

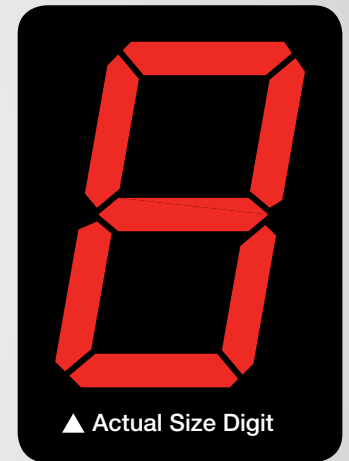
PD2-6262 / PD2-6363

Helios Dual-Input Rate/Totalizers



PD2-6262 Analog Input

HELIOS



FLOW RATE/TOTAL

COMMON HELIOS DUAL-INPUT METER FEATURES

- Large 1.80" Digits
- Dual-Line 6-Digit Display
- Readable from up to 100 Feet (30 Meters) Away
- Superluminous Sunlight Readable Display
- NEMA 4X, IP65 Rated Field Mountable Enclosure
- Operating Temperature Range of -40 to 65°C (-40 to 150°F)
- Dual Analog Inputs with Math Functions
- Rate, Total, and Grand Total for Each Input Channel
- 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
- Universal 85-265 VAC, or 12-24 VDC Input Power Models
- Isolated 24 VDC Transmitter Power Supply
- 32-Point, Square Root, or Exponential Linearization
- 2 or 4 Relays + Isolated 4-20 mA Output Options
- Onboard USB & RS-485 Serial Communication Options
- Modbus[®] RTU Communication Protocol Standard
- Program the Meter from a PC with Onboard USB and MeterView[®] Pro

PD6262 ANALOG DUAL-INPUT RATE/TOTALIZER

- Analog Dual-Inputs with Math Functions
- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ± 10 V Inputs

PD6363 PULSE DUAL-INPUT RATE/TOTALIZER

- Pulse, Open Collector, NPN, PNP, TTL, Switch Contact, Sine Wave (Coil), Square Wave Inputs
- Gate Function for Display of Slow Pulse Rates

PD2-6262 / PD2-6363 Helios Dual-Input Rate/Totalizers

NEMA 4X, IP65
Rated Enclosure



UV Resistant
Sunlight Readable Display



Dual-Line
6-Character
Display with
Extra Large
1.8" Digits

User Configurable
Display (Showing
math function result)

User Configurable
Display (Showing
custom tag)

Alarm Status
Indicators



Connections and
Function Keys Easily
Accessible Behind
Front Panel Door.

▲ PD2-6262 Shown

PERFECT FOR FLOW APPLICATIONS

The PD2-6262 and PD2-6363 Helios meters are multipurpose, easy to use digital dual analog/pulse input flow rate/totalizers specifically designed for displaying flow rate and total from flowmeters with analog or pulse outputs. The displays, relays, and the analog/pulse output may be assigned to the rate, total, or grand total of input channels A or B; or math result channel C. Three of the buttons behind the front panel can be custom-programmed for a specific operation.

KEY FEATURES

Superluminous Sunlight Readable Display

The Helios' standard SunBright display features extraordinarily bright LEDs. It is perfect for applications where the meter is in direct sunlight or in applications where visibility may be impaired by smoke, fog, dust, or distance.

Totalizer Overflow Displays Total to 9 Digits

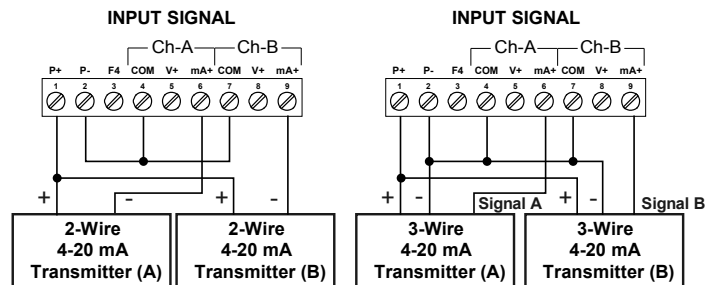
These flow rate/totalizers can display up to nine digits of total flow with the total overflow feature. In the diagrams below, the flow totalizer is displaying 532,831,470 by toggling between a display of "oF 532" and "831470". Notice the (T with arrow ▲ symbol) is lit up indicating the display is in overflow mode.



