Graphite™
Red Lion HMI Series

red lion ®

The new Graphite™ series provides the industry's first rugged HMI solution to combine flexible plug-in modules with protocol conversion, data logging and web-based monitoring and control.

From factories to extreme locations, Graphite allows customers to easily connect, monitor and control their processes. Designed to be extremely rugged, Graphite features cast-aluminum construction, wide temperature ratings and superior shock and vibration specifications. Available in eight different models with sizes ranging from 7" to 15", Graphite's sleek design provides full-color touchscreen displays that consume minimal panel space.

APPLICATIONS

> Machine Automation
> Oil and Gas
> Water/Wastewater
> Plastic Extrusion
> Data Acquisition

PRODUCT HIGHLIGHTS

> Protocol conversion with over 250 protocols
> Built-in web server for remote access
> On-board data logging to SD card or FTP
> Industrial construction, die-cast aluminum housing provides extreme protection
> Extended temperature -20˚ to 60˚ C
> Outdoor/sunlight readable models available
> Widescreen models available
> Dual USB host capability
> Plug-in modules allow expansion beyond normal HMI capabilities

FEATURES & BENEFITS

> Significantly reduce programming time using our easy-to-use, drag-and-drop Crimson 3 software

> Graphite's sleek bezel allows users to save panel or enclosure real estate resulting in real dollar savings

> Rugged construction provides wide temperature range and shock and vibration specifications for installation in harsh environments

> Using modular capability, Graphite can easily accept direct inputs from various devices or provide full PID control

> Modular capabilities include:
  - PID control
  - DC current and voltage
  - RTD/thermocouples
  - Process signals
  - Analog outputs
  - Digital I/O
  - Universal input

industrial automation

CE
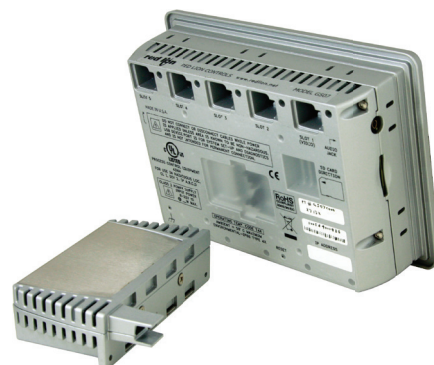
COMMUNICATION PROPERTIES

USB Port: Programming Adheres to USB specification 1.1. Device only using Type B connection.

USB Host Ports: Comply with Universal Serial Bus Specification Rev 2.0. Support data transfers at full-speed. Hardware over current protected (0.5 A max per port).

Serial Ports: Format and Baud Rates for each port are individually software programmable up to 115,200 baud.

PGM Port: RS232 port via RJ12.

COMMS Ports: RS422/485 port via RJ45, and RS232 port via RJ12.

DH485 TXEN: Transmit enable; open collector, $V_{OH} = 15$ VDC, $V_{OL} = 0.5$ V @ 25 mA max.

Ethernet Port: 10 BASE-T / 100 BASE-TX

RJ45 jack is wired as a NIC (Network Interface Card).

Isolation from Ethernet network to Graphite operator interface: 1500 Vrms

LCD DISPLAY

Size:
- G07 – 7 inch
- G09 – 9 inch
- G10 – 10 inch
- G12 – 12 inch
- G15 – 15 inch

Type: TFT

Colors: 16 M

Pixels:
- G07 – 800 X 480
- G09 – 800 X 480
- G10C – 640 X 480
- G10R – 800 X 600
- G10S – 640 X 480
- G12 – 1280 X 800
- G15 – 1024 X 768

Brightness:
- G07C – 500 cd/m^2
- G07S – 1000 cd/m^2
- G09 – 400 cd/m^2
- G10C – 450 cd/m^2
- G10R – 400 cd/m^2
- G10S – 1500 cd/m^2
- G12 – 400 cd/m^2
- G15 – 400 cd/m^2

Backlight*:
- G07 – 50,000 HR TYP.
- G09 – 70,000 HR TYP.
- G10C – 70,000 HR TYP.
- G10R – 70,000 HR TYP.
- G10S – 35,000 HR TYP.
- G12 – 70,000 HR TYP.
- G15 – 70,000 HR TYP.

Touchscreen: Resistive analog

POWER

24 VDC ± 20%

Typical Power:
- G07C – 9 W
- G07S – 10 W
- G09 – 13 W
- G10C/R – 12 W
- G10S – 18 W
- G12 – 16 W
- G15 – 20 W

Maximum Power:
- G07C – 16 W
- G07S – 17 W
- G09 – 20 W
- G10C/R – 19 W
- G10S – 24 W
- G12 – 23 W
- G15 – 27 W

With Modules:
- G07C – 37 W
- G07S – 38 W
- G09 – 45 W
- G10C/R – 48 W
- G10S – 53 W
- G12 – 56 W
- G15 – 60 W

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 10 years.

