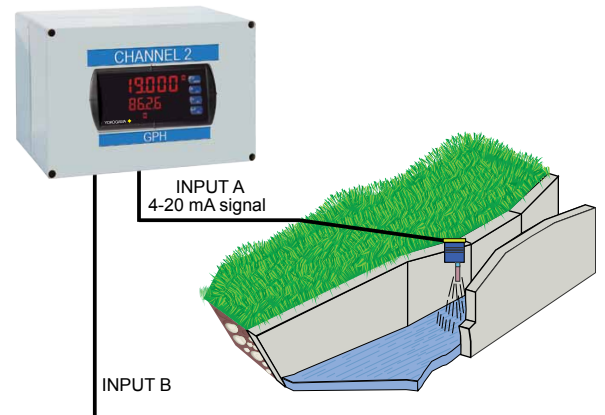
Interlock Relay(s)

This function allows a process to use one or more very low voltage input signals or simple switch contacts to control the state of one or more internal "interlock" relays. A violation (i.e. loss of input, open switch, or open circuit) forces one or more N/O interlock relay contacts to open. One input can be used in series with a number of interlock switches, or up to eight inputs can be required to force-on one (or more) internal interlock relays. Please see Application Note AN-1008 on our website for more information. Requires YPPA1044 Digital I/O module.

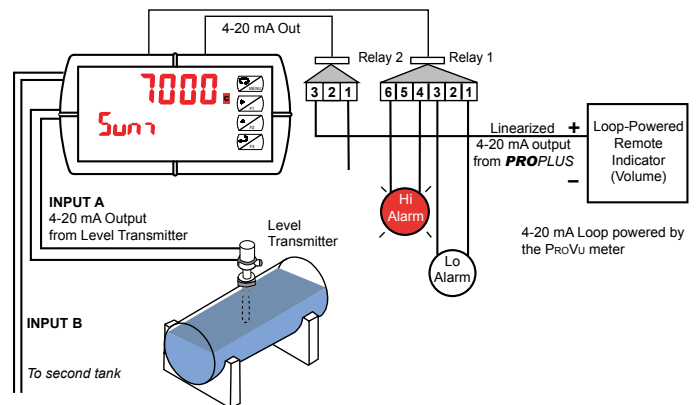


SIGNAL INPUT CONDITIONING

Non-linear input signals (i.e. weirs & flumes, differential pressure, etc.) can be linearized with the **PROPLUS**'s simple to use built-in signal input conditioning, such as: square-root extractor, exponential linearizer, horizontal round tank linearizer, or the **PROPLUS** powerful general purpose 32-point linearizer.



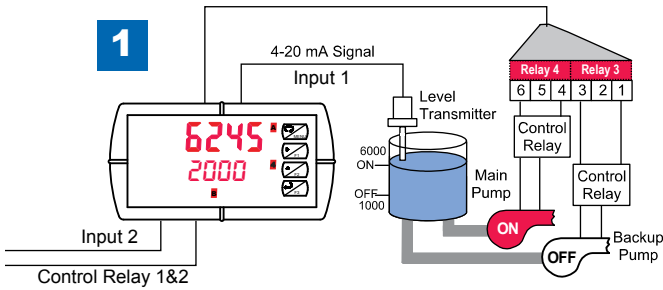
Weir Flow Calculated Using Exponential Signal Input Conditioning



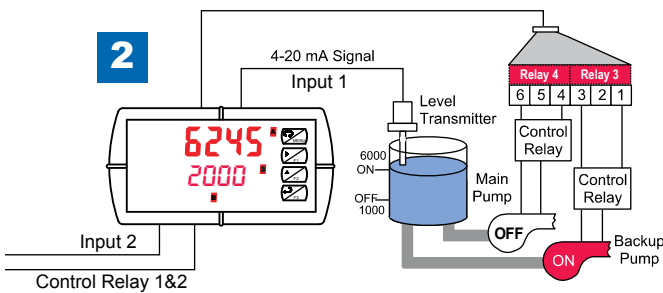
Round Horizontal Tank Signal Input Conditioning

Multi-Pump Alternation

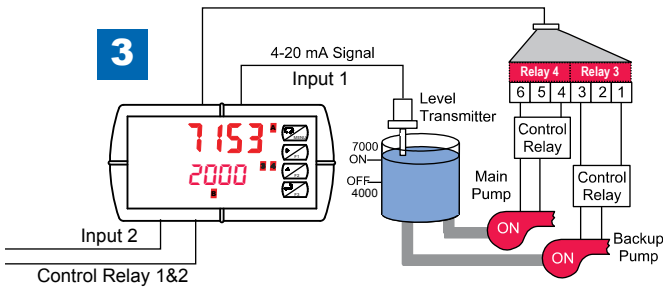
Up to 8 pumps can be alternated/sequenced.