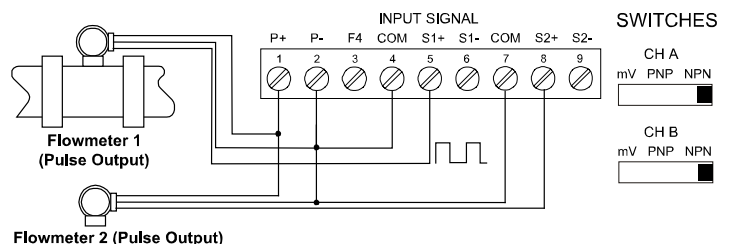
Dual-Input Process Meter

The PD2-6262 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). The PD2-6363 accepts two pulse (e.g. ± 40 mV to ± 8 V), square wave (0-5 V, 0-12 V, or 0-24 V), open collector, NPN, PNP, TTL or switch contact signals. 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.

Pulse (PD2-6262)



Pulse (PD2-6363)



Precise, Accurate, and More Informative

The Helios' large 1.8" display provides a highly accurate and precise dual line, 6-digit view of the process measurement. Its 24-bit A/D is accurate to $\pm 0.03\%$ of calibrated span ± 1 count

Customizable Displays

The Helios has two red LED displays, one Upper display and one Lower display both at 1.8" 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.

Display Flow Rate, Total or Grand Total

The upper display can be programmed to display flow rate, total, or grand total, and the lower display can be programmed to display flow rate, total, grand total, engineering units, custom legends, or can be turned off. Both displays could also display relay set points, or max and min values. The following examples show typical ways these flow rate/totalizers can be programmed.

On-Board Digital Input

The PD2-6262/6363 includes a digital input as standard. This digital input can operate with the tare, reset tare, or interlock relays feature, force relays on from a signal from a PLC or relay on other equipment, and much more. This is ideal for installations where the meter is inaccessible behind a cover, or where an additional function key is needed for customized operation.

Powerful Math Functions

The PD2-6262/PD2-6363 uses two rate input channels (A & B) with total and grand total for each in a variety of powerful math functions designed for a wide range of flow 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, rate, total or grand total, and in other combinations. See *Specifications for math functions*.

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

Advanced Linearization Capability

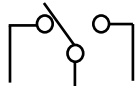
The Helios includes a 32-point linearizer for each input. In non-linear level applications (i.e. some pumping or lift stations), it can easily compensate for submerged equipment or plumbing that displace usable volume. In addition to the 32-point linearization, the Helios can perform a square root or 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. Precision Digital's free MeterView Pro PC-based software greatly simplifies the construction of the linearization tables. The software can save this data to the meter and/or PC.

Rounding

The rounding feature is used to give the user a steadier display with fluctuating signals. It causes the display to round to the nearest value according to the rounding value selected (1, 2, 5, 10, 20, 50, or 100). For example, with a rounding value of 10, and an input of 12346, the display would indicate 12350.

OUTPUTS

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 1-4, 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.

Relay Outputs

The Helios 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 four 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 Helios 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

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 (1-4) 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 Helios 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.

APPLICATIONS

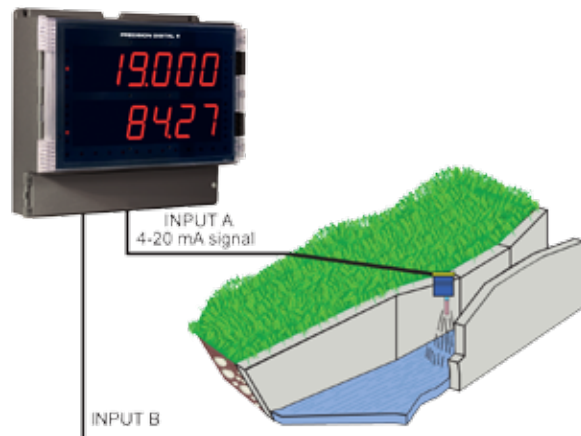
Differential Pressure Flow (PD2-6262)

The PD2-6262 can display flow rate and total by extracting the square root from the 4-20 mA signal from differential pressure transmitters. The user selectable low-flow cutoff feature gives a reading of zero when the flow rates drop below a user selectable value.

