

Dual Line Display Meter

Red Lion PAX[®]2A



▶▶▶ Dual Line Display Meter

The Red Lion PAX2A provides the maximum in application flexibility, allowing users to stock just one meter for numerous applications.

The input, total, min., max. or setpoints can be displayed on the 0.7" high 6-digit main LCD display. The main display also offers three programmable, easy-to-read colors: red, orange and green. The color change can be tied to the setpoints, providing the operator with a visual display of changing conditions in the application. The second display line is a 0.35", high 9-digit, green LCD that can be programmed for any of the above parameters as well. The 9-digit display accommodates totalizing applications that easily exceed the normal 6-digit displays. In addition to the dual displays, the meter also offers a 3-digit programmable custom unit indicator.

APPLICATIONS

- > Industrial Automation
- > Factory Automation
- > Process Control Applications

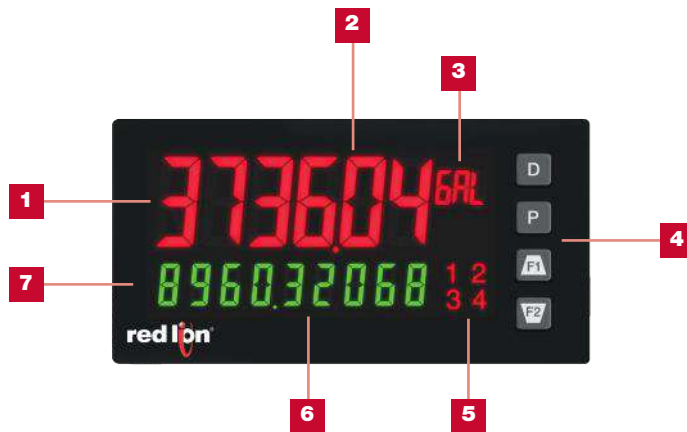


PRODUCT HIGHLIGHTS

- > Universal Process Inputs, DC Current, DC Voltage, Process Signals, Resistance, Thermocouples or RTDs
- > Universal Power Supply: 50 to 250 VAC or 21.6 to 250 VDC
- > Built-in USB Port
- > Meter Update Rate up to 160/Second
- > Built-in Modbus Communications
- > Setpoints: Dual and Quad Relay; Quad Sinking; Quad Sourcing/SSR Drive; and Dual Triac/Dual SSR Drive
- > Retransmitted Analog Output
- > Communications: RS232, RS485, DeviceNet, and Profibus

FEATURES & BENEFITS

- > The Main display offers three programmable, easy-to-read colors: red, orange and green.
- > The 9-digit display accommodates totalizing applications that easily exceed the normal 6-digit displays.
- > The Red Lion PAX2A provides the maximum in application flexibility, allowing users to stock just one meter for numerous applications.
- > The ideal solution for applications that require two parameters to be visualized at the same time.



1. Top Line: 6-Digit 0.7" (18 mm) Display
2. Programmable for Red, Orange or Green
3. Custom Unit Indicator
4. Tactile Feel Buttons
5. Setpoint Annunciators
6. Bottom Line: 9-Digit 0.35" (9 mm) Green Display
7. Built-In USB Port

DISPLAY

Positive image LCD
 Top Line: 6-digit, 0.71" (18 mm) tri-color backlight (red, green or orange)
 Display range: -199,999 to 999,999
 Bottom Line: 9 digit, 0.35" (8.9 mm) green backlight
 Display range: -199,999,999 to 999,999,999

POWER CONNECTION

AC Power: 40 to 250 VAC, 50/60 Hz, 20 VA
 DC Power: 21.6 to 250 VDC, 8 W

ANNUNCIATORS

Backlight color: Red
 1 - setpoint alarm 1 is active
 2 - setpoint alarm 2 is active
 3 - setpoint alarm 3 is active
 4 - setpoint alarm 4 is active
 Units Label: programmable 3 digit units annunciator with tri-color backlight (red, green or orange)

KEYPAD

2 programmable function keys, 4 keys total

A/D CONVERTER

24 bit resolution

UPDATE RATES

A/D conversion rate: programmable 5 to 160 readings/sec.