POWER CONNECTION

High compression cage-clamp terminal block

Wire Strip Length: 0.3" (7.5 mm)

Wire Gauge Capacity: One 14 AWG (2.55 mm) solid, two 18 AWG (1.02 mm) or four 20 AWG (0.61 mm)

CERTIFIED

CE Approved: EN 61326-1 Immunity to Industrial Locations, Emission CISPR 11 Class A, IEC/EN 61010-1, RoHS Compliant

Type 4X Outdoor Enclosure rating (Face only)

IP66 Enclosure rating (Face only)

IP20 Enclosure rating (Rear of unit)

ENVIRONMENTAL

Operating Temperature Range: -20 to 60 °C

Storage Temperature Range: -20 to 70 °C

Vibration to IEC 68-2-6: Operational 5-500 Hz, 4 g (7" model see lit)

Shock to IEC 68-2-27: Operational 40 g

Operating and Storage Humidity: 0 to 85% max. RH non-condensing

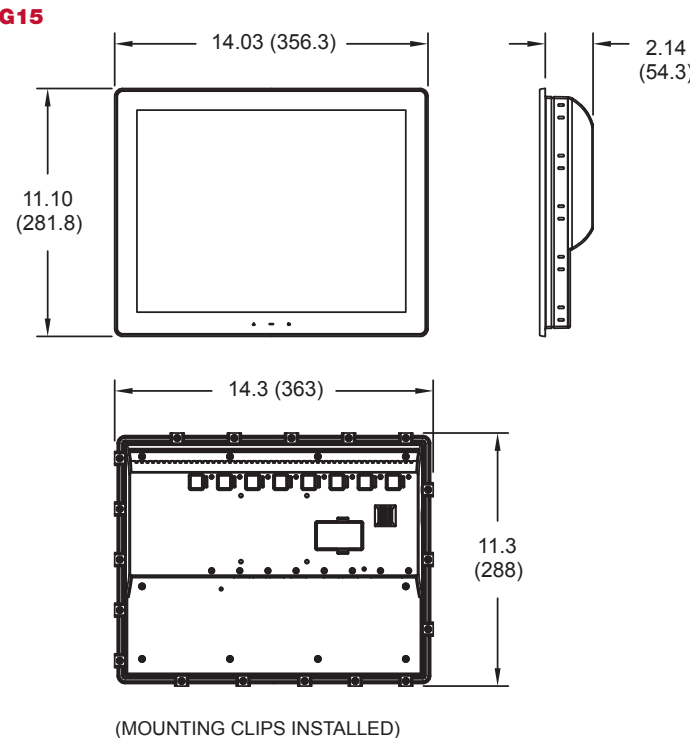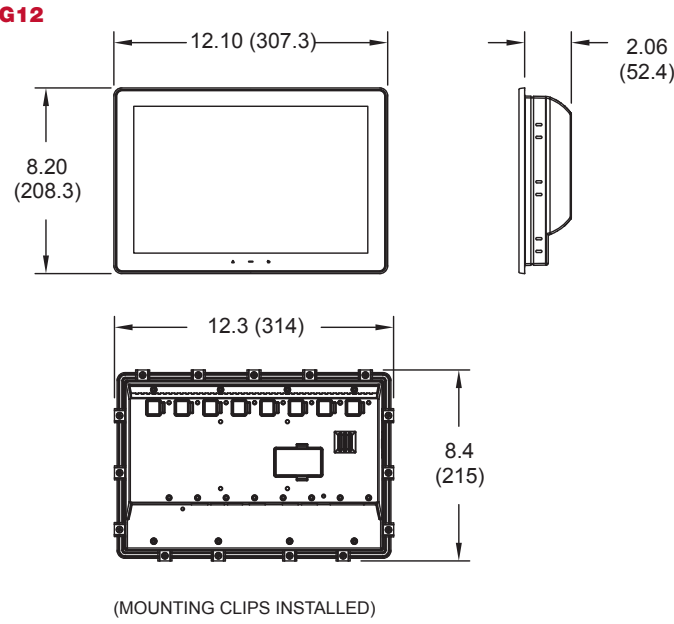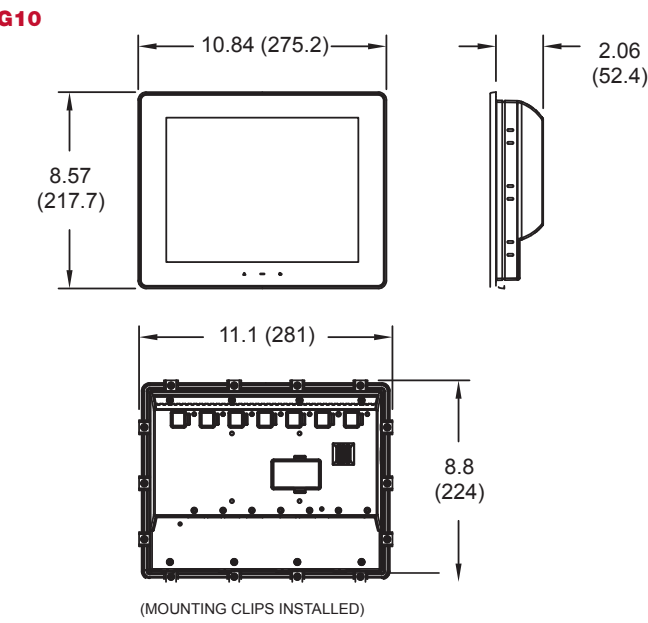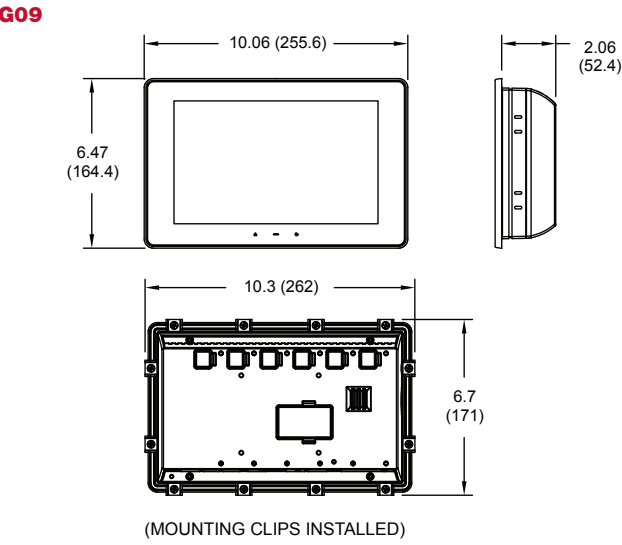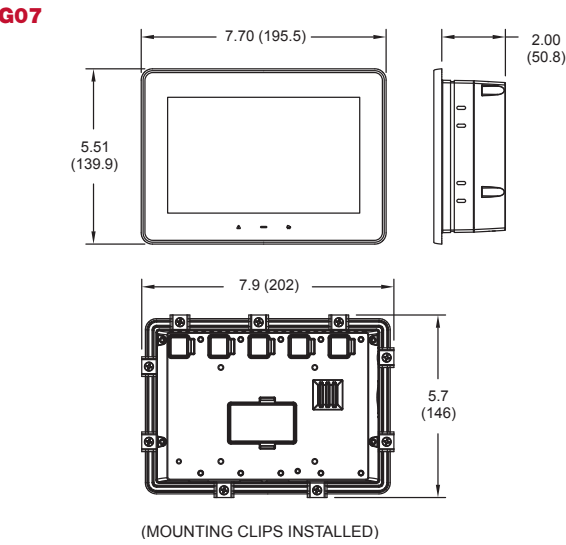Altitude: Up to 2000 meters

