PAX®2C Advanced PID Controller
Red Lion PAX2 Series

red lion®

▶▶▶ **Dual-Line PID Controller**

Red Lion's advanced PAX®2C PID controllers feature field-installable option cards, universal inputs and on-demand auto-tuning, providing full PID control in temperature and process applications

PAX2C PID controllers offer a configurable seven zone tri-color color display with bar graphs and selectable unit annunciators. Each display zone is independently configurable, providing visual indication of control, process and/or alarm status.

Red Lion's PAX2C accepts up to three field-installable cards, easily expanding the controllers core functionality to meet any PID control application requirement. The PAX2C can be populated in more than 150 configurations to address a wide range of control applications or even perform multi-zone PID control on a single display. Using Red Lion's Crimson® software and built-in USB programming port, configuration data can be downloaded to the PAX2C directly.

DISPLAY FEATURES

1. Top Line: 4-Digit 0.51" (13.0 mm) Display
2. Visual Alarm Conditions: Red, Orange or Green
3. Custom Unit Indicators
4. Universal Annunciators
5. Tactile Feel Buttons
6. Manual and Remote Mode Mnemonics
7. Bar Graph Display

PRODUCT HIGHLIGHTS

> PID Control with Reduced Overshoot

> Universal Process, Thermocouples, RTD's, Voltage, Current and Resistance Input

> Programmable Dual-Line Display with Bar Graph and Programmable Universal Annunicators

> Three slots for field-installable FlexCard™ modules

> Tri-Color Display, with 7 Programmable Zones

> Up To 16 Alarms with Boolean Logic Functionality

> Built-In USB Programming port for Configuration with Crimson Programming Software

> NEMA 4X/IP65 Sealed Front Bezel

FEATURES & BENEFITS

> Customize outputs and communication capabilities using field installable option cards

> 1/8 DIN controller is available in vertical and horizontal formats

> Communication and fieldbus option cards include RS-232, RS-485, DeviceNet™, and PROFIBUS®

> One model of controller and a handful of option cards covers almost every application need

> Can be programmed to utilize Modbus protocol

industrial automation

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3RSD
PROCESS CONTROL EQUIPMENT

DISPLAY PROPERTIES

Negative image LCD with tri-color backlight.
The display is divided into seven independently programmable color zones: Line 1, Line 2, Universal Annunciators (1-4) & Mnemonics
Vertical Model: Line 1 - 0.51" (13.0 mm), Line 2 - 0.44" (11.2 mm)
Horizontal Model: Line 1 - 0.62" (15.7 mm), Line 2 - 0.47" (12.0 mm)
Display Range: -1999 to 9999

POWER

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

KEYPAD

2 programmable function keys, 4 keys total

A/D CONVERTER

24 bit resolution

UPDATE RATES

A/D conversion rate: programmable 5 to 40 readings/sec.

INPUT CAPABILITIES

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

EXCITATION POWER

Jumper selectable
Transmitter Power: +18 VDC @ 50 mA
Reference Voltage: +2 VDC, ± 2%
Reference Current: 1.05 mADC, ± 2%

CUSTOM LINEARIZATION

Data Point Pairs: Selectable from 2 to 16
Display Range: -1999 to 9999
Decimal Point: 0 to 0.000

MEMORY

Nonvolatile FRAM memory retains all programmable parameters and display values

INPUTS

Two programmable user inputs

CERTIFICATION & COMPLIANCE

Refer to EMC Installation Guidelines section of the bulletin for additional information
UL Listed: File #E179259

CONNECTIONS

High compression cage-clamp terminal block

ENVIRONMENTAL

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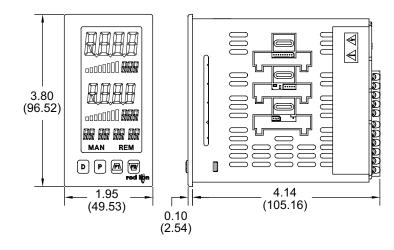Operating and Storage Humidity: 0 to 85% max. relative humidity non-condensing
Altitude: Up to 2000 meters

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)*

3.80 (96.52)
1.95 (49.53)
0.10 (2.54)
4.14 (105.16)

Note: To determine dimensions for horizontal units, swap height and width.

ORDERING INFORMATION

PART NUMBER	MODEL	DESCRIPTION
PX2C8H00	PAX2C	Universal Input Temperature/Process Controller, Horizontal
PX2C8V00		Universal Input Temperature/Process Controller, Vertical
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
PX2FCA00	PX2FCA	Process Input/Remote Setpoint Input Card, with Digital Outputs
PX2FCA10		Heater Current Monitor Input Card, with Digital Outputs

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

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As the global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our automation, Ethernet and cellular M2M technology enables companies worldwide to gain real-time data visibility that drives productivity. Product brands include Red Lion, N-Tron® and Sixnet®. With headquarters in York, Pennsylvania, the company has offices across the Americas, Asia-Pacific and Europe. Red Lion is part of Spectris plc, the productivity-enhancing instrumentation and controls company. For more information, please visit www.redlion.net.