CR1000 and CR3000 HMIs

Red Lion Automation Series

▶▶▶ Operator Interface Panels

CR1000 and CR3000 HMIs provide industry-leading protocol conversion and connectivity choices along with enhanced visual display features to deliver operator interface devices that easily scale and adapt as requirements change.

The CR1000 and CR3000 automation HMIs from Red Lion combine an ever-expanding list of over 300 industrial drivers with the intuitive and powerful Crimson 3.1 development platform to create an operator experience designed to easily adapt as needs change and operations grow. Basic requirements for machine interface and protocol conversion are easily handled by the CR1000 products, while the CR3000 HMIs address more advanced needs with real-time data logging and a built-in web server.

INDUSTRY APPLICATIONS

> Factory Automation
> OEM Machine Builders
> Automotive
> Food & Beverage
> Water/Wastewater

PRODUCT HIGHLIGHTS

> NEMA 4X, IP66 Front Panel Rating
> Industrial Environmental Specifications
  - Wide operating temperature
  - High shock and vibration tolerance
  - CE, UL/cUL
> Supports over 300 Industrial Drivers
> SD Card for database upload/download
> Built-In Web Server for Remote Access*
> Real-Time Data Logging*

FEATURES & BENEFITS

> Full-color HMI touchscreen
  - A variety of 4.3” to 15” models with widescreen (model dependent) ensures the right fit for virtually any application
  - 16M colors
> Industry-leading protocol conversion
  - Communicate with over 300 protocols
  - Easily convert between serial, USB and Ethernet devices
  - Convert up to 6 protocols simultaneously with CR1000 and up to 15 with CR3000
  - Manage multi-vendor environments with ease
> Powerful Integration Capabilities
  - Crimson 3.1 software enables point-and-click configuration
  - Updated 3D symbols and primitives create a modern operator experience
  - Ethernet, USB and serial ports make communication simple
  - Robust web server* provides remote access and control to reduce costly site visits
  - Send email and/or SMS notifications on alarm conditions*
  - Built-in data logging enhances troubleshooting and helps meet regulatory requirements
  - Automate population of data values using SQL Queries feature*

* Model dependent

industrial automation

▶▶▶ CR1000 and CR3000 Specifications

COMMUNICATION PROPERTIES

USB Ports
- USB Device:
  - CR1000 and CR3000 (All Models) - (1) USB Device
  - Type B adheres to USB specification 1.1
- USB Host:
  - CR3000 (4.3") – (1) USB Host port
  - CR3000 (7", 10.4", 15") – (2) USB Host ports
  - Type A adheres to USB specification 2.0 and supports full-speed data transfers with hardware overcurrent protected (0.5 A max per port)

Serial Ports for programming or communications: Format/Baud rates independently configurable
- CR1000 (All) - One (1) RS232 and One (1) RS232/RS422/RS485 selectable
- CR3000 (4.3") - Two (2) RS232 and One (1) RS422/RS485
- CR3000 (7", 10.4", 15") - Two (2) RS232 and Two (2) RS422/RS485

Ethernet Ports: 1500 Vrms network isolation
- CR1000 (All) - One (1) 10/100 BASE-T(X) port (RJ45)
- CR3000 (4.3") - One (1) 10/100 BASE-T(X) port (RJ45)
- CR3000 (7", 10.4", 15") - Two (2) 10/100 BASE-T(X) ports (RJ45)

POWER INPUT

CR1000 (All models) 24 VDC +/- 20%
CR3000 (All models) 10 to 30 VDC
Must use a Class 2 circuit according to National Electrical Code (NEC), NFPA-70 or Canadian Electrical Code (CEC), Part I, C22.1 or a Limited Power Supply (LPS) according to IEC 60950-1 or Limited-energy circuit according to IEC 61010-1. Power connection via removable three position terminal block.
Battery: Lithium coin cell
- Typical lifetime of 5 years

POWER CONNECTION

High compression cage-clamp terminal block
Wire Strip Length: 0.3" (7.5 mm)
Wire Gauge Capacity: 12 to 24 AWG (3.31 to 0.20 mm^2) copper wire
Torque: 4.4-5.3 inch-lbs (0.5-0.6 N-m)

NETWORK MEDIA

10BaseT: ≥ Cat3 cable
100BaseTX: ≥ Cat5 cable

ENVIRONMENTAL

Operating Temperature: -10°C to 50°C
Storage Temperature: -20°C to 70°C
Operating Humidity: 0 to 85% (non condensing)
Operating Altitude: Up to 2000 meters
Shock: 30 g per IEC 68-2-27
Vibration: 2 g @ 5-500 Hz per IEC 68-2-6

