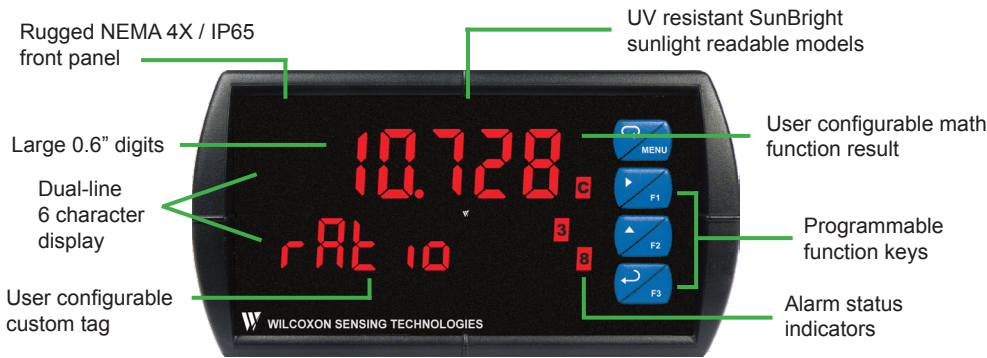


# Dual-input process meters

## PCD200 series

The PCD200 series are 1/8 DIN digital panel meters that accept two inputs of either a process current (4-20 mA) or process voltage (0-5V, 1-5V, ±10V) signal. It displays these signals on a dual line, 6-digit display that is available with an optional SunBright® sunlight readable LEDs. The meter can be customized such that these two inputs are displayed in a variety of ways, including both at the same time with tags or the result of math functions performed on one or both of the inputs. The PCD200 features CE marking, a NEMA 4X front, and AC or DC power options, and can be equipped with up to four internal relays, a 4-20 mA analog output, and Modbus® serial communications. PCD200 meters can be programmed via the front panel pushbuttons or included PC-based software.



### Key features

- Dual input process meter with math functions
- 0-20 mA, 4-20 mA, 0-5 V, 1-5 V, and ± 10 V inputs
- SunBright display models for outdoor applications
- NEMA 4X, IP65 front panel
- Input power options include 85-265 VAC or 12-24 VDC
- 2 or 4 relays + isolated 4-20 mA output options
- Includes PC-based programming and monitoring software

### Certifications



Ordering information			
	85-265 VAC models	12-24 VDC models	Options installed
Standard	PCD200-265-B-N-200	PCD200-24-B-N-100	none
	PCD200-265-B-2R-200	PCD200-24-B-2R-100	2 relays
	PCD200-265-B-420-240	PCD200-24-B-420-140	4-20 mA output
	PCD200-265-B-4R-200	PCD200-24-B-4R-100	4 relays
	PCD200-265-B-2R420-240	PCD200-24-B-2R420-140	2 relays + 4-20 mA output
	PCD200-265-B-4R420-240	PCD200-24-B-4R420-140	4 relays + 4-20 mA output
SunBright display	PCD200-265-SB-N	PCD200-24-SB-N-100	none
	PCD200-265-SB-2R	PCD200-24-SB-2R-100	2 relays
	PCD200-265-SB-420	PCD200-24-SB-420-140	4-20 mA output
	PCD200-265-SB-4R-200	PCD200-24-SB-4R-100	4 relays
	PCD200-265-SB-2R420-240	PCD200-24-SB-2R420-140	2 relays + 4-20 mA output
	PCD200-265-SB-4R420-240	PCD200-24-SB-4R420-140	4 relays + 4-20 mA output

Accessories available.

NOTE: A 24 V transmitter power supply is standard and may be used to power the inputs.

Note: Due to continuous process improvement, specifications are subject to change without notice. This document is cleared for public release.

