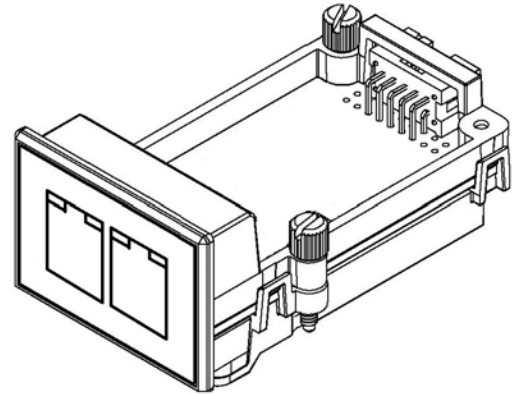**RedLion™**

USAT
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DA Serial Port Sled
Installation Guide

- Individually isolated serial ports
- Three product offerings:
  - Two RS232 ports
  - Two RS485/RS422 ports
  - One RS232 port and one RS485/RS422 port
- Up to 5000 Vrms isolation
- Industrial rated for harsh environments
- Wide operating temperature range
- Simplified deployment architecture
- Field installable

CE

For use with DA50 and DA70 series covered in DEMKO 20 ATEX 2268X and IECEx UL 20.0007X certificates

PACKAGE CHECKLIST

This product package should contain the items listed below. If any items are missing or damaged, contact Red Lion immediately.
- DA Serial Sled
- Installation Guide

SAFETY SUMMARY

All safety related regulations, local codes and instructions that appear in this document or on equipment must be observed to ensure personal safety and to prevent damage to either the device or equipment connected to it.

Do not use these products to replace proper safety interlocking. No software-based device (or any other solid-state device) should ever be designed to be responsible for the maintenance of personnel safety or consequential equipment not equipped with safeguards. Red Lion disclaims any responsibility for damages, either direct or consequential, that result from the use of this equipment in a manner not specified.

⚠ **CAUTION: Risk of Danger**
Read complete instructions prior to installation and operation of the unit.

ATTENTION : Risque de danger
Lire les instructions complètes avant l'installation et l'utilisation de l'appareil.

ORDERING INFORMATION

DESCRIPTION	PART NUMBER
2x RS232 ports (RJ12 connectors)	DA S00 PN22 21IS 000
2x RS485/RS422 ports (RJ45 connectors)	DA S00 PN24 42IS 000
1x RS232 port, 1x RS485/RS422 port (RJ12 and RJ45 connectors respectively)	DA S00 PN22 45IS 000

Spaces in listed part numbers are shown to improve readability, do not include when searching for or ordering these parts.

A listing of the entire family of products and accessories can be found at www.redlion.net

SPECIFICATIONS

1. **POWER REQUIREMENTS**: Power is supplied by the DA host controller.
   Max Power: 1.5 W
2. **INTERFACES:**
   Individually isolated RS232, RS485/RS422
   RS232 ports accessed via an RJ12 jack
   RS485/RS422 ports accessed via an RJ45 jack
3. **ENVIRONMENTAL CONDITIONS**:
   Operating Temperature Range: -40 to 75 °C
   Storage Temperature Range: -40 to 80 °C
   Vibration to IEC 60068-2-6: Operational 5-500 Hz, 2 g
   Shock to IEC 60068-2-27: Operational 15 g
   Operating and Storage Humidity: 0 to 95% max. RH non-condensing
   Altitude: Up to 2000 meters
4. **CERTIFICATIONS AND COMPLIANCES**:
   Refer to the controller manual for agency certifications.
   CE Approved
     EN 61326-1 Immunity to Industrial Locations
     Emission CISPR 11 Class A
     IEC/EN 61010-1
     RoHS Compliant
5. **INSTALLATION REQUIREMENTS**: Sled must be installed inside the unit case with the hardware provided. See "Installing the DA Serial Sled" for more details
6. **WEIGHT**: 3.1 oz (88 g)

INSTALLING THE DA SERIAL SLED

CAUTION: Follow standard ESD precautionary procedures.
ATTENTION: Suivez les procédures de précaution standard de décharge électrostatique.

WARNING - Disconnect all power to the unit before installing or removing sleds.
AVERTISSEMENT - Débranchez l'alimentation électrique de l'appareil avant d'installer ou de retirer les tiroirs.

DA50 INSTALLATION

1. Prior to installing the Sled for your DA50 application, ensure that the unit is not receiving power.
2. Disconnect and remove your DA50 from the DIN rail.
3. Remove the DA50 unit's front cap by squeezing the sides and pulling.
4. Slide out the sled holder.
5. Install a sled into the sled holder and hand tighten the captive fasteners, or use a screwdriver.
6. Re-install the sled holder containing the sled into the Converter. Make sure it is fully seated.
7. Replace the front cap.

DA70 INSTALLATION

1. Prior to installing the Sled(s) for your DA70 Controller application, ensure that the Controller is not receiving power.
2. Remove the carriage from the Controller case by releasing the two retaining latches and pulling straight out from Controller
3. Remove blank panel from the carriage slot of the target sled installation location.
4. Install sled by aligning the two sled mounting hole fasteners, with the controller mounting posts. Be sure locating holes on bottom side of sled align with the locating pins on the carriage, and the sled sits flush against the carriage.
5. Hand tighten the sled captive fasteners, or use a screwdriver if necessary.
6. Repeat the above steps for any additional sleds.
7. Carefully align the carriage with the Controller base and press carriage into the controller.

CAUTION: Failure to properly align the carriage can result in damage to the Sled connector pins.
ATTENTION: Si le tiroir n'est pas correctement aligné, les broches du connecteur du tiroir risquent d'être endommagées.