- Display Flow Rates and Totals
- User Selectable Low-Flow Cutoff
- Only 2 Calibration Points Required

Open Channel Flow (PD2-6262)

The PD2-6262, in combination with ultrasonic level transmitters, makes for an economical way to measure and display open channel flow rates and totals in most weirs and flumes, and take periodic samples. All the user needs to do is enter the exponents for the weirs or flumes into the PD2-6262 and the PD2-6262 automatically raises the input signals to those powers. Sampling can be based on the total flow or the flow rate. Each channel's signal input conditioning is programmed independently.



Weir Flow Calculated Using Exponential Signal Input Conditioning

Convert Pulses to 4-20 mA (PD2-6363)

The PD2-6363 accepts pulse outputs from flowmeters and with the appropriate option installed, can convert the pulses to a 4-20 mA signal. The 4-20 mA signal can be programmed to correspond to either the flow rate or the total flow.



- Use K-Factor or Multi-Point Scaling
- Helios Powers the Flowmeters
- Up to 3 Analog Outputs

TOTALIZER CAPABILITIES

Helios flow rate/totalizers can be programmed for a wide variety of totalizer applications. Each input channel has a total, grand total, or non-resettable grand total with a time base of seconds, minutes, hours or days. The user can program a totalizer conversion factor for each channel, a non-resettable grand total, password protection, and several total reset methods.

Non-Resettable Grand Total

The user can set up the grand totals to be non-resettable by entering a specific password. Once this is done, the grand total can never be reset for either input channel.

Totalizer Conversion Factors

The user can enter a totalizer conversion factor for each channel that allows the meter to display total in different units than the rate. For instance, a meter could display flow rate in gallons per minute and total in hundredths of acre-feet.

Totalizer Password Protection

The totals and grand totals can be password protected so they can be reset only by authorized personnel.

Remote Total Reset

An I/O expansion module or F4 digital input can be used to remotely reset the totals or grand totals. The reset switch is wired into the module or F4 input and the module is connected to the M-Link RJ45 connector at the back of the flow rate/totalizer.

Total Alarms

The Helios' four internal and four external relays can be set up to alarm when the total of channel A or B, or channel C math based on the totals, reaches a user-defined set point. A variety of reset modes are available and the user can also program time delays and fail-safe operation.

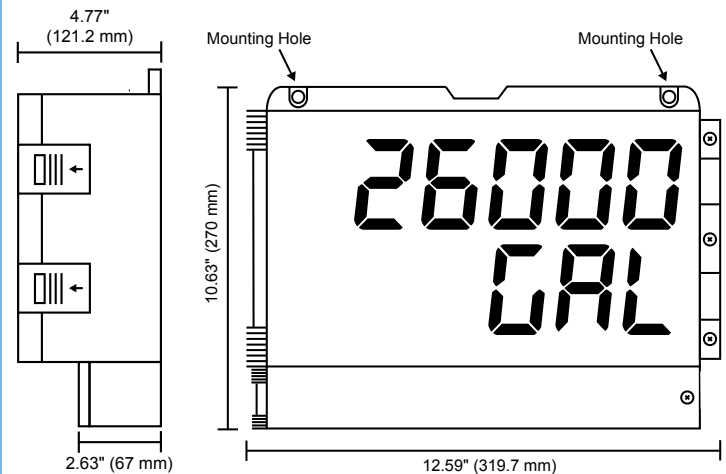
METERVIEW® PRO SOFTWARE

Free USB Programming Software

The Helios comes with free **MeterView® Pro** programming software that connects to your PC with a standard USB cable that is provided with each instrument. The software will allow you to configure, monitor, control, and datalog a Helios PD2-6262 or PD2-6363 using your PC. A new and very useful feature of this software is that it is resident on the Helios meter and installed directly into your PC. This eliminates the need to install drivers or download software from the internet. Just connect the Helios to your PC (the Helios even gets its power from the PC so you don't have to provide external power!) and within minutes you will be programming it with the free software.