# Dual-input process meters

## PCD200 series

### DISPLAY FEATURES

#### Easy to use, customizable displays

The dual-line display makes the PCD200 easy to set up and program, and all configuration can be done via the front panel. PCD200 series meters have an upper and lower display, each a full 6 digits (-999999 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 math channel C), set points, gross, or net & gross values of channel A or B, or the Modbus input. This allows the meter to show the most relevant variables for the application.



Math function & tag



Input channels A & B

#### Alternation display

Certain 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 results may also alternate on a single display.

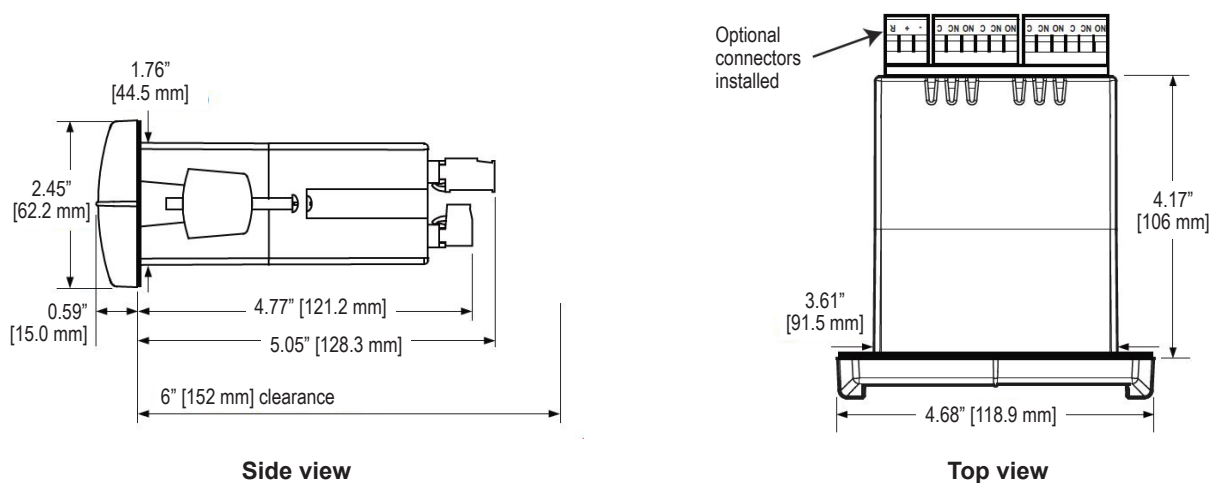


Lower display alternating input channels A & B

#### Standard LED and SunBright LED display models

PCD200 meters feature ultra-bright LED displays. Both standard and SunBright models perform well in both indoor and outdoor settings where visibility may be impaired by smoke, fog, dust, or distance. The UV-resistant SunBright display option is even readable in sunlight and ideal for use in outdoor applications.

### DIMENSIONS



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# Dual-input process meters

## PCD200 series

### SPECIFICATIONS

#### GENERAL

<b>Display</b>	Upper display: 0.60: (15mm) high, lower display: 0.46" (12 mm) high, 6 digits each, red LEDs
<b>Front panel</b>	NEMA 4X, IP65
<b>Programming methods</b>	Four front panel buttons, digit inputs, PC with MeterView software, Modbus registers, or cloning using Copy function
<b>Power options</b>	85-265 VAC, 50/60 Hz; 90-265 VDC, 20 W max; optional model with 12-24 VDC $\pm 10\%$ , 15 W max
<b>Required fuse</b>	UL recognized, 5 A max, slow-blow; up to 6 meters may share one 5 A fuse
<b>Isolated transmitter power supply</b>	Terminals P+ & P-: 24 VDC $\pm 10\%$ . Internally selectable jumper for 24, 10, or 5 VDC supply. 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.
<b>Isolation</b>	4 kV input/output-to-power line; 500 V input-to-output or output or output-to-P+ supply
<b>Temperature range:</b>	
<b>Operating</b>	-40° to 65°C
<b>Storage</b>	-40° to 85°C
<b>Relative humidity</b>	0 to 90% non-condensing
<b>Connections</b>	Removable screw terminal blocks accept 12 to 22 AWG, RJ45 for external relays, digital I/O, and serial communication adapters
<b>Enclosure</b>	1/8 DIN, high impact plastic, UL 94V-0, color: black
<b>Mounting</b>	1/8 DIN panel cutout required: 3.622" x 1.772"
<b>Tightening torque</b>	Screw terminal connectors: 5 lb-in (0.56 Nm)
<b>Weight</b>	269 grams (9.5 oz)
<b>USB connection</b>	Compatibility: USB 2.0 Standard; compliant connector type: Micro-B receptacle; cable: USB A male to Micro-B cable; power: USB port

