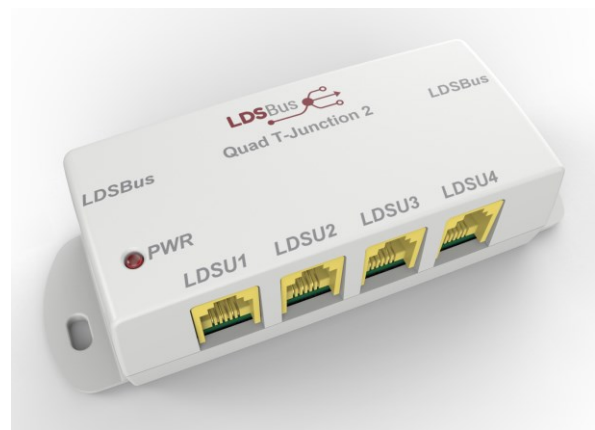




LDSBus Quad T-Junction 2 Datasheet



1 Introduction

The LDSBus Quad T-Junction 2 connects LDSBus devices (sensors / actuators) to the LDSBus. It serves as a data and power interface between an LDSBus host and LDSBus devices. Each LDSBus Quad T-Junction 2 can connect up to four LDSBus devices and powers up the devices sequentially. Additional LDSBus Quad T-Junctions 2 may be daisy chained to add more LDSBus devices to the bus.

1.1 Features

- Connects LDSBus devices to an LDSBus Host and supports daisy chain connections through the RJ45 LDSBus ports.
- Supports four LDSBus device connections through the RJ11/RJ12 LDSU ports.
- Built-in DC-DC converter for stepping down the LDSBus +24VDC supply to +5VDC for LDSU ports.
- LDSU downstream ports automatically activate in sequence to prevent inrush current.
- Built-in short circuit protection for both RJ45 LDSBus ports and LDSU ports
- Flush mount and DIN Rail mounting options.
- Operating temperature range: 0°C to +70°C



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2 Part Numbers/Ordering Information

Part#	Description
LA011101A	LDSBus Quad T-Junction 2
LA120101A	LDSBus DIN Rail Mount Set

Table 1 – LDSBus Quad T-Junction 2 - Part Numbers & Description

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3 Specifications

Features	Interface	RS485
	LED Indicator	Red LED (Power On)
	Mounting	Flush Mount
DIN Rail Mount		
Power	Input Voltage	24V DC Bus Power
	Input Max. Current	200mA
	Output Voltage	5V DC (LDSU Ports)
	Output Max. Current	800mA
	LDSBus Port Short Circuit Protection	Yes
	LDSU Port Short Circuit Protection	Yes
Physical Characteristics	Color	White
	Housing	Polycarbonate
	Dimensions	L117.6mm x W42.9mm x H29.7mm
Environmental Limits	Operating Temperature	0 to 70°C
	Storage Temperature	-20 to 85°C
	Ambient Relative Humidity	5 to 95% (non-condensing)
Package Contents	Device	1x LDSBus Quad T-Junction 2
Optional	Mounting Accessories	1x DIN Rail Bracket Set

Table 2 - LDSBus Quad T-Junction 2 - Specifications

4 FCC Compliance Statement

LDSBus Quad T-Junction 2 complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) These devices may not cause harmful interference, and
- (2) These devices must accept any interference received, including interference that may cause undesired operation.

NOTE: The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If the equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF exposure guidelines, at least 20cm of separation distance between the **LDSBus Quad T-Junction 2** device and the user's body must be always maintained.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation statement.