MECHANICAL

Construction: Cast aluminum enclosure with NEMA 4X/IP66 rating for indoor/outdoor use when correctly fitted with the gasket provided. Installation Category II, Pollution Degree 2.

Weight:
- G07 – 2.26 lb. (1.03 Kg)
- G09 – 3.39 lb. (1.54 Kg)
- G10 – 4.80 lb. (2.18 Kg)
- G12 – 5.06 lb. (2.29 Kg)
- G15 – 7.73 lb. (3.50 Kg)

G07

7.70 (195.5)   2.00 (50.8)   5.51 (139.9)   7.9 (202)   5.7 (146)

(MOUNTING CLIPS INSTALLED)

G09

10.06 (255.6)   2.06 (52.4)   6.47 (164.4)   10.3 (262)   6.7 (171)

(MOUNTING CLIPS INSTALLED)

G10

10.84 (275.2)   2.06 (52.4)   8.57 (217.7)   11.1 (281)   8.8 (224)

(MOUNTING CLIPS INSTALLED)

G12

12.10 (307.3)   2.06 (52.4)   8.20 (208.3)   12.3 (314)   8.4 (215)

(MOUNTING CLIPS INSTALLED)

G15

14.03 (356.3)   2.14 (54.3)   11.10 (281.8)   14.3 (363)   11.3 (288)

(MOUNTING CLIPS INSTALLED)

PART NUMBER	DESCRIPTION
G07C0000	7" Operator Interface Terminal for Indoor Use
G07S0000	7" Operator Interface Terminal for Outdoor Use
G09C0000	9" Operator Interface Terminal for Indoor Use
G10C0000	10" Operator Interface Terminal for Indoor Use
G10S0000	10" Operator Interface Terminal for Outdoor Use
G10R0000	10" Operator Interface Terminal, High Resolution Display for Indoor Use
G12C0000	12" Operator Interface Terminal for Indoor Use
G12C1100	12" Operator Interface Terminal with Aux. Ethernet and dual RS485 ports
G15C0000	15" Operator Interface Terminal for Indoor Use
G15C1100	15" Operator Interface Terminal with Aux. Ethernet and dual RS485 ports
GMP1RA00	Graphite Module, Single PID, Relay and Analog Outputs
GMP1RM00	Graphite Module, Single PID, Relay Outputs, Heater Current Monitor
GMP1SA00	Graphite Module, Single PID, SSR and Analog Outputs

PART NUMBER	DESCRIPTION
GMP1SM00	Graphite Module, Single PID, SSR Outputs, Heater Current Monitor
GMP2R000	Graphite Module, Single PID, Relay Outputs
GMP2RM00	Graphite Module, Single PID, Relay Outputs and Heater Current Monitor
GMP2S000	Graphite Module, Single PID, SSR Outputs
GMP2SM00	Graphite Module, Single PID, SSR Outputs and Heater Current Monitor
GMDIOR00	Graphite Module, Digital I/O, 8 Inputs and 6 Relays Outputs
GMDIOS00	Graphite Module, Digital I/O, 8 Inputs and 6 Solid State Outputs
GMUIN400	Graphite Module, 4 Universal Analog Inputs
GMOUT400	Graphite Module, 4 Analog Outputs
GMINI800	Graphite Module, 8 DC Current Inputs
GMINV800	Graphite Module, 8 DC Voltage Inputs
GMTC8000	Graphite Module, 8 Thermocouple Inputs
GMRTD600	Graphite Module, 6 RTD Inputs

Web-Enabled Phone
Mobile Phone
Database
SCADA OPC
Cloud
Remote Programming/Control
Send and Receive Files via FTP
Red Lion Switch
ETHERNET #1
Red Lion Switch
Text Msg (SMS)
SD Card
TRANSFER LOGGING
USB Thumb
USB Keyboard
USB Barcode Reader
Serial
Drive
Red Lion Modular Controller
Square D PLC
Mitsubishi PLC
Allen-Bradley PLC
Drive
Siemens® PLC
Red Lion Panel Meter

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

**Europe
Middle East
Africa**
europe@redlion.net

+31 (0) 33 4723-225

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 award-winning 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. For more information, please visit www.redlion.net. Red Lion is a Spectris company.

red lion®

www.redlion.net

Connect. Monitor. Control.

