# DA10D and DA30D Protocol Conversion and Data Acquisition Systems

*Red Lion Automation Series*

## ►►► Data Acquisition

## The DA10D and DA30D Data Stations provide powerful protocol conversion and data acquisition capabilities to unlock valuable data from orphaned or legacy equipment and share with plant floor, enterprise or cloud platforms with ease.

The benefits of end-to-end connectedness are clear – whether on the plant floor or in the front office, employees should be able to act on real-time data from virtually any equipment, anywhere, to make operational decisions that have meaningful business impact. Offering native support for over 300 industrial drivers, out-of-box OPC UA server capability, and simple point-and-click configuration of MQTT connectors for some of the industry's most popular IIoT platforms, the DAx0D Protocol Converter and Data Acquisition platform was designed to act as a key part of any plant's industrial data collection, visualization and management system.

### INDUSTRY APPLICATIONS

> Factory Automation
> Automotive
> Food & Beverage
> Oil & Gas

### PRODUCT HIGHLIGHTS

> Supports over 300 industrial drivers
> Industrial environmental specifications
  - Wide operating temperature
  - High shock and vibration tolerance
  - UL Class 1, Div 2 (model dependent)
> Optional real-time data, event and security logging with cryptographic signature support

### FEATURES & BENEFITS

> Industry-leading protocol conversion
  - Communicate with over 300 protocols
  - Easily convert between serial, and Ethernet devices
  - Manage multi-vendor environments with ease
  - Optional expansion port for select add-on network modules
> Easy to Use Web Server
  - Provides remote access and control to reduce costly site visits
  - Responsive design with full-screen display option ideal for tablet or mobile display
  - Supports HTTPS operation with the provision of certificates and HTTP redirect
  - CSS and JavaScript support

> Powerful Integration Capabilities
  - Built-in MQTT connectors accelerate IIoT projects with point-and-click simplicity
  - Embedded OPC UA server functionality eliminates need for separate system hardware
  - SD card slot for data logging and database upload/download (model dependent)
  - Optional SQL queries feature simplifies batch and recipe management
  - Configured using Crimson® software

**industrial automation**

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## COMMUNICATION PROPERTIES

USB Ports
USB Device:
DA10D and DA30D - (1) USB port
Type B adheres to USB specification 1.1
USB Host:
DA30D – (1) USB Host ports
Type A adheres to USB specification 2.0 and supports full-speed data transfers with overcurrent protection (0.5 A max per port)
Serial Ports for programming or communications: Format/Baud rates independently configurable
DA10D - One (1) RS232 and One (1) RS232/RS485
DA30D - Two (2) RS232 and One (1) RS485
Ethernet Ports: 1500 Vrms network isolation
DA10D - One (1) 10/100 BASE-T(X) port (RJ45)
DA30D - One (1) 10/100 BASE-T(X) port (RJ45)

## POWER INPUT

DA10D 24 VDC +/- 20%
DA30D 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 1 Div 2 Groups A, B, C and D - UL Hazardous Ratings (DA30D only)