#### DUAL PROCESS INPUT

<b>Inputs</b>	Two non-isolated inputs, separately field selectable: 0-20 mA, 4-20 mA, 10 V (0-5, 1-5, 0-10 V), Modbus PV (Slave)
<b>Accuracy</b>	$\pm 0.03\%$ of calibrated span $\pm 1$ count, square root & programmable exponent accuracy range: 10-100% of calibrated span
<b>Temperature drift:</b>	
<b>0 to 65°C ambient</b>	0.005% of calibrated span/°C max
<b>-40 to 0°C ambient</b>	0.01% of calibrated span/°C max
<b>Signal input conditioning</b>	linear, square root, programmable exponent, or round horizontal tank volume calculation
<b>Calibration range</b>	4-20 mA: minimum span input 1 & input 2: 0.15 mA $\pm 10$ V: minimum span input 1 & 2: 0.10 V
<b>Input impedance:</b>	
<b>Voltage ranges</b>	>500 k $\Omega$
<b>Current ranges</b>	50-100 $\Omega$ , varies with resettable fuse impedance
<b>Input overload</b>	current input protected by resettable fuse, 30 VDC max <sup>1</sup>

**Notes:** <sup>1</sup> Fuse resets automatically after fault is removed.

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# Dual-input process meters

## PCD200 series

### SPECIFICATIONS

#### RELAYS

<b>Rating</b>	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 HT (approx. 50 W) @ 125/250 VAC for inductive loads
<b>Relay operation</b>	automatic (non-latching); latching (requires manual acknowledge); sampling (based on time); pump alteration control (2 to 8 relays); Off (disable unused relays and enable interlock feature, manual on/off control mode)
<b>Time delay</b>	0 to 999.9 seconds, on and off relay time delays; programmable & independent for each relay

#### SERIAL COMMUNICATIONS

<b>Protocol</b>	Modbus RTU
<b>Meter address/Slave ID</b>	1 to 247
<b>Baud rate</b>	300 to 19,200 bps
<b>Transmit time delay</b>	Programmable between 0 and 199 ms
<b>Data</b>	8 bit (1 start bit, 1 or 2 stop bits)
<b>Parity</b>	Even, odd or none with 1 or 2 stop bits
<b>Byte-to-byte timeout</b>	0.01 - 2.54 seconds
<b>Turn around delay</b>	< 2 ms (fixed)

#### ISOLATED 4-20 mA TRANSMITTER OUTPUT

<b>Output source</b>	Process channel A, B, or C, max or min for channel A, B, or highest and lowest max or min of A and B, set points 1-8, Modbus input, or manual control mode
<b>Scaling range</b>	1.000 to 23.000 mA for any display range
<b>Accuracy</b>	±0.1% of span ±0.004 mA
<b>Temperature drift<sup>2</sup>:</b>	
0 to 65°C ambient	0.4 µA/°C max
-40 to 0°C ambient	0.8 µA/°C max
<b>Isolated transmitter power supply</b>	Terminals I+ & R: 24 VDC ±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
<b>External loop power supply</b>	35 VDC maximum
<b>Output loop resistance</b>	see Table 1

Notes: <sup>2</sup> Analog output drift is separate from input drift.

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

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