Graphite® HMIs
Red Lion Automation Series

The Graphite® operator panels are the industry's first rugged HMI touchscreens to combine I/O modules with protocol conversion, data logging, web-based monitoring and IEC 61131 control capabilities.

Available in nine different sizes ranging from 7" to 15", Graphite HMIs feature sleek full-color touchscreens in a streamlined, compact footprint for easy installation. Rugged cast-aluminum construction supports outdoor and indoor display with wide operating temperatures and high shock/vibration tolerances that enable organizations to connect, monitor and control processes regardless of environment. Unify disparate devices by converting up to 20 industrial protocols simultaneously from a built-in library of over 300 supported drivers. In addition, select from a wide variety of module and expansion options to seamlessly extend capabilities and address varying requirements.

INDUSTRY APPLICATIONS

> Factory Automation
> Oil & Gas
> Power & Utilities
> Maritime
> Water/Wastewater
> Plastic Extrusion
> Data Acquisition
> Industrial Internet of Things (IIoT)

PRODUCT HIGHLIGHTS

> Protocol Conversion of over 300+ Drivers
> Built-In Web Server for Remote Access
> Real-Time Data Logging to SD Card or via FTP
> Rugged Construction for Extreme Protection
> Wide Operating Temperature Range
> Outdoor Sunlight-Readable Models
> Scalable Modules and Expansion Options
> IEC 61131 control capabilities with Crimson Control

FEATURES & BENEFITS

> Sleek Full-Color HMI Touchscreens
  - 7" to 15" models with narrow tablet-style bezels
  - Outdoor sunlight-readable and widescreen models
> Versatile Module and Expansion Options
  - Choose from a mix of I/O, PID control or communication to populate up to 8 local module slots*
  - Use Crimson Control module for enhanced IEC 61131 logic control programming
  - Connect Graphite Expansion Racks to easily scale
  - Extend even further with E3 I/O™ high-density modules
> Rugged Environmental Specifications
  - Wide -20° to 60°C HMI operating temperature
  - High shock and vibration tolerance
  - CE, UL/cUL, UL/cUL Hazardous, ATEX, IECEx and ABS approvals

> Industry-Leading Protocol Conversion
  - Communicate with over 300 industrial protocols
  - Support up to 20 simultaneous protocols
  - Convert between serial, USB and Ethernet devices
  - Manage multi-vendor environments with ease
> Powerful Integration Functionality
  - Intuitive Crimson 3.0 software for easy drag-and-drop configuration
  - Ethernet, USB and serial ports make communication simple
  - Built-in data logging enhances troubleshooting and helps meet regulatory requirements
  - Robust web server provides remote access and control to reduce costly site visits

  * Model dependent

industrial automation

COMMUNICATION PROPERTIES

USB Ports
Programming Port: One (1) USB Type B adheres to USB specification 1.1
Host Ports: Two (2) USB Type A complies with USB specification 2.0
Supports full-speed data transfers
Hardware over current protected (0.5 A max per port)
Serial Ports: Format/Baud rates independently configurable
Programming Port: One (1) RS-232 port with RJ12 connector
Communication Ports:
One (1) RS-232 port via RJ12 connector
One (1) RS-422/485 port via RJ45 connector
Optional Serial Ports:
One (1) RS-232 port via RJ12 connector
One (1) RS-422/485 port with via RJ45 connector
Ethernet Ports: 1500 Vrms network isolation
One (1) 10/100Base-T(X) port via RJ45 connector
Optional Ethernet Port: One (1) 10/100Base-T(X) port via RJ45 connector

POWER INPUT

10 to 30 VDC

Model	Typical	Max	With Modules
G07C	8 W	14 W	35 W
G07S	9 W	15 W	36 W
G09	12 W	18 W	43 W
G10C/R	11 W	17 W	47 W
G10S	16 W	22 W	52 W
G12C	15 W	20 W	55 W
G12S	17 W	23 W	57 W
G15	18 W	24 W	58 W

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 6 years

POWER CONNECTION

High compression cage-clamp terminal block
Wire Strip Length: 0.3" (7.5 mm)
Wire Gauge Capacity: One 14 AWG (1.63 mm) solid,
two 18 AWG (1.02 mm) or four 20 AWG (0.81 mm)

NETWORK MEDIA

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

ENVIRONMENTAL

Operating Temperature: -20°C to 60°C
Storage Temperature: -20°C to 70°C
Operating Humidity: 0 to 85% (non condensing)
Operating Altitude: Up to 2000 meters
Shock: 40 g per IEC 68-2-27
Vibration: 4 g @ 5-500 Hz per IEC 68-2-6

LCD DISPLAY

Touchscreen: Resistive analog

Model	Size	Pixels	Brightness	Backlight
G07C	7 in	800 X 480	500 cd/m²	50,000 HR TYP.
G07S	7 in	800 X 480	1000 cd/m²	70,000 HR TYP.
G09	9 in	800 X 480	400 cd/m²	70,000 HR TYP.
G10C	10 in	640 X 480	450 cd/m²	70,000 HR TYP.
G10R	10 in	800 X 600	400 cd/m²	70,000 HR TYP.
G10S	10 in	640 X 480	2500 cd/m²	35,000 HR TYP.
G12C	12 in	1280 X 800	400 cd/m²	70,000 HR TYP.
G12S	12 in	1280 X 800	1600 cd/m²	100,000 HR TYP.
G15	15 in	1024 X 768	400 cd/m²	70,000 HR TYP.