INPUT CAPABILITIES

Current Input: $\pm 250 \mu\text{ADC}$, $\pm 2.5 \text{ mADC}$, $\pm 25 \text{ mADC}$, $\pm 250 \text{ mADC}$, and $\pm 2 \text{ ADC}$
 Voltage Input: $\pm 250 \text{ mVDC}$, $\pm 2.0 \text{ VDC}$, $\pm 10 \text{ VDC}$, $\pm 25 \text{ VDC}$, $\pm 100 \text{ ADC}$, and $\pm 200 \text{ VDC}$
 Thermocouple Input: T, E, J, K, R, S, B, N, and C
 RTD Input: 100 Ω Pt (Alpha 0.00385 and 0.00392 120 Ω Nickel (Alpha 0.00672) and 10 Ω Copper (Alpha 0.00427)
 Resistance Input: 100 Ω , 1,000 Ω , and 10 K Ω

EXCITATION POWER

Jumper selectable
 Transmitter Power: +18VDC @ 50mA
 Reference Voltage: +2VDC, +/- 2%
 Reference Current: 1 mADC, +/- 2%

TOTALIZER

Time Base: second, minute, hour or day
 Batch: Can accumulate (gate) input display from a user input
 Time Accuracy: 0.01% typical
 Decimal Point: 0 to 0.0000
 Scale Factor: 0.001 to 65.000
 Low Signal Cut-out: -199,999 to 999,999
 Total: 9 digits, display alternates between high order and low order readouts

CUSTOM LINEARIZATION

Data Point Pairs: Selectable from 2 to 16
 Display Range: -199,999 to 999,999
 Decimal Point: 0 to 0.0000
 Ice Point Compensation: user value (0.00 to 650.00 $\mu\text{V/C}$)

MEMORY

Nonvolatile FRAM memory retains all programmable parameters and display values

All specifications are subject to change. Consult the company website for more information.

INPUTS

Two programmable user inputs

ENVIRONMENTAL

Operating Temperature Range: 0 to 50 °C
 Storage Temperature Range: -40 to 60 °C
 Operating and Storage Humidity: 0 to 85% max.
 RH non-condensing
 Altitude: Up to 2000 meters

CERTIFICATION & SYMBOL COMPLIANCE

Refer to EMC Installation Guidelines section of the bulletin for additional information

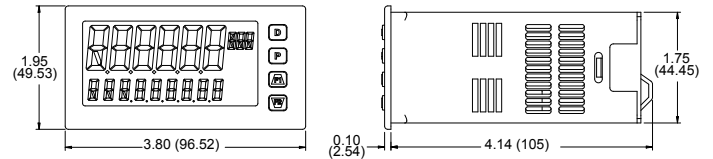
CONNECTIONS

High compression cage-clamp terminal block

MECHANICAL

Construction: This unit is rated for NEMA 4X/IP65 indoor use; IP20 Touch safe; Installation Category II, Pollution Degree 2; One piece bezel/case; Flame resistant; Synthetic rubber keypad; Panel gasket and mounting clip included
 Weight: 8 oz. (226.8 g)