CERTIFICATION & COMPLIANCE

CE Approved
- Immunity: IEC/EN 61000-6-2 for Industrial Locations
- Emissions: IEC/EN 6100-6-4 for Industrial Locations; CISPR 11 Class A
- Safety: IEC/EN 61010-1

RoHS Compliant
UL Listed for CR1000
Type 4X Indoor / IP66 Enclosure rating (front face only)

MECHANICAL

Construction: Polycarbonate enclosure with NEMA 4X/IP66 rating for indoor use when correctly fitted with the gasket provided. Installation Category II, Pollution Degree 2.
Weight:
- CR1000 4.3" model – 15.0 oz (425 g)
- CR1000 7" model – 1.91 lb (868 g)
- CR1000 10.4" model – 3.08 lb (1.395 Kg)
- CR3000 4.3" model – 1.00 lb (454 g)
- CR3000 7" model – 2.01 lb (913 g)
- CR3000 10.4" model – 3.16 lb (1.435 Kg)
- CR3000 15" model – 4.12 lb (2.155 Kg)

Specifications are subject to change. Visit www.redlion.net for more information.

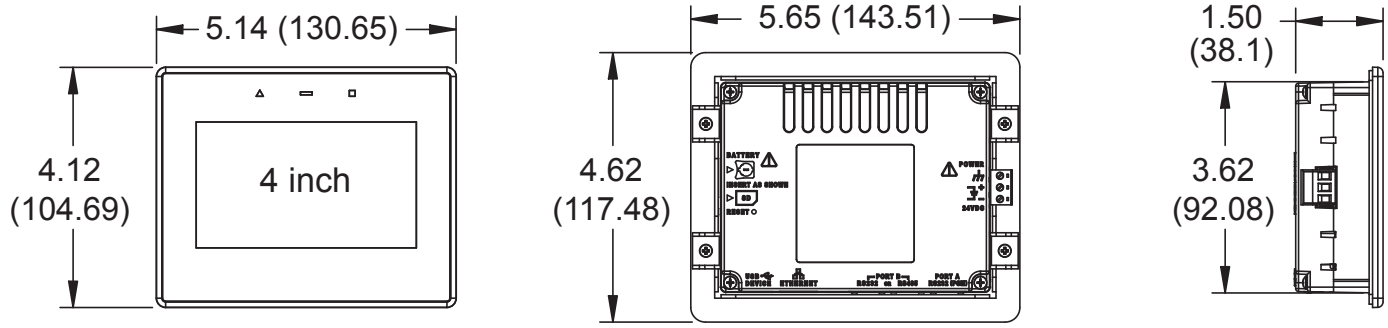
CR1000 and CR3000 HMIs Ordering Guide

MODEL NUMBER*	DESCRIPTION	SIZE (IN.)	PIXELS	SERIAL/ ETHERNET PORTS	USB HOST	DATA LOGGING & WEB SERVER	EXPANSION PORT	SD CARD SLOT
CR1000-04000-00210	4.3" HMI	4.3	480 x 272	2/1	0	No	No	Yes
CR1000-07000-00210	7" HMI	7	800 x 480	2/1	0	No	No	Yes
CR1000-10000-00210	10.4" HMI	10.4	800 x 600	2/1	0	No	No	Yes
CR3000-04000-00310	4.3" HMI with Data Logging and Web Server	4.3	480 x 272	3/1	1	Yes	Yes	Yes
CR3000-07000-00420	7" HMI with Data Logging and Web Server	7	800 x 480	4/2	2	Yes	Yes	Yes
CR3000-10000-00420	10" HMI with Data Logging and Web Server	10.4	800 x 600	4/2	2	Yes	Yes	Yes
CR3000-15000-00420	15" HMI with Data Logging and Web Server	15	1024 x 768	4/2	2	Yes	Yes	Yes

* Dashes in listed model numbers added to improve readability, and are not included in orderable part numbers.