CERTIFICATION & COMPLIANCE

CE Approved
EN 61326-1 Immunity to Industrial Locations Emission CISPR 11 Class A
IEC/EN 61010-1
RoHS Compliant
ATEX Approved
II 3 G Ex ic nA IIC T4 Gc
II 3 D Ex tc IIIC T135°C Dc
DEMKO 14 ATEX 1387X
EN 60079-0, -11, -15, -31
IECEx Approved
Ex ic nA IIC T4 Gc
Ex tc IIIC T135°C Dc
IECEx UL 15.0035X
IEC 60079-0, -11, -15, -31
UL Approved
cULus Listed for Ordinary Location: File #E302106
UL 61010-1, -2-201
cULus Listed for Hazardous Location: File #E317425
Class I, Division 2, Groups A, B, C and D
Class II, Division 2, Groups F and G
Class III, Division 2
ANSI/ISA 12.12.01, C22.2 No. 213-M1987, 157-92
Type 4X Indoor / IP66 Enclosure rating (Face only) for all models
Type 4X Outdoor Enclosure rating (Face only) for GxxSxxxx models
ABS Type Approval for Shipboard Applications

MECHANICAL

Construction: Cast aluminum enclosure with NEMA 4X/IP66 rating for
indoor/outdoor use when correctly fitted with the gasket provided.
Installation Category II, Pollution Degree 2.
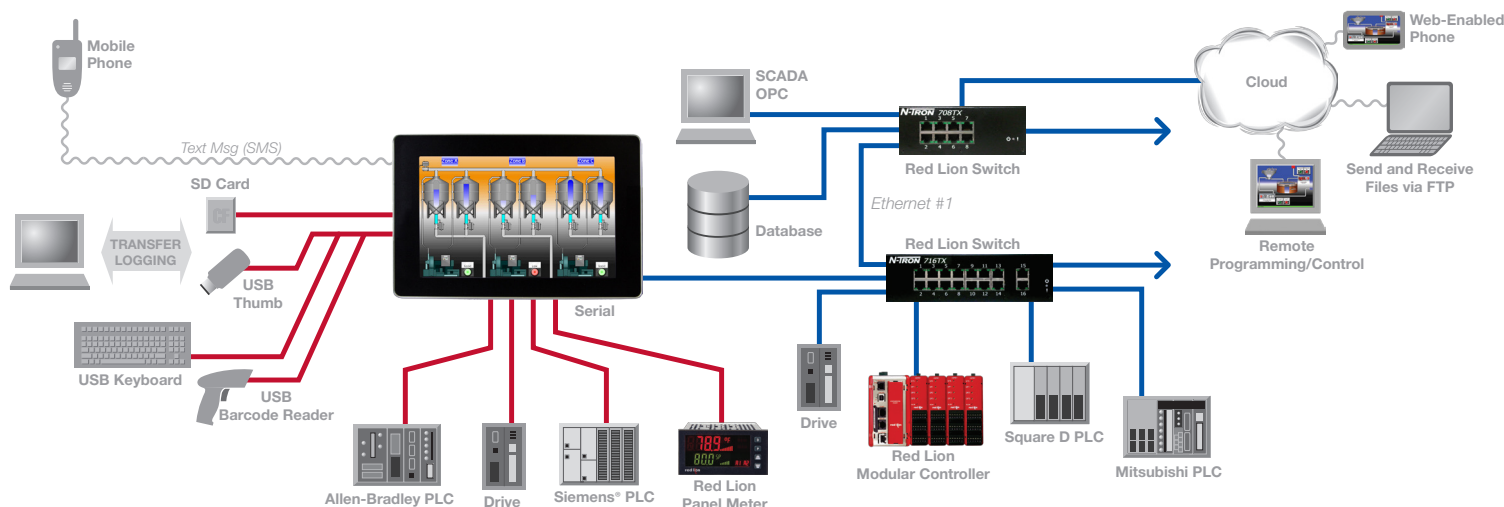Weight:
G07 – 2.26 lb. (1.03 kg)
G09 – 3.39 lb. (1.54 kg)
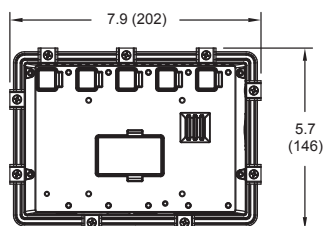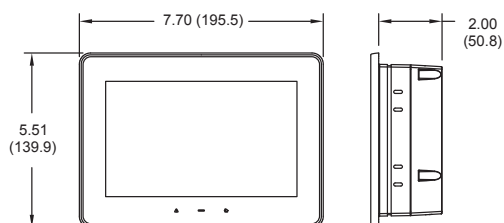G10 – 4.80 lb. (2.18 kg)
G12 – 5.06 lb. (2.29 kg)
G15 – 7.73 lb. (3.50 kg)

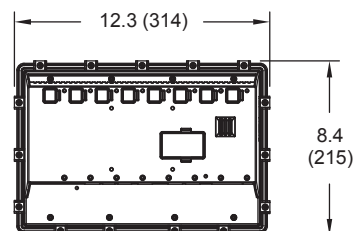Specifications are subject to change. Visit www.redlion.net for more information.