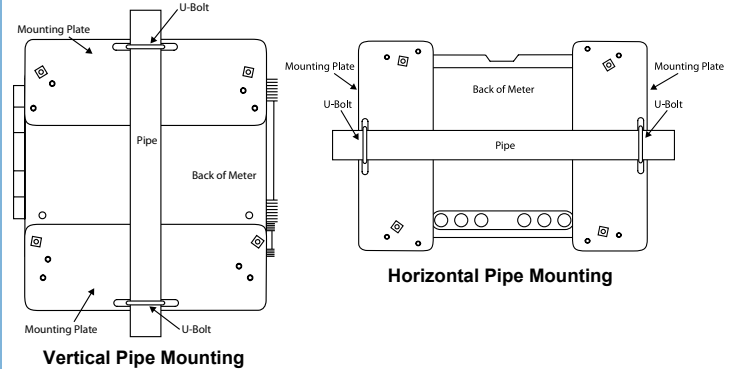
DIMENSIONS



MOUNTING OPTIONS

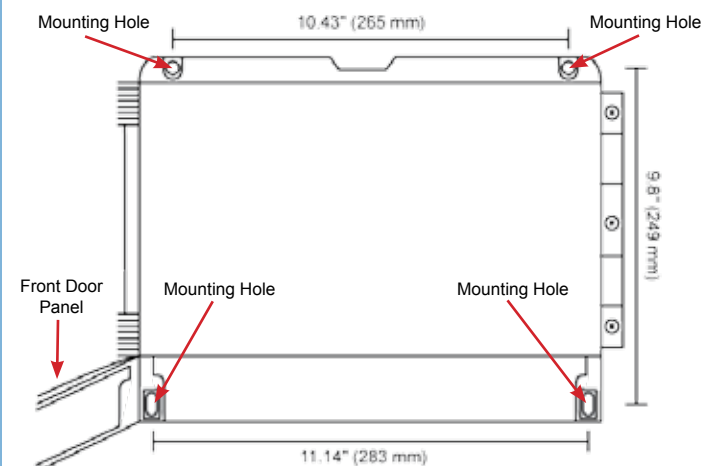
Pipe Mounting Kit

The meter can also be mounted to a pipe using the optional pipe mounting kit (PDA6260). This kit includes two mounting plates, two U-bolts, and the necessary nuts and bolts. See PD2-6262/6363 manual for instructions.



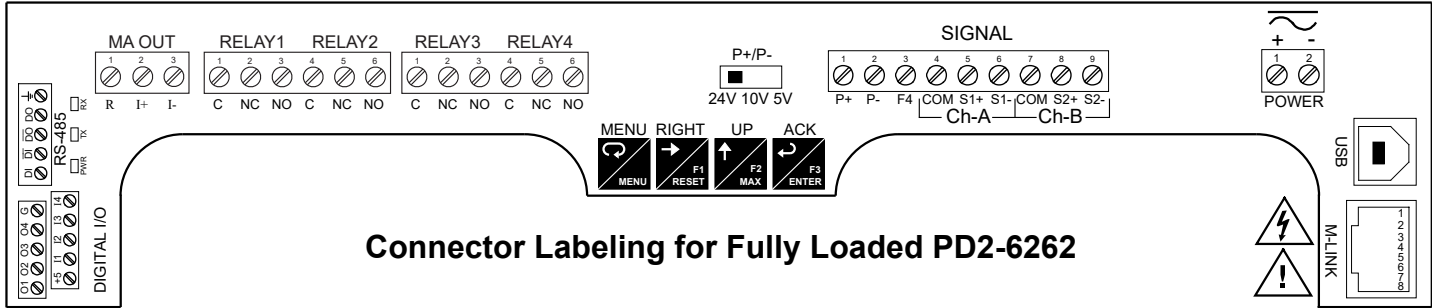
Wall Mounting

The Helios meter can be mounted to any wall using the four provided mounting holes. Note that the bottom mounting holes are located behind the front door panel. See PD2-6262/PD2-6363 manual for instructions.