DIMENSIONS *In inches (mm)*



ORDERING INFORMATION

PART NUMBER	MODEL	DESCRIPTION
PAX2A000	PAX2A	Dual Line Display Process Meter
PAXCDS10	PAXCDS	Dual Setpoint Relay Output Card
PAXCDS20		Quad Setpoint Relay Output Card
PAXCDS30		Quad Setpoint Sinking Open Collector Output Card
PAXCDS40		Quad Setpoint Sourcing Open Collector Output Card
PAXCDS50		Dual Triac/Dual SSR Drive Digital Output Card
PAXCDS60	Quad Form C Relay Digital Output Card	
PAXCDC10	PAXCDC	RS485 Serial Communications Card with Terminal Block
PAXCDC1C		Extended RS485 Serial Communications Card with Dual RJ11 Connector
PAXCDC20		RS232 Serial Communications Card with Terminal Block
PAXCDC2C		Extended RS232 Serial Communications Card with 9 Pin D Connector
PAXCDC30		DeviceNet Communications Card
PAXCDC50		Profibus-DP Communications Card
PAXCDL10		PAXCDL



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Dual Line Digital Input Panel Meter

Red Lion PAX[®]2 Series



▶▶▶ PAX2D - Dual Line Digital Input Panel Meter

With its dual display and digital input, the PAX2D delivers an ideal solution for applications that require two parameters to be visualized at the same time.

Line one consists of a 0.7" high 6 digit LCD display that can be programmed to show Counters A, B, or C; Rate A, B, or C; or the Hi or Lo values. The color can be tied to the setpoints; providing the operator with a visual display of changing conditions in the application. A second display line can be programmed for any of the above parameters as well. The meter also offers a programmable custom unit indicator for both displays.

PAX2D provides the maximum in application flexibility; by accepting inputs from proximity sensors, magnetic sensors, photo eyes, length sensors, rotary pulse generators, transistors or a plain switch.

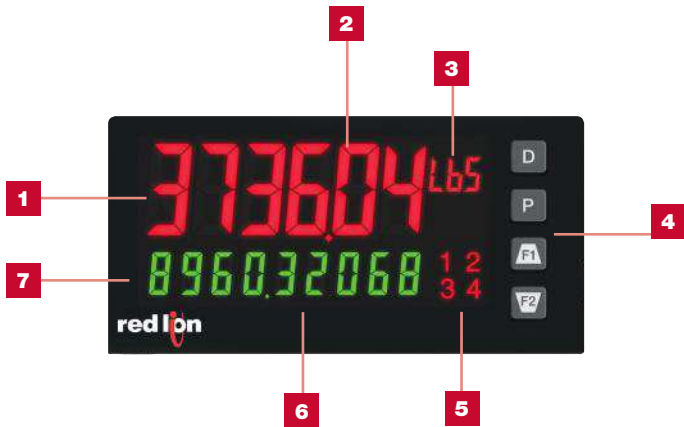


PRODUCT HIGHLIGHTS

- > Count, Dual Count, Rate, and Dual Rate
- > Math Function Capability
- > Universal Power Supply: 50 to 250 VAC or 21.6 to 250 VDC
- > Built-in USB Programming/Virtual Comms Port
- > Setpoints: Dual or Quad Relay; Quad Sinking; Quad Sourcing/SSR Drive; and Dual Triac/Dual SSR Drive
- > Retransmitted Analog Output
- > Communications: Modbus Protocol; RS232, RS485, DeviceNet, and Profibus

FEATURES & BENEFITS

- > Main display offers three programmable, easy-to-read colors: red, orange and green
- > The display color can be tied to the setpoints
- > Second display line is a 0.35" high 9 digit, green LCD
- > The 9-digit display accommodates totalizing applications that exceed the normal 6-digit displays
- > Stock one meter for multiple applications



1. Top Line: 6-Digit 0.7" (18 mm) Display
2. Programmable for Red, Orange or Green
3. Custom Unit Indicator
4. Tactile Feel Buttons
5. Setpoint Annunciators
6. Bottom Line: 9-Digit 0.35" (9 mm) Green Display
7. Built-In USB Port

▶▶▶ PAX2D - Dual Line Digital Input Panel Meter Specifications

DISPLAY

Negative image LCD
 Top Line: 6-digit, 0.71" (18 mm) tri-color backlight (red, green or orange)
 Display range: -199,999 to 999,999
 Bottom Line: 9 digit, 0.35" (8.9 mm) green backlight
 Display range: -199,999,999 to 999,999,999