Caution

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



5 Hardware Features

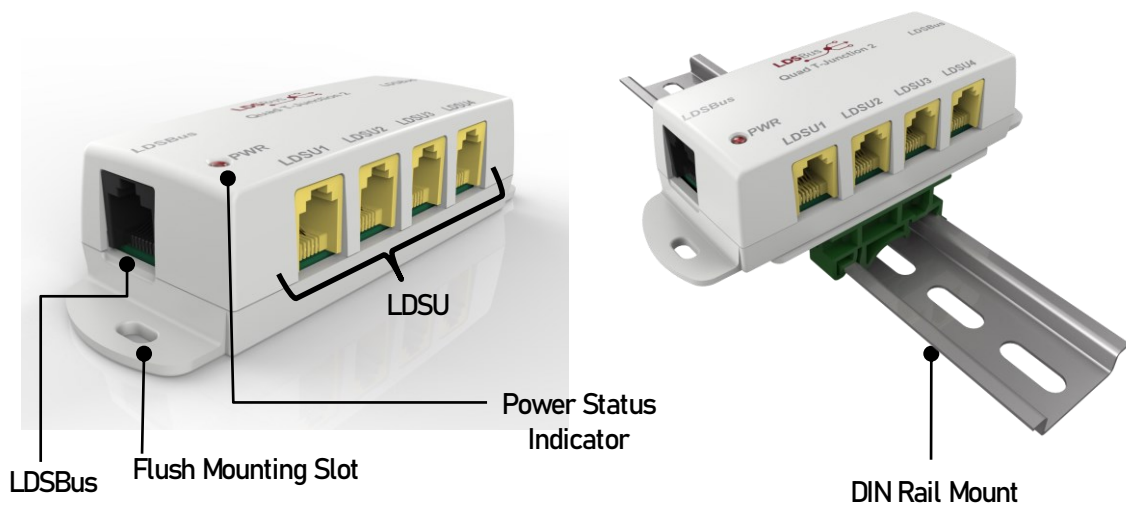


Figure 1 - LDSBus Quad T-Junction 2 Flush Mount / DIN Rail Mount – Hardware Features

5.1 LDSBus

An RJ45 port serves for data communication and power. In a Daisy chain configuration, the two LDSBus ports can function either as input or output.

5.2 LDSU

The RJ11/RJ12 LDSU port functions for data communication and power. The power supply to the LDSU port activates sequentially, starting from LDSU1 and progressing up to LDSU4.

5.3 Flush Mounting Slot

The flush mounting slot enables the securing of devices using screws within openings or enclosures.

5.4 Power Status Indicator

An LED indicates the power status - (ON/OFF).

5.5 DIN Rail Mount

DIN Rail mount is a method of installing and securing electronic devices on a standardized metal rail. It provides a simple and cost-effective way to organize and install multiple devices in an electrical or control panel.

6 Connection Diagram

Figure 2 illustrates the connection of the LDSBus Quad T-Junction 2 (LDSBus Device) in an LDSBus system.

Setup Instructions:

1. Connect the first LDSBus Quad T-Junction 2 to any of the LDSBus Host Systems using an RJ45 (CAT5e) cable.
2. Connect the configured LDSBus device(s) to the LDSBus Quad T-Junction 2 as shown in Figure 2.
3. If there is more than one LDSBus Quad T-Junction 2, chain them together as shown in Figure 2.

Please visit <http://bit.ly/ldsbus-resources> to view the full application, setup and installation guides.