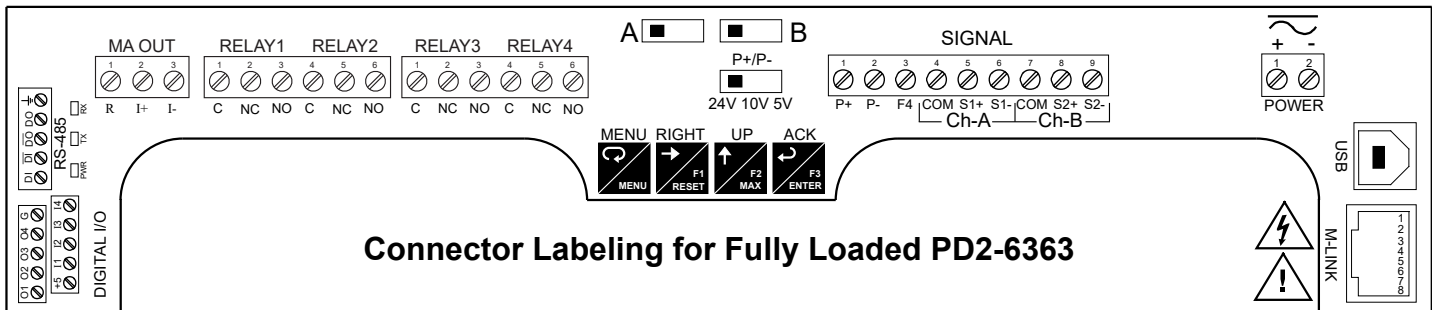


PD2-6262 / PD2-6363 Helios Dual-Input Rate/Totalizers

CONNECTIONS



Connector Labeling for Fully Loaded PD2-6262



Connector Labeling for Fully Loaded PD2-6363

SPECIFICATIONS

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

General

Display: Two lines with 1.8" (46 mm) high digits, red LEDs; 6 digits per line (-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 show:

- One or more rate channels: Channel A (Ch-A), B (Ch-B), or C (Ch-C)
- Toggle between rate channels: Ch-A & Ch-B, Ch-A & Ch-C, Ch-B & Ch-C, and Ch-A, Ch-B, & Ch-C
- Total or grand total: Ch-A or Ch-B
- Rate and total or grand total: Ch-A, Ch-B
- Relay set points
- Max and/or min values: Ch-A, Ch-B, or Ch-C
- Toggle between any rate channel & units
- Total and units: Ch-A or Ch-B
- Toggle between totals: Ch-A & Ch-B; Ch-A, Ch-B, and sum of Ch-A and Ch-B
- Modbus input

The lower display may also be set to show engineering units or be off, with no display.

Programming Methods: Four programming buttons, digital inputs, PC and MeterView Pro software, or Modbus registers.

Max/Min Display: Max/min readings reached by the process are stored until reset by the user or until power to the meter is turned off.

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

Total: Prevents resetting the total manually

Gtotal: Prevents resetting the grand total manually.

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

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

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

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

Power Options: 85-265 VAC 50/60 Hz, 90-265 VDC, 20 W max or 12-24 VDC \pm 10%, 15 W max. Powered over USB for configuration only.

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 \pm 10%. 12-24 VDC powered models selectable for 24, 10, or 5 VDC supply (internal P+/P- switch). 85-265 VAC models rated @ 200 mA max, 12-24 VDC powered models rated @ 100 mA max, @ 50 mA max for 5 or 10 VDC supply.

Normal Rejection Mode: 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.