POWER CONNECTION

AC Power: 40 to 250 VAC, 50/60 Hz, 20 VA
 DC Power: 21.6 to 250 VDC, 8 W

SENSOR POWER

+18 VDC, ±5% @ 60 mA max., short circuit protected

ANNUNCIATORS

Backlight color: Red
 1 - setpoint alarm 1
 2 - setpoint alarm 2
 3 - setpoint alarm 3
 4 - setpoint alarm 4
 Units Label: programmable units annunciators

KEYPAD

2 programmable function keys, 4 keys total

COUNTER DISPLAYS

6-digit (top line) or 9-digit (bottom line)
 Top Line Display Range: -199,999 to 999,999
 Bottom Line Display Range: -199,999,999 to 999,999,999
 Over Range Display: OUEr
 Under Range Display: UndEr
 Display Designators: CtA, Ctb, CtC (top line), A, b, C (bottom line)
 Maximum Count Rates: 50% duty cycle, count mode dependent
 If setpoints disabled: 35 KHz for all modes except Quadrature x4 (32 KHz)
 If setpoint(s) enabled: 20 KHz for any mode except Quadrature x1 (19 KHz), Quadrature x2 (17 KHz) and Quadrature x4 (10 KHz)

RATE DISPLAYS

6-digit (top or bottom line)
 Rate A or Rate B Display Range: 0 to 999,999
 Rate C, Rate Max (High) or Min (Low) Display Range: -199,999 to 999,999
 Over Range Display: OUEr
 Under Range Display: UndEr
 Display Designators: RtA, Rtb, RtC, Hi, Lo (top or bottom line)
 Maximum Frequency: 50 KHz
 Minimum Frequency: 0.001 Hz
 Display Update Time: 0.1 to 999.9 seconds
 Accuracy: ±0.01%

INPUT CAPABILITIES

The inputs accept pulses from a variety of sources including switch contacts, TTL outputs, magnetic pickups and all standard RLC sensors. Inputs accept current sinking or current sourcing outputs and provide selectable input filtering for low frequency signals or switch contact debounce.

MEMORY

Nonvolatile memory retains all programmable parameters and display values

INPUTS

Three programmable user inputs

All specifications are subject to change. Consult the company website for more information.

ENVIRONMENTAL

Operating Temperature Range: 0 to 50 °C
 Storage Temperature Range: -40 to 60 °C
 Operating and Storage Humidity: 0 to 85% max.
 RH non-condensing
 Altitude: Up to 2000 meters

CERTIFICATION & COMPLIANCE

Refer to EMC Installation Guidelines section of the bulletin for additional information

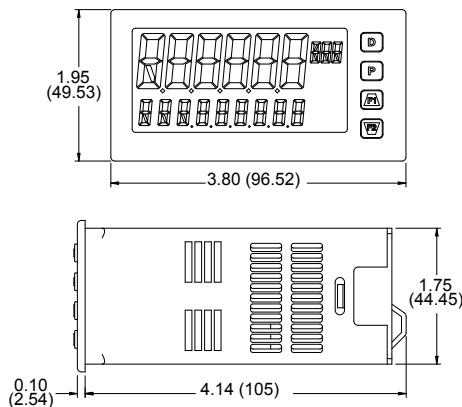
CONNECTIONS

High compression cage-clamp terminal block

MECHANICAL

Construction: This unit is rated for NEMA 4X/IP65 indoor use; IP20 Touch safe; Installation Category II, Pollution Degree 2; One piece bezel/case; Flame resistant; Synthetic rubber keypad; Panel gasket and mounting clip included
 Weight: 8 oz. (226.8 g)

DIMENSIONS In inches (mm)