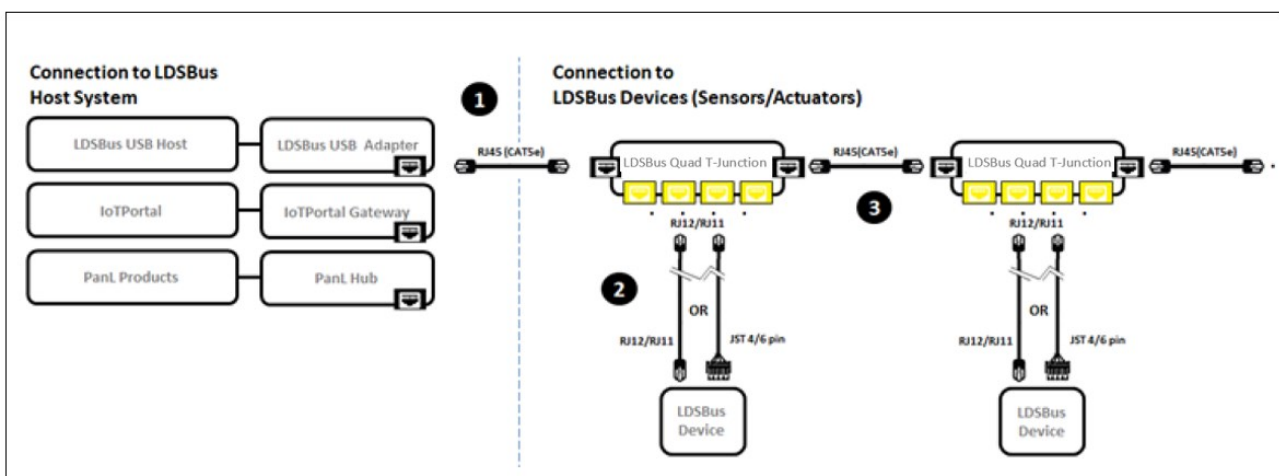


Figure 2 - LDSBus Quad T-Junction 2 in LDSBus System – Connection Diagram

7 Mounting Options

7.1 Flush Mount

The LDSBus Quad T-Junction 2 can be flush mounted directly on a wall or any flat surface using 2 M3.5*16mm (thread) screws.

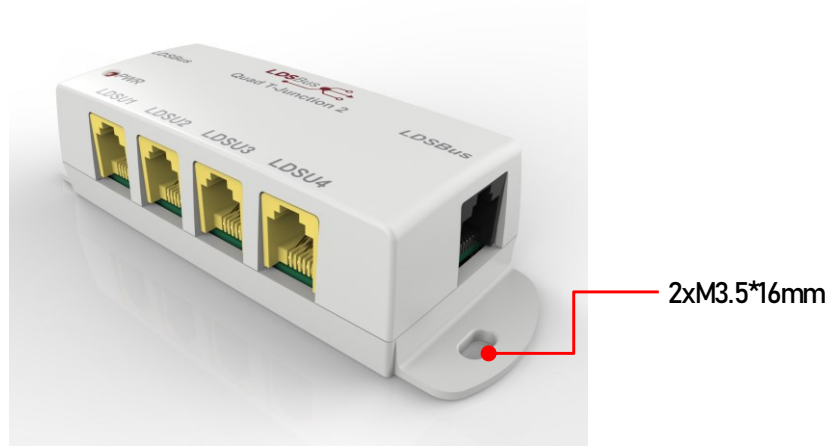


Figure 3 - LDSBus Quad T-Junction 2 - Flush Mount

7.2 DIN Rail Mount

The LDSBus Quad T-Junction 2 can be mounted on a DIN Rail using the LDSBus DIN Rail Mount set. This set is optional and includes the bracket and mounting screws.