Environmental: Operating temperature range: -40 to 150°F (-40 to 65°C)

Storage temperature range: -40 to 185°F (-40 to 85°C)

Relative humidity: 0 to 90% non-condensing

Max Power Dissipation: ProtEX-MAX (PD8 Series): Maximum power dissipation limited to 15.1 W. See LIM8 ProtEX-MAX instruction manual for additional details.

Connections: Removable and integrated screw terminal blocks accept 12 to 22 AWG wire.

Enclosure: UL Type 4X, IP65 rated. Polycarbonate & glass blended plastic case, color: gray. Includes four PG11 through-hole conduit openings, with two factory installed PG11, IP68, black nylon threaded hole plugs with backing nuts.

Wall Mounting: Four (4) mounting holes provided for mounting meter to wall.

Pipe Mounting: Optional pipe mounting kit (PDA6260) allows for pipe mounting. Sold separately. See manual for mounting instructions.

Tightening Torque: Removable Screw Terminals: 5 lb-in (0.56 Nm)

Digital I/O and RS485 Terminals: 2.2 lb-in (0.25 Nm)

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

Weight: 6.10 lbs (2.76 kg)

UL File Number: UL & C-UL Listed. E160849; 508 Industrial Control Equipment.

Warranty: 3 years parts & labor

PD2-6262 / PD2-6363 Helios Dual-Input Rate/Totalizers

USB Connection: Compatibility: USB 2.0 Standard, Compliant
 Connector Type: Micro-B receptacle
 Cable: USB A Male to Micro-B Cable
 Driver: Windows 98/SE, ME, 2000, Server 2003/2008, XP 32/64-Bit, Vista 32/64-Bit, Windows 7 32/64-Bit, Windows 10 32/64-Bit
 Power: USB Port

Dual Input Functionality

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

Pulse Inputs: Field selectable: Pulse or square wave 0-5 V, 0-12 V, or 0 24 V @ 30 kHz; TTL; open collector 4.7 kΩ pull-up to 5 V @ 30 kHz; NPN or PNP transistor, switch contact 4.7 kΩ pull-up to 5 V @ 40 Hz; Modbus PV (Slave)

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

Programmable Constants: Constant P (Adder): -99.999 to 999.999, default: 0.000, Constant F (Factor): 0.001 to 999.999, default: 1.000

Low Voltage Mag Pickup: (PD2-6363) Sensitivity: 40 mVp-p to 8Vp-p

Minimum Input Frequency: (PD2-6363) 0.001 Hz Minimum frequency is dependent on high gate setting.

Maximum Input Frequency: (PD2-6363) 30,000 Hz (10,000 for low voltage mag pickup)

Accuracy: (PD2-6262) ±0.03% of calibrated span ±1 count, square root & programmable exponent accuracy range: 10-100% of calibrated span (PD2-6363) ±0.03% of calibrated span ±1 count

Math Functions:

Name	Function	Setting
Addition	(A+B+P)*F	5u7r
Difference	(A-B+P)*F	d iF
Absolute diff.	((Abs(A-B))+P)*F	d iFRb5
Average	((A+B)/2+P)*F	RuG
Multiplication	((A*B)+P)*F	7r7L t i
Division	((A/B)+P)*F	d iU dE
Max of A or B	((AB-Hi)+P)*F	H i -Rb
Min of A or B	((AB-Lo)+P)*F	L o -Rb
Draw	((A/B)-1)*F	d r RuU
Weighted avg.	((B-A)*F)+A	u b RuG
Ratio	(A/B)*F	r R t o
Ratio 2	((B-A)/A)+P)*F	r R t o 2
Concentration	(A/(A+B))*F	L o n c E n
Total Addition	(tA+tB+P)*F	5u7r t
G. Tot. Addition	(GtA+GtB+P)*F	5u7r t t
Total Difference	(tA-tB+P)*F	d iF t
G. Tot. Difference	(GtA-GthhB+P)*F	d iF t t
Total Ratio	(tA/tB)*F	t r R t o
Total Ratio 2	((tB-tA)/tA)*F	t - r R t 2
Total Percent	(tA/(tA+tB))*100	t P t