Mobile Phone

Text Msg (SMS)

SD Card

TRANSFER LOGGING

USB Thumb

USB Keyboard

USB Barcode Reader

Serial

Allen-Bradley PLC

Drive

Siemens® PLC

Red Lion Panel Meter

SCADA OPC

Database

Ethernet #1

Red Lion Switch

Red Lion Switch

Drive

Red Lion Modular Controller

Square D PLC

Mitsubishi PLC

Cloud

Web-Enabled Phone

Send and Receive Files via FTP

Remote Programming/Control

G07

7.70 (195.5)

2.00 (50.8)

5.51 (139.9)

7.9 (202)

5.7 (146)

(MOUNTING CLIPS INSTALLED)

G09

10.06 (255.6)

2.06 (52.4)

6.47 (164.4)

10.3 (262)

6.7 (171)

(MOUNTING CLIPS INSTALLED)

G10

10.84 (275.2)

2.06 (52.4)

8.57 (217.7)

11.1 (281)

8.8 (224)

(MOUNTING CLIPS INSTALLED)

G12

12.10 (307.3)

2.06 (52.4)

8.20 (208.3)

12.3 (314)

8.4 (215)

(MOUNTING CLIPS INSTALLED)

G15

14.03 (356.3)

2.14 (54.3)

11.10 (281.8)

14.3 (363)

11.3 (288)
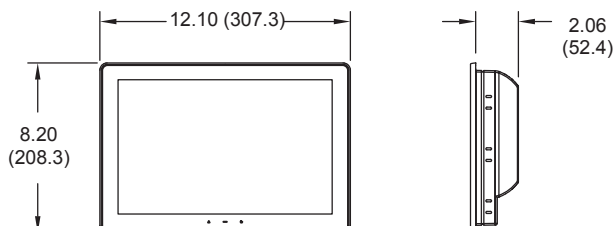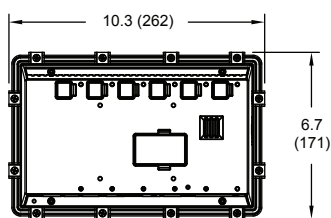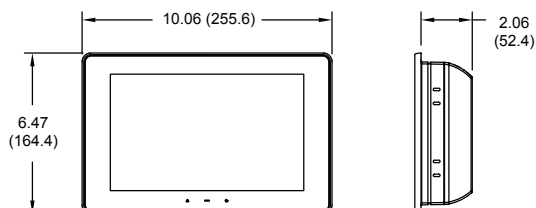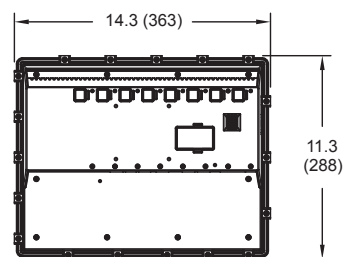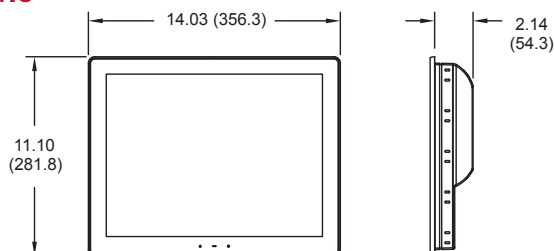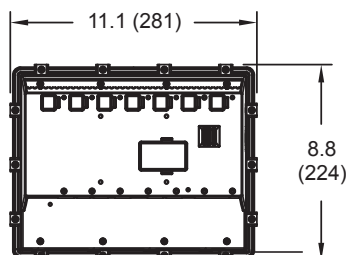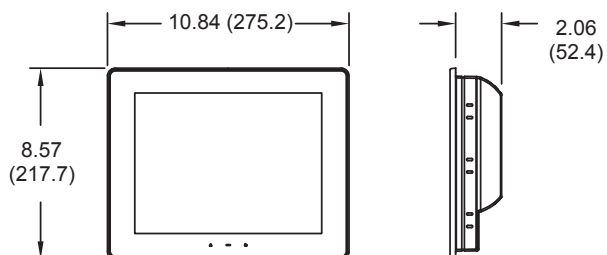
(MOUNTING CLIPS INSTALLED)

GRAPHITE OPERATOR PANELS

MODEL NUMBER	DESCRIPTION
G07C0000	7" Operator Interface Terminal for Indoor Use
G07S0000	7" Operator Interface Terminal for Outdoor Use
G09C0000	9" Operator Interface Terminal for Indoor Use
G09C1000	9" Operator Interface Terminal for Indoor Use with Aux. Ethernet port
G10C0000	10" Operator Interface Terminal for Indoor Use
G10C1000	10" Operator Interface Terminal for Indoor Use with Aux. Ethernet port
G10R0000	10" Operator Interface Terminal, High Resolution Display for Indoor Use
G10R1000	10" Operator Interface Terminal, High Resolution Display for Indoor Use with Aux. Ethernet port
G10S0000	10" Operator Interface Terminal for Outdoor Use
G10S1000	10" Operator Interface Terminal for Outdoor Use with Aux. Ethernet port
G12C0000	12" Operator Interface Terminal for Indoor Use
G12C1100	12" Operator Interface Terminal with Aux. Ethernet and dual RS485 ports
G12S1100	12" Operator Interface Terminal for Outdoor Use with Aux. Ethernet and dual RS485 ports
G15C0000	15" Operator Interface Terminal for Indoor Use
G15C1100	15" Operator Interface Terminal with Aux. Ethernet and dual RS485 ports