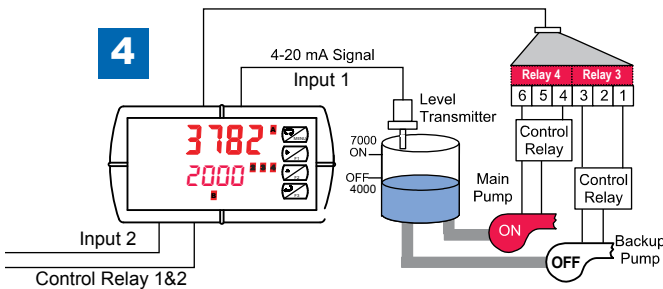
Relay #4 turns the main pump on at 6000 gallons and turns it off at 1000 gallons.



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.



At 4000 gallons, relay 3 turns off and the system returns to normal pump alternation control.

NEMA 4X FIELD ENCLOSURES

Thermoplastic NEMA 4X enclosures are constructed for either indoor or outdoor use.

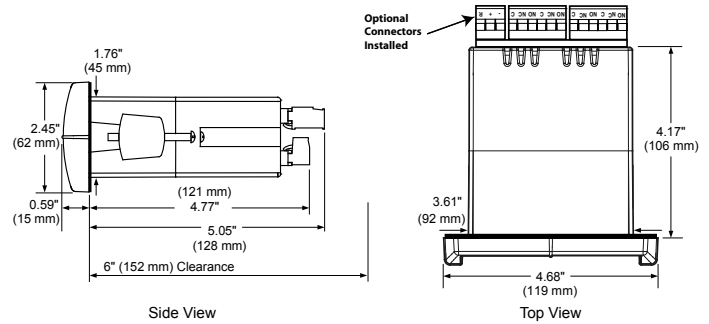


YPPA2811
Plastic Low-Cost



YPPA2812
Plastic Low-Cost

DIMENSIONS

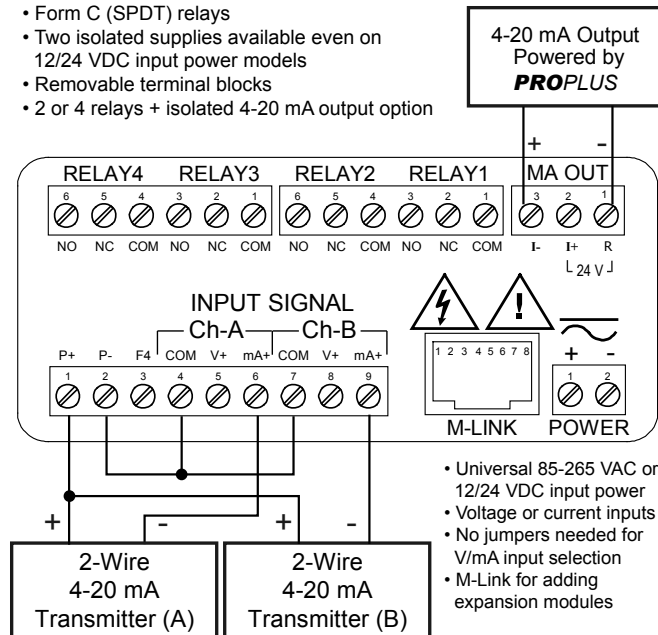


Notes:

1. Panel cutout required: 1.772" x 3.622" (45 mm x 92 mm)
2. Panel thickness: 0.040 - 0.250" (1.0 mm - 6.4 mm)
3. Mounting brackets lock in place for easy mounting
4. Clearance: Allow 6" (152 mm) behind the panel

CONNECTIONS

- Form C (SPDT) relays
- Two isolated supplies available even on 12/24 VDC input power models
- Removable terminal blocks
- 2 or 4 relays + isolated 4-20 mA output option



- Universal 85-265 VAC or 12/24 VDC input power
- Voltage or current inputs
- No jumpers needed for V/mA input selection
- M-Link for adding expansion modules

SPECIFICATIONS

Except where noted all specifications apply to operation at +25°C.