## MECHANICAL

Construction: Polycarbonate enclosure with IP40 rating for indoor use
Weight:
DA10D – 6.8 oz (192.78 g)
DA30D – 6.9 oz (195.61 g)
Specifications are subject to change. Visit www.redlion.net for more information.
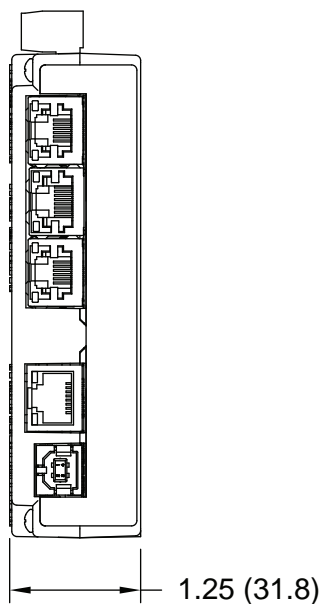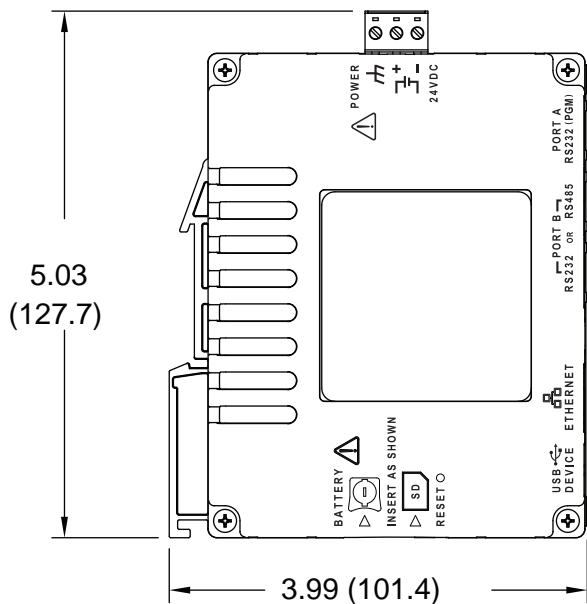
## DA10 and DA30 Ordering Guide

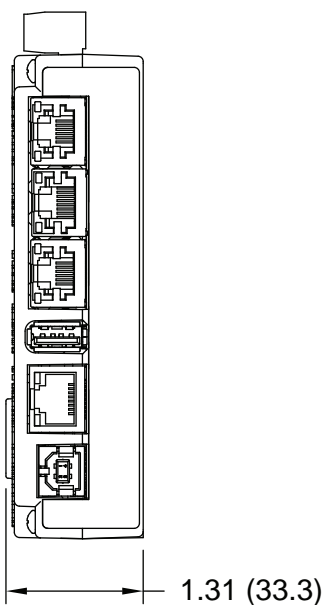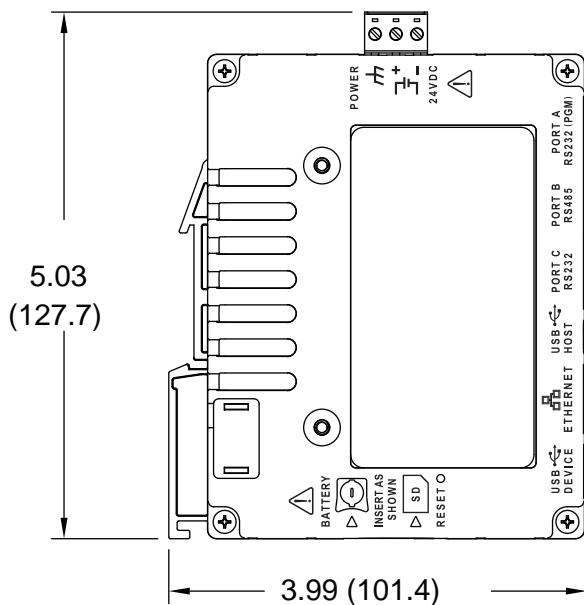| MODEL NUMBER* | DESCRIPTION | SERIAL/ ETHERNET PORTS | USB HOST | DATA LOGGING & WEB SERVER | EXPANSION PORT | SD CARD SLOT | VIRTUAL HMI RESOLUTION |
|---|---|---|---|---|---|---|---|
| DA10D-0C-000000-000 | Protocol Converter and Data Acquisition System | 2/1 | 0 | No | No | Yes | N/A |
| DA30D-0F-000000-000 | High Performance Protocol Converter and Data Acquisition System with Data Logger, Web Server and Virtual HMI | 3/1 | 1 | Yes | Yes | Yes | 480x272 800x480 1280x720 |

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

## DA10D0C000000000



5.03
(127.7)

3.99 (101.4)

1.25 (31.8)

## DA30D0F000000000



5.03
(127.7)

3.99 (101.4)

1.31 (33.3)

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