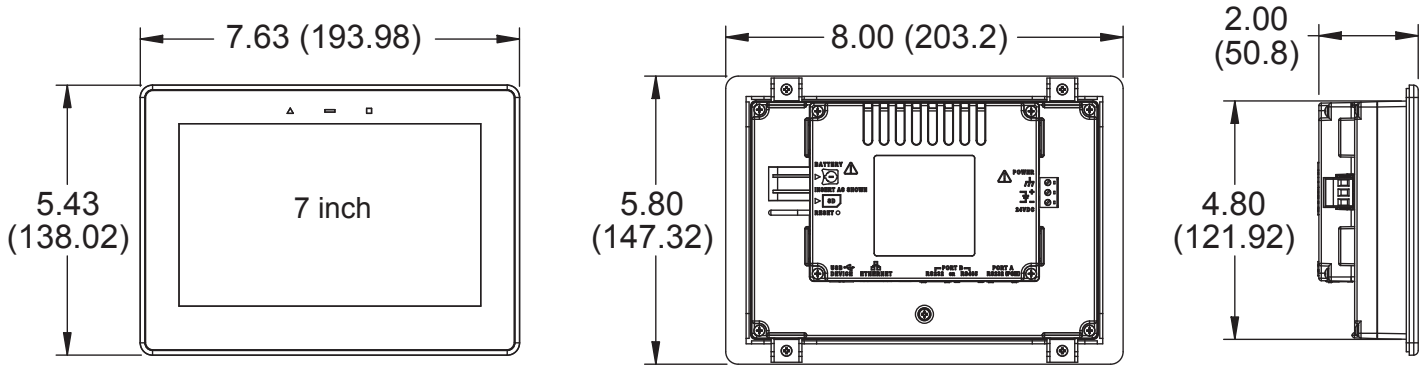
▶▶▶ CR1000 Dimensions *in Inches (mm)*

4.3” models



THIS VIEW SHOWN WITH MOUNTING PLATE AND BRACKETS

7” Models



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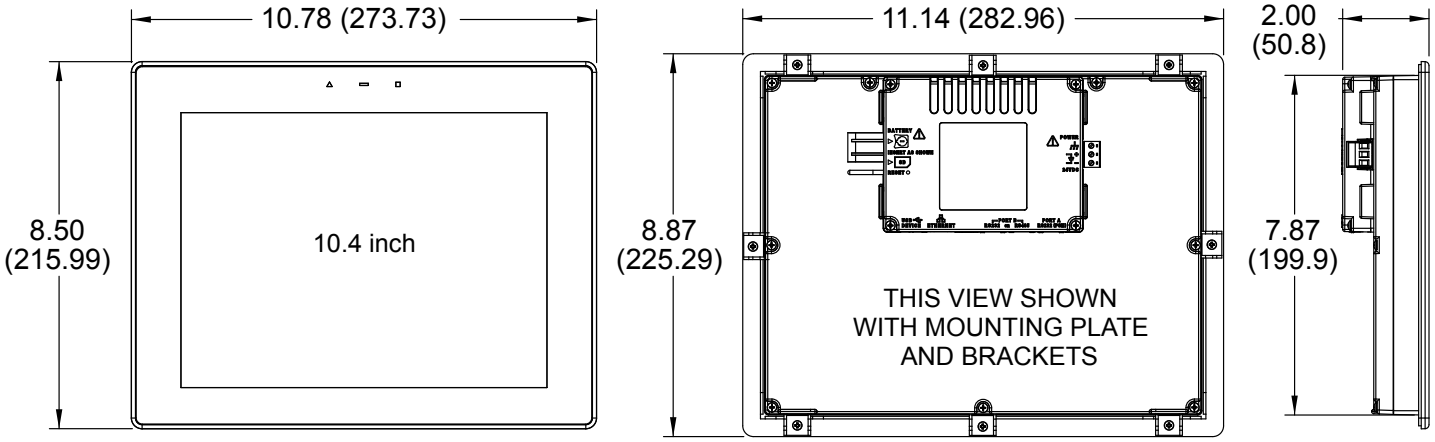
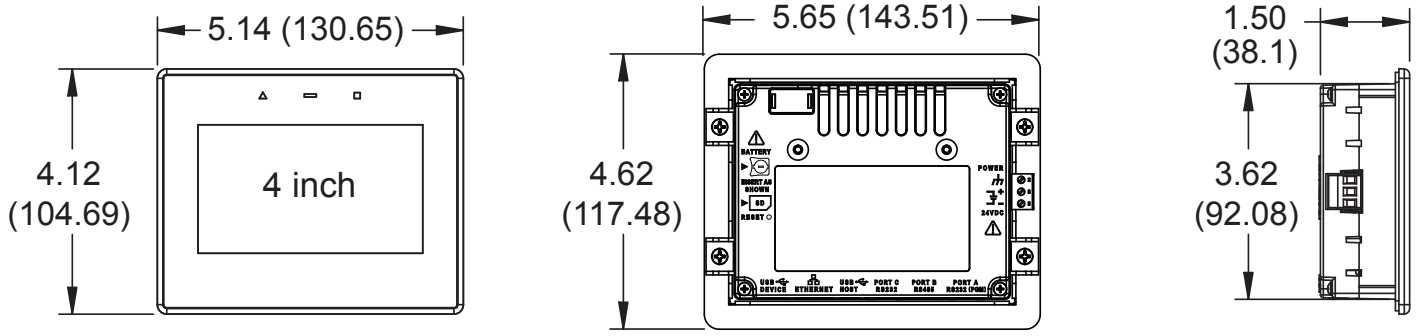
10” Models