CRIMSON CONTROL MODULE

MODEL NUMBER	DESCRIPTION
GMCC0000	Graphite Module, enables IEC 61131 control capabilities via Crimson Control

PID CONTROL MODULES

MODEL NUMBER	DESCRIPTION
GMP1RA00*	Graphite Module, Single PID, Relay and Analog Outputs
GMP1RM00*	Graphite Module, Single PID, Relay Outputs, Heater Current Monitor
GMP1SA00	Graphite Module, Single PID, SSR and Analog Outputs
GMP1SM00	Graphite Module, Single PID, SSR Outputs, Heater Current Monitor
GMP2R000*	Graphite Module, Dual PID, Relay Outputs
GMP2RM00*	Graphite Module, Dual PID, Relay Outputs and Heater Current Monitor
GMP2S000	Graphite Module, Dual PID, SSR Outputs
GMP2SM00	Graphite Module, Dual PID, SSR Outputs and Heater Current Monitor

DATA ACQUISITION MODULES

| MODEL NUMBER	DESCRIPTION
GMDIOR00*	Graphite Module, Digital I/O, 8 Inputs and 6 Relays Outputs
GMDIOS00	Graphite Module, Digital I/O, 8 Inputs and 6 Solid State Outputs
GMUIN400	Graphite Module, 4 Universal Analog Inputs
GMOUT400	Graphite Module, 4 Analog Outputs
GMINI800	Graphite Module, 8 DC Current Inputs
GMINV800	Graphite Module, 8 DC Voltage Inputs
GMTC8000	Graphite Module, 8 Thermocouple Inputs
GMRTD600	Graphite Module, 6 RTD Inputs
GMSG10R0*	Graphite Module, 1 Strain Gage Input, Relay Output
GMSG10S0	Graphite Module, 1 Strain Gage Input, SSR Output
GMSG11R0*	Graphite Module, 2 Strain Gage Input, Relay Output
GMSG11SO	Graphite Module, 2 Strain Gage Input, SSR Output

COMMUNICATION MODULES

MODEL NUMBER	DESCRIPTION
GMCAN000	Graphite Module, CAN Protocol Interface
GMJ19390	Graphite Module, J1939 Protocol Interface
GMDN0000	Graphite Module, DeviceNet Protocol Interface
GMPBDP00	Graphite Module, PROFIBUS DP Protocol Interface
GMHSPA00	Graphite Module, HSPA+ Cellular

EXPANSION RACKS

MODEL NUMBER	DESCRIPTION
GEXRACK1	Graphite Wide Expansion Rack for Modules
GEXRACK2	Graphite Standard Expansion Rack for Modules
CBLUSBM0	USB Tethering Cable, 0.5 M Metal Jacketed
CBLUSBM1	USB Tethering Cable, 1 M Metal Jacketed
CBLUSBM2	USB Tethering Cable, 2 M Metal Jacketed

* Non ATEX approved modules
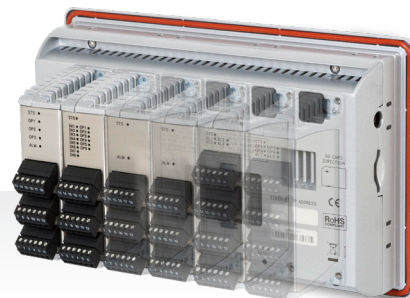
BUILD THE PERFECT HMI SOLUTION.

With up to eight available plug-and-play module slots and additional expansion rack options, Graphite HMIs provide a scalable all-in-one platform to help integrate complex multi-vendor environments. Employing modules to address PID control, data acquisition and communication, Graphite HMIs allow users to connect, monitor and control a wide array of equipment to meet specific application requirements. In addition, our Crimson Control module enables users to leverage industry-standard IEC 61131 programming languages such as Ladder Logic, Function Block, Structured Text and Instruction List to develop logic code much like a Programmable Logic Controller (PLC) or Remote Telemetry Unit (RTU) without the added expense.

RED LION™
a spectris company

www.redlion.net
EXCELLENCE. REDEFINED.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

Europe
Middle East
Africa
europe@redlion.net
+1 (717) 767-6511

As global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our award-winning 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. For more information, please visit www.redlion.net. Red Lion is a Spectris company.

CR1000 and CR3000 HMIs

Red Lion Automation Series

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, UL/cUL Hazardous

> 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

CE   c(UL)us LISTED

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
Class I, Division 2, Groups A, B, C and D for CR3000 only
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.