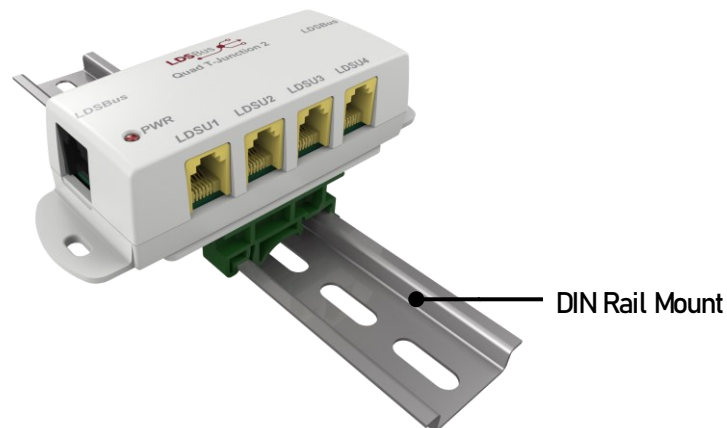


Figure 4 - LDSBus Quad T-Junction 2 - DIN Rail Mount

8 Mechanical Dimension

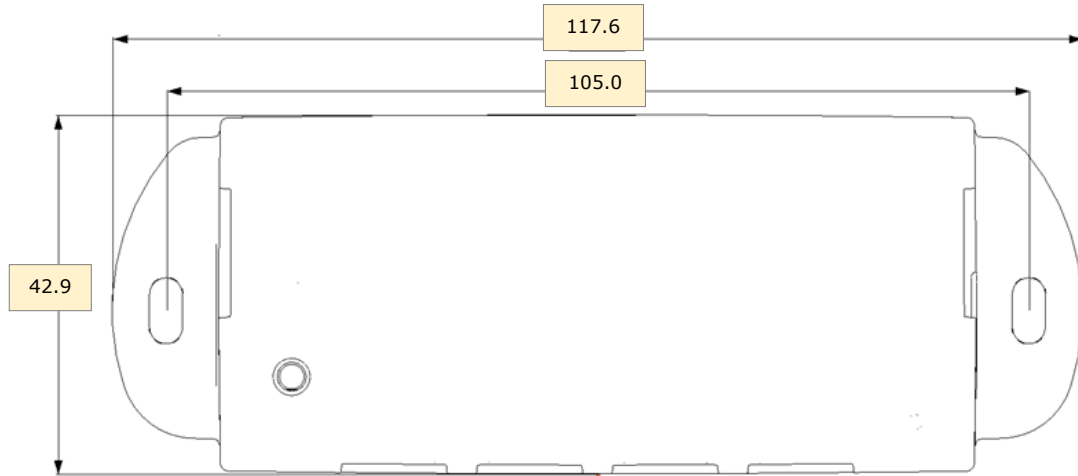


Figure 5 - LDSBus Quad T-Junction 2 Dimension – Top View



Figure 6 - LDSBus Quad T-Junction 2 Dimension – Side View

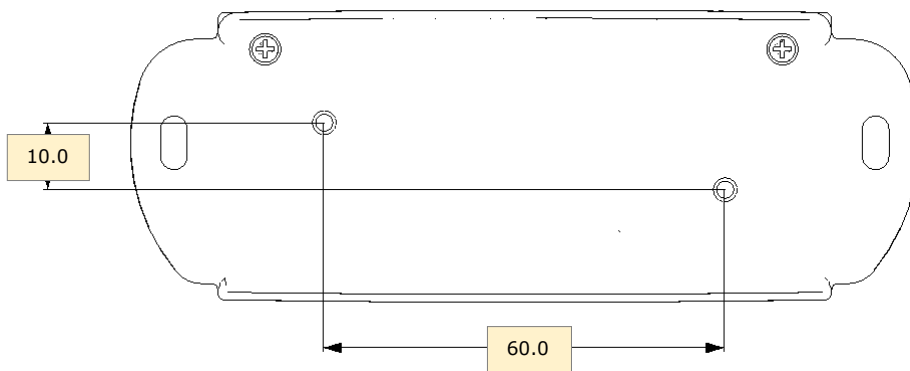


Figure 7 - LDSBus Quad T-Junction 2 Dimension – Bottom View

Note: All dimensions are in millimetres.

9 Contact Information

Refer to <https://brtsys.com/contact-us/> for contact information.

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Appendix A – References

Document References

[BRTSYS AN 001 LDSBus Configuration Utility User Guide](#)

[BRTSYS API 001 LDSBus Python SDK Guide](#)

[LDSBus Quad T-Junction Quick Start Guide](#)

Acronyms and Abbreviations

Terms	Description
DC	Direct Current
LED	Light Emitting Diode
LDSBus	Long Distance Sensor Bus
LDSU	Long Distance Sensor Units
IoT	Internet of Things

Appendix B - List of Figures and Tables

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Appendix C – Revision History

Document Title: LDSBus Quad T-Junction 2 Datasheet
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Document Feedback: [Send Feedback](#)

Revision	Changes	Date
1.0	Initial Release	26-04-2024
1.1	Updated the product pictures	29-08-2024