▶▶▶ CR3000 Dimensions *in Inches (mm)*

4.3" models



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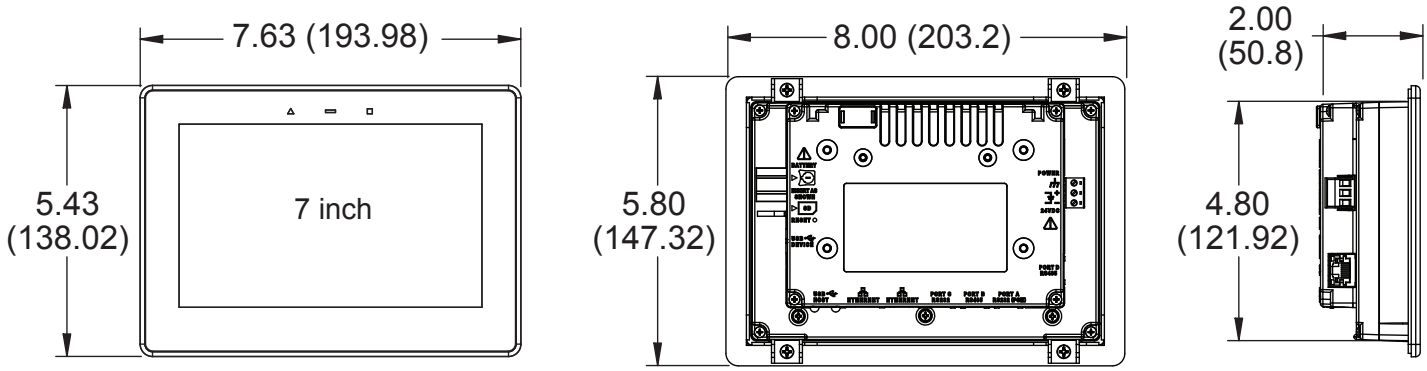
7" Models



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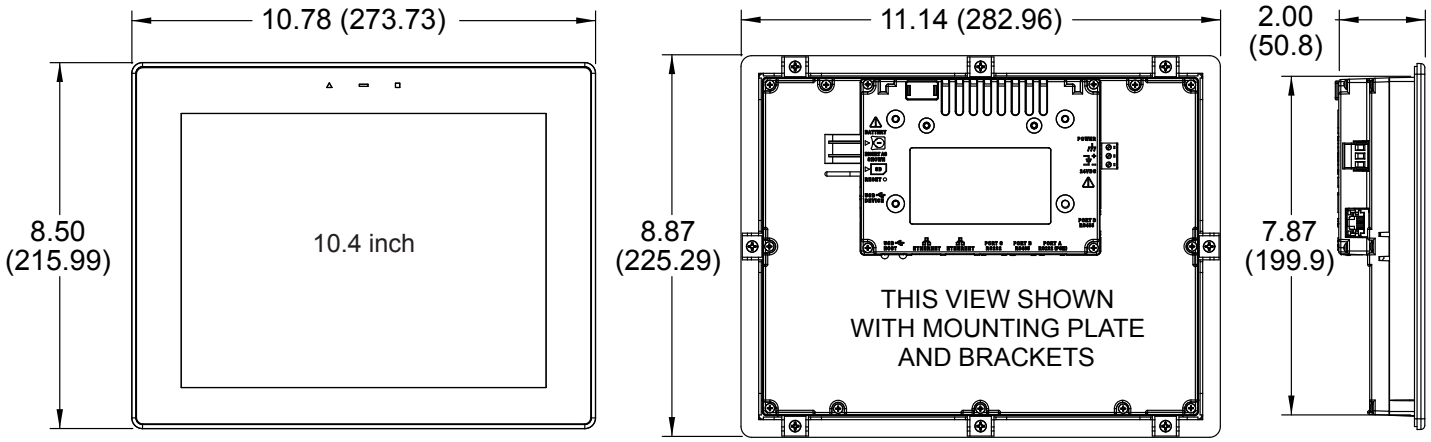
10" Models



red lion®

www.redlion.net

Connect. Monitor. Control.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

Europe
Middle East
Africa
europe@redlion.net

+1 (717) 767-6511

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.

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