ORDERING INFORMATION

PART NUMBER	MODEL	DESCRIPTION
PAX2D000	PAX2D	Dual Line Digital Input Panel Meter
PAXCDS10	PAXCDS	Dual Setpoint Relay Output Card
PAXCDS20		Quad Setpoint Relay Output Card
PAXCDS30		Quad Setpoint Sinking Open Collector Output Card
PAXCDS40		Quad Setpoint Sourcing Open Collector Output Card
PAXCDS50		Dual Triac/Dual SSR Drive Digital Output Card
PAXCDS60		Quad Form C Relay Digital Output Card
PAXCDC10	PAXCDC	RS485 Serial Communications Card with Terminal Block
PAXCDC1C		Extended RS485 Serial Communications Card with Dual RJ11 Connector
PAXCDC20		RS232 Serial Communications Card with Terminal Block
PAXCDC2C		Extended RS232 Serial Communications Card with 9 Pin D Connector
PAXCDC30		DeviceNet Communications Card
PAXCDC50		Profibus-DP Communications Card
PAXCDL10	PAXCDL	Analog Output Card



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Dual Line Strain Gage Meter

Red Lion PAX[®]2 Series



▶▶▶ PAX2S - Dual Line Strain Gage Meter

With 9 dual line display and strain gage input, the PAX2S delivers an ideal solution for applications that require two parameters to be visualized at the same time.

The input, gross, tare, total, min, max or setpoints can be displayed on the 0.7" high 6-digit Line 1 of the LCD display. The color change can be tied to the setpoints; providing the operator with a visual display of changing conditions in the application. Line 2 of the display is a 0.35" high 9-digit, green LCD that can be programmed for any of the above parameters as well.

The strain gage input easily connects to load cell, strain gage or pressure sensors. The PAX2S also features a universal power input. Whether it's 40 to 250 VAC or 21.6 to 250 VDC, polarity does not matter.



PRODUCT HIGHLIGHTS

- > Load cells, Strain Gage, and Pressure Sensors
- > Universal Power Supply: 40 to 250 VAC or 21.6 to 250 VDC
- > Built-in USB Port
- > Meter Update Rate up to 160/Second
- > Built-in Modbus Communications
- > Setpoints: Dual and Quad Relay; Quad Sinking; Quad Sourcing/SSR Drive; and Dual Triac/Dual SSR Drive
- > Retransmitted Analog Output
- > Communications: RS232, RS485, DeviceNet, and Profibus

FEATURES & BENEFITS

- > Line 1 of the display offers three programmable easy-to-read colors: red, orange and green
- > The display color can be tied to the setpoints
- > The 9-digit display accommodates totalizing applications that easily exceed the normal 6-digit displays
- > Offers a 3-digit programmable mnemonic; add identification to the display value
- > Stock one meter for multiple applications



1. Top Line: 6-Digit 0.7" (18 mm) Display
2. Programmable for Red, Orange or Green
3. Custom Unit Indicator
4. Tactile Feel Buttons
5. Setpoint Annunciators
6. Bottom Line: 9-Digit 0.35" (9 mm) Green Display
7. Built-In USB Port

PAX2S - Dual Line Strain Gage Meter Specifications

DISPLAY

Positive image LCD
 Top Line: 6-digit, 0.71" (18 mm) tri-color backlight (red, green or orange)
 Display range: -199,999 to 999,999
 Bottom Line: 9 digit, 0.35" (8.9 mm) green backlight
 Display range: -199,999,999 to 999,999,999

POWER

AC Power: 40 to 250 VAC, 50/60 Hz, 20 VA
 DC Power: 21.6 to 250 VDC, 8 W

ANNUNCIATORS

Backlight color: Red
 1 - setpoint alarm 1 is active
 2 - setpoint alarm 2 is active
 3 - setpoint alarm 3 is active
 4 - setpoint alarm 4 is active
 Units Label: programmable 3 digit units annunciator with tri-color backlight (red, green or orange)

KEYPAD

2 programmable function keys, 4 keys total

A/D CONVERTER

24 bit resolution

UPDATE RATES

A/D conversion rate: programmable 5 to 160 readings/sec.