General

Display: Upper display: 0.60" (15 mm) high, red LEDs
Lower display: 0.46" (12 mm) high, red LEDs
6 digits each (-99999 to 999999), with lead zero blanking

Display Intensity: Eight user selectable intensity levels

Display Update Rate: 5/second (200 ms)

Overrange: Display flashes 999999

Underrange: Display flashes -99999

Display Assignment: The Upper and Lower displays may be assigned to process values for Channels A (Ch-A), B (Ch-B), or C (Ch-C), toggle between (Ch-A & Ch-B, Ch-A & Ch-C, Ch-B & Ch-C, and Ch-A, Ch-B, & Ch-C), toggle between Channel & units, show channel gross value (no tare) or toggle net (tare) and gross values, show relay set points, max & min values, or Modbus input. The second display may also be set to show engineering units or be off, with no display.

Front Panel: NEMA 4X, IP65

Programming Methods: Four front panel buttons, digital inputs, PC and PROPLUS software, Modbus registers, or cloning using Copy function.

Noise filter: Programmable from 2 to 199 (0 will disable filter)

Filter Bypass: Programmable from 0.1 to 99.9% of calibrated span

Recalibration: All ranges are calibrated at the factory. Recalibration is recommended at least every 12 months.

Max/Min Display: Max (Peak) / min (Valley) readings reached by the process are stored until reset by the user or until power to the meter is cycled.

Password: Three programmable passwords restrict modification of programmed settings. Pass 1: Allows use of function keys and digital inputs. Pass 2: Allows use of function keys, digital inputs and editing set/reset points. Pass 3: Restricts all programming, function keys, and digital inputs.

Non-Volatile Memory: All programmed settings are stored in non-volatile memory for a minimum of ten years if power is lost.

Power Options: 85-265 VAC 50/60 Hz, 90-265 VDC, 20 W max, or jumper selectable 12/24 VDC ±10%, 15 W max.

Fuse: Required external fuse: UL Recognized, 5 A max, slow blow; up to 6 meters may share one 5 A fuse.

Isolated Transmitter Power Supply: Terminals P+ & P-: 24 VDC ±5% @ 200 mA max (standard), (12/24 VDC powered models rated @ 100 mA max). 5 or 10 VDC @ 50 mA max, selectable with internal jumper J4.

Normal Mode Rejection: Greater than 60 dB at 50/60 Hz

Isolation: 4 kV input/output-to-power line. 500 V input-to-output or output-to-P+ supply.

Overvoltage Category: Installation Overvoltage Category II: Local level with smaller transient overvoltages than Installation Overvoltage Category III.

Operating Temperature Range: -40 to 65°C

Storage Temperature Range: -40 to 85°C

Relative Humidity: 0 to 90% non-condensing.

Connections: Removable screw terminal blocks accept 12 to 22 AWG wire, RJ45 for external relays, digital I/O, and serial communication adapters.

Enclosure: 1/8 DIN, high impact plastic, UL 94V-0, color: black

Mounting: 1/8 DIN panel cutout required: 3.622" x 1.772" (92 mm x 45 mm). Two panel mounting bracket assemblies are provided.

Tightening Torque: Screw terminal connectors: 5 lb-in (0.56 Nm)

Overall Dimensions: 4.68" x 2.45" x 5.64" (119 mm x 62 mm x 143 mm) (W x H x D)

Weight: 9.5 oz (269 g)

UL File Number: UL & c-UL Listed. E348677; 508 Industrial Control Equipment.