4.3" models

5.14 (130.65)

4.12 (104.69)

4 inch

5.65 (143.51)

4.62 (117.48)

1.50 (38.1)

3.62 (92.08)
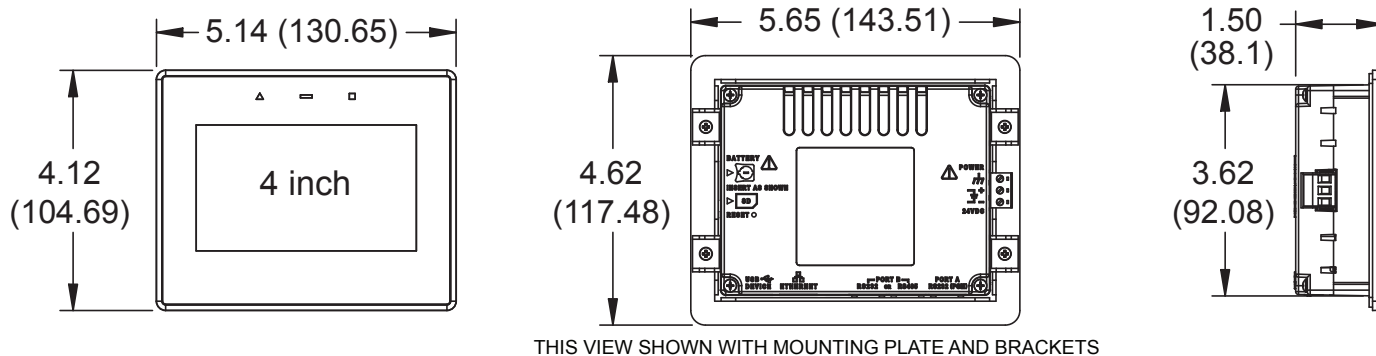
THIS VIEW SHOWN WITH MOUNTING PLATE AND BRACKETS

7" Models

7.63 (193.98)

5.43 (138.02)

7 inch

8.00 (203.2)

5.80 (147.32)

2.00 (50.8)

4.80 (121.92)
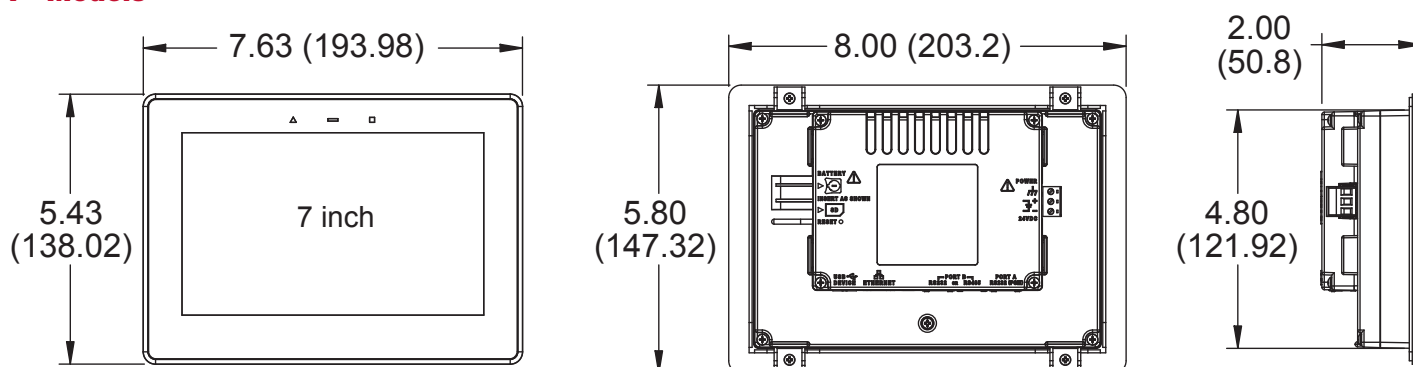
THIS VIEW SHOWN WITH MOUNTING PLATE AND BRACKETS

10" Models

10.78 (273.73)

8.50 (215.99)

10.4 inch

11.14 (282.96)

8.87 (225.29)

THIS VIEW SHOWN WITH MOUNTING PLATE AND BRACKETS

2.00 (50.8)

7.87 (199.9)

4.3" models

5.14 (130.65)

4.12 (104.69)

4.3 inch

5.65 (143.51)

4.62 (117.48)

THIS VIEW SHOWN WITH
MOUNTING PLATE AND BRACKETS

1.50 (38.1)

1.26 (32)

3.62 (92.08)

Module sold
separately

7" Models

7.63 (193.98)

5.43 (138.02)

7.0 inch

8.00 (203.2)

5.80 (147.32)

THIS VIEW SHOWN WITH
MOUNTING PLATE AND BRACKETS

2.00 (50.8)

1.26 (32)

4.80 (121.92)

Module sold
separately

10" Models

10.78 (273.73)

8.50 (215.99)

10.4 inch

11.14 (282.96)

8.87 (225.29)

THIS VIEW SHOWN
WITH MOUNTING PLATE
AND BRACKETS

2.00 (50.8)

1.26 (32)

7.87 (199.9)

Module sold
separately

15" Models

14.36 (364.6)

11.42 (290.1)

15.0 inch

14.31 (363.5)

11.38 (289.1)

THIS VIEW SHOWN
WITH MOUNTING PLATE
AND BRACKETS

2.64 (67.2)

1.26 (32)

10.38 (263.7)

Module sold
separately

RL
RED LION™
a spectris company

www.redlion.net
EXCELLENCE. REDEFINED.

Americas
sales@redlion.net

Asia-Pacific
asia@redlion.net

Europe
Middle East
Africa
europe@redlion.net
+1 (717) 767-6511

As global experts in communication, monitoring and control for industrial automation and networking, Red Lion has been delivering innovative solutions for over forty years. Our award-winning 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. For more information, please visit www.redlion.net. Red Lion is a Spectris company.