INPUT CAPABILITIES

Connection Type: 4-wire bridge (differential) or 2-wire bridge (single-ended)
 Range: Selectable for ± 24 mVDC or ± 240 mVDC

EXCITATION POWER

Jumper selectable
 +5VDC @ 65mADC, +/- 2%
 +10VDC @ 125mADC, +/- 2%

TOTALIZER

Time Base: second, minute, hour or day
 Batch: Can accumulate (gate) input display from a user input
 Time Accuracy: 0.01% typical
 Decimal Point: 0 to 0.0000
 Scale Factor: 0.001 to 65.000
 Low Signal Cut-out: -199,999 to 999,999
 Total: 6 digits on Line 1; 9 digits on Line 2

CUSTOM LINEARIZATION

Data Point Pairs: Selectable from 2 to 16
 Display Range: -199,999 to 999,999
 Decimal Point: 0 to 0.0000

MEMORY

Nonvolatile memory retains all programmable parameters and display values

INPUTS

Three programmable user inputs

ENVIRONMENTAL

Operating Temperature Range: 0 to 50 °C
 Storage Temperature Range: -40 to 60 °C
 Operating and Storage Humidity: 0 to 85% max.
 RH non-condensing
 Altitude: Up to 2000 meters

All specifications are subject to change. Consult the company website for more information.

CERTIFICATION & COMPLIANCE

Refer to EMC Installation Guidelines section of the bulletin for additional information

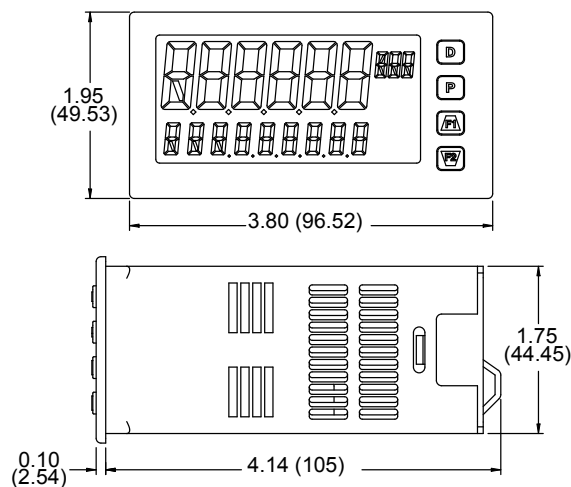
CONNECTIONS

High compression cage-clamp terminal block

MECHANICAL

Construction: This unit is rated for NEMA 4X/IP65 indoor use; IP20 Touch safe; Installation Category II, Pollution Degree 2; One piece bezel/case; Flame resistant; Synthetic rubber keypad; Panel gasket and mounting clip included
 Weight: 8 oz. (226.8 g)

DIMENSIONS In inches (mm)



ORDERING INFORMATION

PART NUMBER	MODEL	DESCRIPTION
PAX2S000	PAX2S	Dual Line Display Strain Gage Meter
PAXCDS10	PAXCDS	Dual Setpoint Relay Output Card
PAXCDS20		Quad Setpoint Relay Output Card
PAXCDS30		Quad Setpoint Sinking Open Collector Output Card
PAXCDS40		Quad Setpoint Sourcing Open Collector Output Card
PAXCDS50		Dual Triac/Dual SSR Drive Digital Output Card
PAXCDS60		Quad Form C Relay Digital Output Card
PAXCDC10	PAXCDC	RS485 Serial Communications Card with Terminal Block
PAXCDC1C		Extended RS485 Serial Communications Card with Dual RJ11 Connector
PAXCDC20		RS232 Serial Communications Card with Terminal Block
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PAXCDL10	PAXCDL	Analog Output Card



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