Note: The F constant can be any value from 0.001 to 999.999. 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 rate, total, and grand total engineering units for channels A & B, and units for math channel C
3. Set up rate, total, and grand total decimal points for channels A & B, and decimal point for math channel C
4. Program channel A & B rate parameters
5. Program channel A & B total and reset parameters
6. Set up the big and little displays and display intensity
7. Select the transfer function for A & B (e.g. Linear)
8. Select Math function for Channel C
9. Program constants for Factor (F) and Adder (P)
10. Program cutoff values for A and B

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 (PD2-6363) Rate display is not affected by changes in temperature.

Signal Input Conditioning: (PD2-6262) Linear, square root, programmable exponent.

Multi-Point Linearization: 2 to 32 points for channel A and B

Programmable Exponent: (PD2-6262) 1.0001 to 2.9999

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

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

Calibration Range (PD2-6262):

Input Range	Minimum Span Input 1 & Input 2
4-20 mA	0.15 mA
±10 V	0.01 V

An Error message will appear if input 1 and input 2 signals are too close together.

Calibration Range (PD2-6363): Input 1 signal may be set anywhere in the range of the meter; input 2 signal may be set anywhere above or below input 1 setting. Minimum input span between any two inputs is 10 Hz. An error message will appear if the input span is too small.

Calibration: (PD2-6363) May be calibrated using K-factor, internal calibration, or by applying an external calibration signal.

Input Impedance: (PD2-6262) Voltage ranges: greater than 500 KΩ. Current ranges: 50 - 100 Ω (depending on resettable fuse impedance). (PD2-6363) Pulse input: Greater than 300 kΩ @ 1 kHz. Open collector/switch input: 4.7 kΩ pull-up to 5 V.

Input Overload: (PD2-6262) Current input protected by resettable fuse, 30 VDC max. Fuse resets automatically after fault is removed.

K-Factor: (PD2-6363) Field programmable K-factor converts input pulses to rate in engineering units. May be programmed from 0.00001 to 999,999 pulses/unit.

Filter: (PD2-6363) Programmable contact de-bounce filter: 40 to 999 Hz maximum input frequency allowed with low speed filter.

Time Base: (PD2-6363) Second, minute, hour, or day

Gate: (PD2-6363) Low gate: 0.1-99.9 seconds, High gate: 2.0-999.9 seconds

F4 Digital Input Contacts: 3.3 VDC on contact. Connect normally open contacts across F4 to COM.

F4 Digital Input Logic Levels: Logic High: 3 to 5 VDC, Logic Low: 0 to 1.25 VDC

Dual Rate/Totalizer

Rate Display Indication: -99999 to 999999, lead zero blanking.

Total Display & Total Overflow: 0 to 999,999; automatic lead zero blanking. Up to 999,999,999 with total-overflow feature. "oF" is displayed to the left of total overflow and ▲ LED is illuminated.

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

Total decimal point is independent of rate decimal point. Channel A and B decimal points programmed independently.

Dual Totalizer: Calculates total for channels A and B based on rate and field programmable multiplier to display total in engineering units. Time base must be selected according to the time units in which the rate is displayed. Channel A and B totalizer parameters programmed independently.

Totalizer Rollover: Totalizer rolls over when display exceeds 999,999,999. Relay status reflects the display value.

Total Overflow Override: Program total A or B total reset for automatic with 0.1 second delay and set point 1 for 999,999

Totalizer Alarm Presets: Up to eight, user selectable under setup menu. Any set point can be assigned to channel A or B total or grand total (or C) and may be programmed anywhere in the range of the meter for total alarm indication.

Total & Grand Total Reset: External contact closure on digital inputs, automatically via user selectable preset value and time delay, or through serial communications. Channel A and B total and grand total reset parameters programmed independently.

Total Reset Password: Total and grand total passwords may be entered to prevent resetting the total or grand total.