Warranty: 3 years parts & labor

Dual Process Input

Inputs: Two inputs, each separately field selectable: 0-20, 4-20 mA, 10 V (0-5, 1-5, 0-10 V), Modbus PV (Slave)

Channels: Channel A, Channel B, Channel C (Math channel)

Programmable Constants: Constant P (Adder): -99999 to 999999, default: 0.000; Constant F (Factor): 0.00001 to 999999, default: 1.000

Math Functions:

Name	Function	Setting
Addition	$(A+B+P)*F$	Sum
Difference	$(A-B+P)*F$	dif
Absolute diff.	$((Abs(A-B))+P)*F$	difAbs
Average	$((A+B)/2+P)*F$	Avg
Multiplication	$((A*B)+P)*F$	mult
Divide	$((A/B)+P)*F$	div
Max of A or B	$((AB-Hi)+P)*F$	Max
Min of A or B	$((AB-Lo)+P)*F$	Min
Draw	$((A/B)-1)*F$	draw
Weighted Avg.	$((B-A)*F)+A$	avg
Ratio	$(A/B)*F$	ratio
Concentration	$(A/(A+B))*F$	conc

Note: The F constant can be any value from 0.00001 to 999999. If the value is less than 1, it will have the same effect as a divider. For example, the average could also be derived by using $(A+B)*F$, where $F = 0.500$.

Sequence of Operations for Input Programming:

1. Select Input for A and B
2. Set up the engineering units for A, B, and C
3. Set up decimal point for A, B, and C
4. Scale A & B
5. Set up the displays for A, B, or C
6. Select the transfer function for A & B (e.g. Linear)
7. Select Math function for Channel C
8. Program constants for Factor (F) and Adder (P).
9. Program cutoff values for A and B

Accuracy: ±0.03% of calibrated span ±1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span

Temperature Drift: 0.005% of calibrated span/°C max from 0 to 65°C ambient, 0.01% of calibrated span/°C max from -40 to 0°C ambient

Signal Input Conditioning: Linear, square root, programmable exponent, or round horizontal tank volume calculation.

Multi-Point Linearization: 2 to 32 points for PV or PV1. 2 to 8 points for PV2 (Dual-Scale Level feature)

Programmable Exponent: 1.0001 to 2.9999

Low-Flow Cutoff: 0-999999 (0 disables cutoff function)

Decimal Point: Up to five decimal places or none: d.ddddd, dd.dddd, ddd.ddd, dddd.dd, ddddd.d, or dddddd.

Calibration Range: 4-20 mA: minimum span input 1 & input 2: 0.15 mA. ±10 V: minimum span input 1 & 2: 0.10 V. An Error message will appear if input 1 and input 2 signals are too close together.

Input Impedance: Voltage ranges: greater than 500 kΩ. Current ranges: 50 - 100 Ω (depending on resettable fuse impedance).

Input Overload: Current input protected by resettable fuse, 30 VDC max. Fuse resets automatically after fault is removed.

Relays

Rating: 2 or 4 SPDT (Form C) internal and/or 4 SPST (Form A) external; rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/14 HP (≈ 50 W) @ 125/250 VAC for inductive loads.

Noise Suppression: Noise suppression is recommended for each relay contact switching inductive loads.

Deadband: 0-100% of span, user programmable

High or Low Alarm: User may program any alarm for high or low trip point. Unused alarm LEDs and relays may be disabled (turned off).

Relay Operation: automatic (non-latching), latching (requires manual acknowledge), sampling (based on time), pump alternation control (2 to 8 relays), Off (disable unused relays and enable interlock feature, manual on/off control mode).

Relay Reset: User selectable via front panel buttons or digital inputs.

1. Automatic reset only (non-latching), when input passes the reset point.
2. Automatic + manual reset at any time (non-latching).

- 3. Manual reset only, at any time (latching).
 - 4. Manual reset only after alarm condition has cleared (latching).
- Note: Front panel button or digital input may be assigned to acknowledge relays programmed for manual reset.*

Time Delay: 0 to 999.9 seconds, on & off relay time delays. Programmable and independent for each relay.

Fail-Safe Operation: Programmable and independent for each relay. *Note: Relay coil is energized in non-alarm condition. In case of power failure, relay will go to alarm state.*

Auto Initialization: When power is applied to the meter, relays will reflect the state of the input to the meter.

Serial Communications

Protocol: Modbus® RTU

Meter Address/Slave ID: 1 - 247

Baud Rate: 300 - 19,200 bps

Transmit Time Delay: Programmable between 0 and 199 ms

Data: 8 bit (1 start bit, 1 or 2 stop bits)

Parity: Even, odd, or none with 1 or 2 stop bits

Byte-to-Byte Timeout: 0.01 - 2.54 seconds

Turn Around Delay: Less than 2 ms (fixed)

Note: Refer to the YPP6000/YPP7000 Modbus Register Tables located at www.yokogawa-usa.com for details.