8. Close the retaining latches to ensure the carriage is fully seated into the Controller case.

CONFIGURING THE SERIAL SLED

DA50N CONFIGURATION

When using the Serial Sled in your installation, browse to Automation -> Serial Ports to configure serial port settings.

Refer to the Software Guide for more information on configuring a Serial Sled.

DA50D or DA70D CONFIGURATION

The Dual RS485 Serial Sled, Dual RS232 Serial Sled and the RS485/RS232 Serial Sled are configured using Crimson 3.1 (or later) software. After selecting the appropriate serial sled, the serial ports are configured in the same manner as native serial ports. Specialist drivers such as Allen Bradley DH485 Master Driver, BACnet MS/TP Master and Slave Drivers, Debug Console Driver and the Raw Serial Driver are not supported on the Serial Sleds. Find additional information in the Crimson 3.1 User Manual.
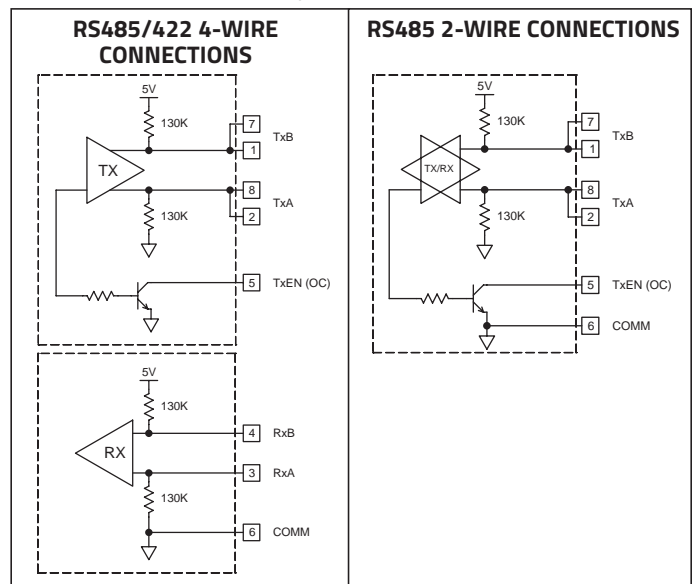
RS232 PORT(S)

The DA Serial Sled may have one or two RS232 serial ports depending on part number. The RS232 port(s) can be used for master or slave protocols. Each serial port has a pair of LEDs to indicate transmit and receive activity. The pinout is shown to the right.

RS232 Serial Sled to a PC			
Sled : RJ12		PC : DB9	
Pin #	Name	Pin #	Name
4	COMM	1	DCD
5	Tx	2	Rx
2	Rx	3	Tx
	N/C	4	DTR
3	COMM	5	GND
	N/C	6	DSR
1	CTS	7	RTS
6	RTS	8	CTS
	N/C	9	RI

RS485/422 COMMS PORT(S)

The DA Serial Sled may have one or two RS485 ports depending on part number. These ports can be used for RS485 or RS422 communication. The comms port has a pair of LEDs to indicate transmit and receive activity.

Note: All Red Lion devices connect A to A and B to B. Refer to www.redlion.net for additional information.

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Examples of RS485 2-Wire Connections

RS232 Serial Sled to Red Lion RJ11			
Sled : RJ45		RLC : RJ11	
Pin #	Name	Pin #	Name
5	TxEN	2	TxEN
6	COMM	3	COMM
1	TxB	5	B-
2	TxA	4	A+

RS232 Serial Sled to Modular Controller			
Sled		Modular Controller	
Pin #	Name	Pin #	Name
1, 4	TxB	1, 4	TxB
4, 1	RxB	4, 1	RxB
2, 3	TxA	2, 3	TxA
3, 2	RxA	3, 2	RxA
5	TxEN	5	TxEN
6	COMM	6	COMM
7	TxB	7	TxB
8	TxA	8	TxA

RED LION CONTROLS TECHNICAL SUPPORT

If for any reason you have trouble operating, connecting, or simply have questions concerning your new DA Dual Port Serial sled, contact Red Lion's technical support.

Support: support.redlion.net
Website: www.redlion.net
Inside US: +1 (877) 432-9908
Outside US: +1 (717) 767-6511

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LIMITED WARRANTY

(a) Red Lion Controls Inc. (the "Company") warrants that all Products shall be free from defects in material and workmanship under normal use for the period of time provided in "Statement of Warranty Periods" (available at www.redlion.net) current at the time of shipment of the Products (the "Warranty Period"). **EXCEPT FOR THE ABOVE-STATED WARRANTY, COMPANY MAKES NO WARRANTY WHATSOEVER WITH RESPECT TO THE PRODUCTS, INCLUDING ANY (A) WARRANTY OF MERCHANTABILITY; (B) WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE; OR (C) WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; WHETHER EXPRESS OR IMPLIED BY LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE OF TRADE OR OTHERWISE.** Customer shall be responsible for determining that a Product is suitable for Customer's use and that such use complies with any applicable local, state or federal law.
(b) The Company shall not be liable for a breach of the warranty set forth in paragraph (a) if (i) the defect is a result of Customer's failure to store, install, commission or maintain the Product according to specifications; (ii) Customer alters or repairs such Product without the prior written consent of Company.
(c) Subject to paragraph (b), with respect to any such Product during the Warranty Period, Company shall, in its sole discretion, either (i) repair or replace the Product; or (ii) credit or refund the price of Product provided that, if Company so requests, Customer shall, at Company's expense, return such Product to Company.
(d) **THE REMEDIES SET FORTH IN PARAGRAPH (c) SHALL BE THE CUSTOMER'S SOLE AND EXCLUSIVE REMEDY AND COMPANY'S ENTIRE LIABILITY FOR ANY BREACH OF THE LIMITED WARRANTY SET FORTH IN PARAGRAPH (a).**

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