Non-Resettable Total: The grand totals can be programmed as non-resettable totals by entering the password "050873". Both channels are set to non-resettable when this password is entered.

CAUTION! Once the Grand Total has been programmed as "non-resettable" the feature CANNOT be disabled.

Programmable Delay on Release: 0.1 and 999.9 seconds; applied to the first relay assigned to total or grand total. If the meter is programmed to reset total to zero automatically when the preset is reached, then a delay will occur before the total is reset.

PD2-6262 / PD2-6363 Helios Dual-Input Rate/Totalizers

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. See manual for details.

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 manual on/off control mode.

Relay Reset: Digital inputs, or PC

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: Button behind the front panel 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.

Isolated 4-20 mA Transmitter Output

Output Source: Input channels A or B, rate, total, or grand total; channel C; max or min for channel A or B; highest or lowest max or min of A and B; set points 1-4; 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: $\pm 0.1\%$ of span ± 0.004 mA

Temperature Drift: 0.4 $\mu\text{A}/^\circ\text{C}$ max from 0 to 65 $^\circ\text{C}$ ambient,

0.8 $\mu\text{A}/^\circ\text{C}$ max from -40 to 0 $^\circ\text{C}$ ambient

Note: Analog output drift is separate from input drift.

Isolated Transmitter Power Supply: Terminals I+ & R: 24 VDC $\pm 10\%$. Isolated from the input at >500 V. May be used to power the 4-20 mA output or other devices. All models rated @ 40 mA max.

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

Modbus® RTU Serial Communications

Slave ID: 1 - 247

Baud Rate: 300 - 19,200 bps

Transmit Time Delay: Programmable between 0 and 199 ms or transmitter always on for RS-422 communication

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 Modbus Register Tables located at www.predig.com for details.

RS485 Serial Communications Terminal

Compatibility: EIA-485

Connectors: Removable screw terminal connector

Max Distance: 3,937' (1,200 m) max

Status Indication: Separate LEDs for Power (P), Transmit (TX), and Receive (RX)

Digital Input & Output Terminal

Channels: 4 digital inputs & 4 digital outputs

Digital Input Logic High: 3 to 5 VDC

Digital Input Logic Low: 0 to 1.25 VDC

Digital Output Logic High: 3.1 to 3.3 VDC

Digital Output Logic Low: 0 to 0.4 VDC

Source Current: 10 mA maximum output current

Sink Current: 1.5 mA minimum input current

+5 V Terminal: To be used as pull-up for digital inputs only. Connect normally open pushbuttons across +5 V & DI 1-4.

WARNING! DO NOT use +5 V terminal to power external devices.

ORDERING INFORMATION

Helios PD2-6262 Batch Controller Models		
85-265 VAC Model	12-24 VDC Model	Options Installed
PD2-6262-6H0	PD2-6262-7H0	No Options
PD2-6262-6H7	PD2-6262-7H7	4 Relays & 4-20 mA Output

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

Helios PD2-6363 Batch Controller Models		
85-265 VAC Model	12-24 VDC Model	Options Installed
PD2-6363-6H0	PD2-6363-7H0	No Options
PD2-6363-6H7	PD2-6363-7H7	4 Relays & 4-20 mA Output

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

Accessories	
Model	Description
PDA6260	Pipe Mounting Kit
PDA7485-I	RS-232 to RS-422/485 Isolated Converter
PDA7485-N	RS-232 to RS-422/485 Non-Isolated Converter
PDA8485-I	USB to RS-422/485 Isolated Converter
PDA8485-N	USB to RS-422/485 Non-Isolated Converter
PDAPLUG2	Plastic Conduit Plug
PDX6901	Suppressor (snubber): 0.01 $\mu\text{F}/470 \Omega$, 250 VAC

Your Local Distributor is:



**NATIONWIDE
OIL & GAS**

46, Jalan SS 22/21, Damansara Jaya,
47400 Petaling Jaya,
Selangor Darul Ehsan, Malaysia.

Email: nog@nog.com.my

Web access: <http://www.nog.com.my>

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