Isolated 4-20 mA Transmitter Output

Output Source: Process channel A, B, or C, max or min for channel A, B, or highest or lowest max or min of A and B, set points 1-8, Modbus input, or manual control mode

Scaling Range: 1.000 to 23.000 mA for any display range

Calibration: Factory calibrated: 4.000 to 20.000 = 4-20 mA output

Analog Output Programming: 23.000 mA maximum for all parameters: Overrange, underrange, max, min, and break

Accuracy: ± 0.1% of span ± 0.004 mA

Temperature Drift: 0.4 µA/°C max from 0 to 65°C ambient, 0.8 µA/°C max from -40 to 0°C ambient

Note: Analog output drift is separate from input drift.

Isolated Transmitter Power Supply: Terminals I+ & R: 24 VDC ± 5% @ 40 mA maximum, may be used to power the 4-20 mA output or other devices.

External Loop Power Supply: 35 VDC maximum

Output Loop Resistance:

Power supply	Minimum	Maximum
24 VDC	10 Ω	700 Ω
35 VDC (external)	100 Ω	1200 Ω

Digital I/O Expansion Module

Channels: 4 digital inputs & 4 digital outputs per module

System: Up to 2 modules for a total of 8 inputs & 8 outputs

Digital Input Logic: **High:** 3 to 5 VDC **Low:** 0 to 1.25 VDC

Digital Output Logic: **High:** 3.1 to 3.3 VDC **Low:** 0 to 0.4 VDC

Source Current: 10 mA maximum

Sink Current: 1.5 mA minimum

+5 V Terminal: To be used as pull-up for digital inputs only.

4-Relay Expansion Module

Relays: Four Form A (SPST) rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/14 HP (≈ 50 watts) @ 125/250 VAC for inductive loads.

Disclaimer

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ORDERING INFORMATION

PROPLUS YPP6060 • Standard Models		
85-265 VAC Model	12/24 VDC Model	Options Installed
YPP6060-6R0	YPP6060-7R0	None
YPP6060-6R2	YPP6060-7R2	2 Relays
YPP6060-6R3	YPP6060-7R3	4-20 mA Output
YPP6060-6R4	YPP6060-7R4	4 Relays
YPP6060-6R5	YPP6060-7R5	2 Relays & 4-20 mA Output
YPP6060-6R7	YPP6060-7R7	4 Relays & 4-20 mA Output

Note: 24 V Transmitter power supply standard on all models.

PROPLUS YPP6060 • SunBright Display Models		
85-265 VAC Model	12/24 VDC Model	Options Installed
YPP6060-6H0	YPP6060-7H0	None
YPP6060-6H2	YPP6060-7H2	2 Relays
YPP6060-6H3	YPP6060-7H3	4-20 mA Output
YPP6060-6H4	YPP6060-7H4	4 Relays
YPP6060-6H5	YPP6060-7H5	2 Relays & 4-20 mA Output
YPP6060-6H7	YPP6060-7H7	4 Relays & 4-20 mA Output

Note: 24 V Transmitter power supply standard on all models.

Accessories	
Model	Description
YPPA1002	DIN Rail Mounting Kit for Two Expansion Modules
YPPA1004	4-Relay Expansion Module
YPPA1044	4 Digital Inputs & 4 Digital Outputs Module
YPPA1200	Meter Copy Cable
YPPA1232	RS-232 Serial Adapter
YPPA1485	RS-485 Serial Adapter
YPPA8008	USB-Serial Adapter
YPPA7485-I	RS-232 to RS-422/485 Isolated Converter
YPPA7485-N	RS-232 to RS-422/485 Non-Isolated Converter
YPPA8232-N	USB to RS-232 Non-Isolated Converter
YPPA8485-I	USB to RS-422/485 Isolated Converter
YPPA8485-N	USB to RS-422/485 Non-Isolated Converter
YPPX6901	Suppressor (snubber): 0.01 µF/470 Ω, 250 VAC

Your Local Distributor is: