



LDSBus Quad T-Junction Datasheet



1 Introduction

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

1.1 Features

- Connects LDSBus devices to 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
- Built-in Voltage protection for RJ45 ports
- Built-in Overcurrent protection
- Flush mount and DIN Rail mounting options
- Operating temperature range: 0°C to +70°C



Neither the whole nor any part of the information contained in, or the product described in this manual, may be adapted, or reproduced in any material or electronic form without the prior written consent of the copyright holder. This product and its documentation are supplied on an as-is basis and no warranty as to their suitability for any particular purpose is either made or implied. BRT Systems Pte Ltd (BRTSys) will not accept any claim for damages howsoever arising as a result of use or failure of this product. Your statutory rights are not affected. This product or any variant of it is not intended for use in any medical appliance, device, or system in which the failure of the product might reasonably be expected to result in personal injury. This document provides preliminary information that may be subject to change without notice. No freedom to use patents or other intellectual property rights is implied by the publication of this document. BRT Systems Pte Ltd, 1 Tai Seng Avenue, Tower A, #03-01 Singapore 536464. Singapore Registered Company Number: 202220043R.

2 Part Numbers

Part#	Description
LA010101A	LDSBus Quad T-Junction
LA120101A	LDSBus DIN Rail Mount Set

Table of Contents

1	Introduction	1
1.1	Features.....	1
2	Part Numbers	2
3	Specifications.....	4
4	Hardware Features.....	5
5	Connection Diagram	6
6	Mounting Options	7
6.1	Flush Mount	7
6.2	DIN Rail Mount.....	7
7	Mechanical Dimension.....	8
8	Contact Information.....	9
Appendix A - References		10
Document References		10
Acronyms and Abbreviations		10
Appendix B - List of Figures and Tables		11
List of Figures		11
List of Tables		11
Appendix C – Revision History		12

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
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
	Installation (Optional)	1x DIN Rail Bracket Set

Table 1 - LDSBus Quad T-Junction Specifications

4 Hardware Features

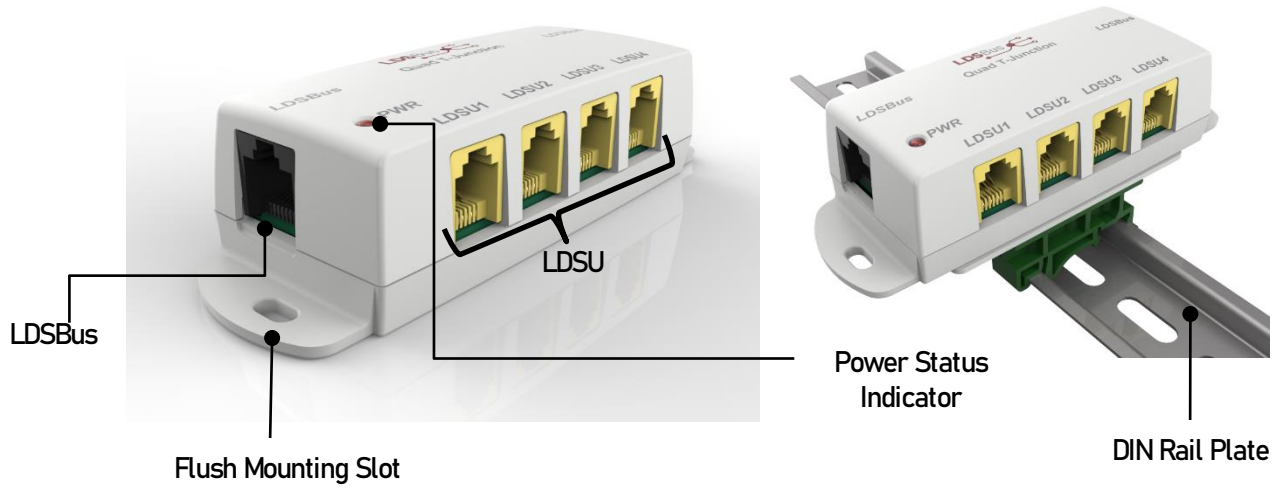


Figure 1 - LDSBus Quad T-Junction Flush Mount / DIN Rail Plate – Hardware Features

5 Connection Diagram

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

Setup Instructions:

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

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

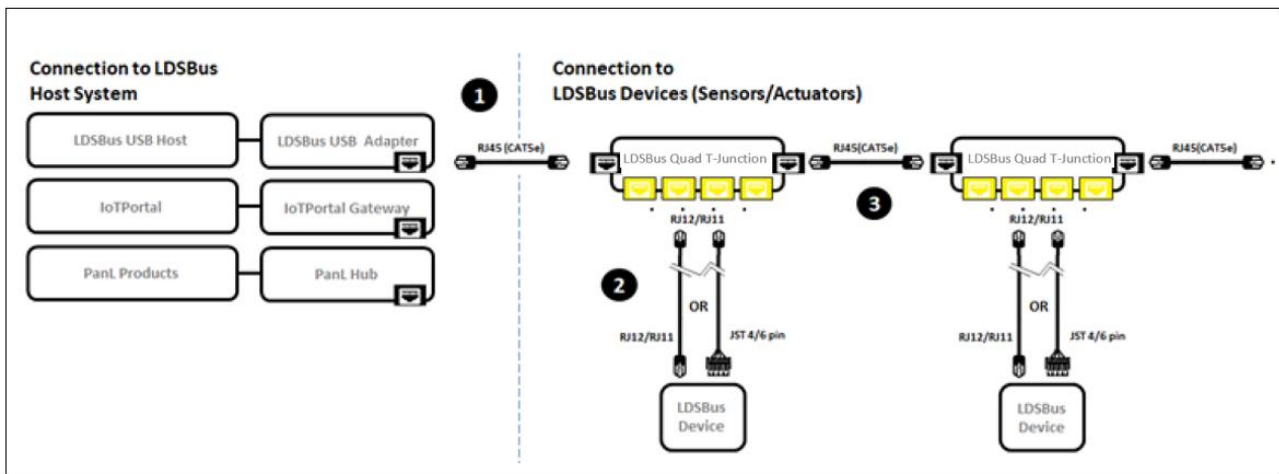


Figure 2 - LDSBus Quad T-Junction in LDSBus System – Connection Diagram

6 Mounting Options

6.1 Flush Mount

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

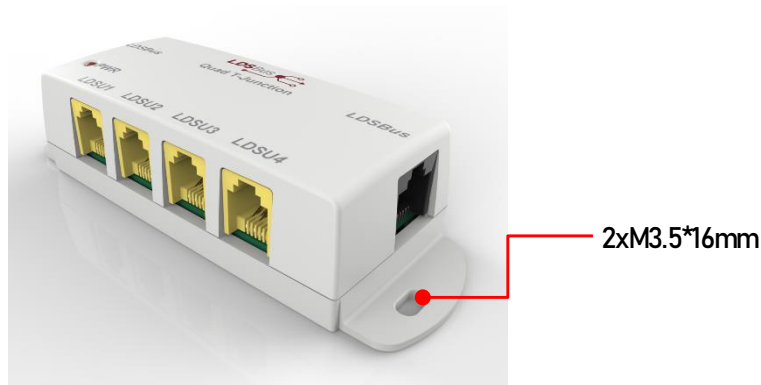


Figure 3 - LDSBus Quad T-Junction - Flush Mounting

6.2 DIN Rail Mount

The LDSBus Quad T-Junction 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.

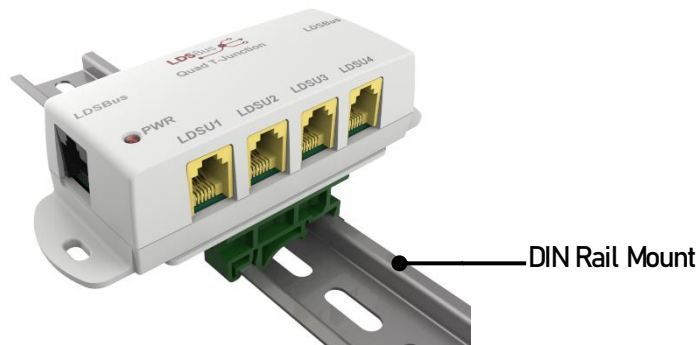


Figure 4 - LDSBus Quad T-Junction - DIN Rail Mount

7 Mechanical Dimension

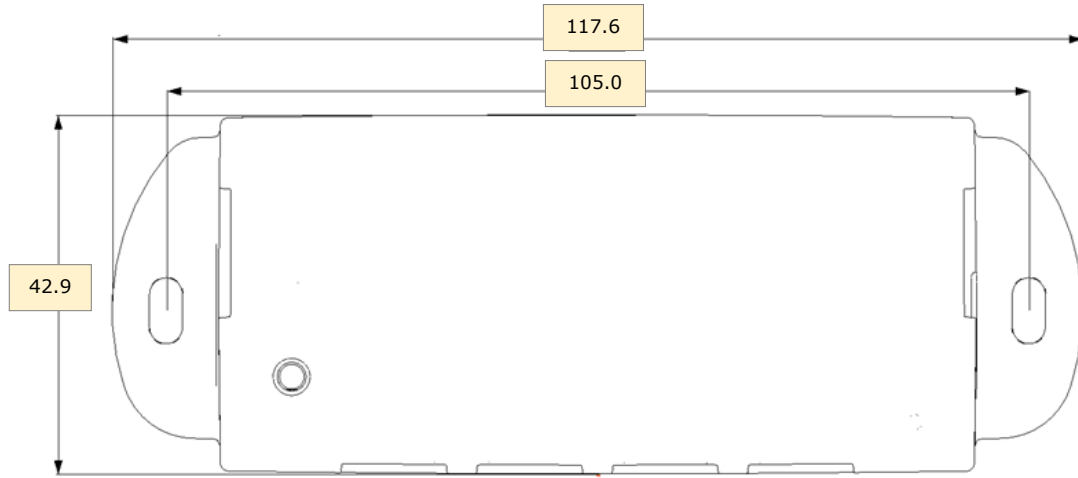


Figure 5 - LDSBus Quad T-Junction Dimension – Top View



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

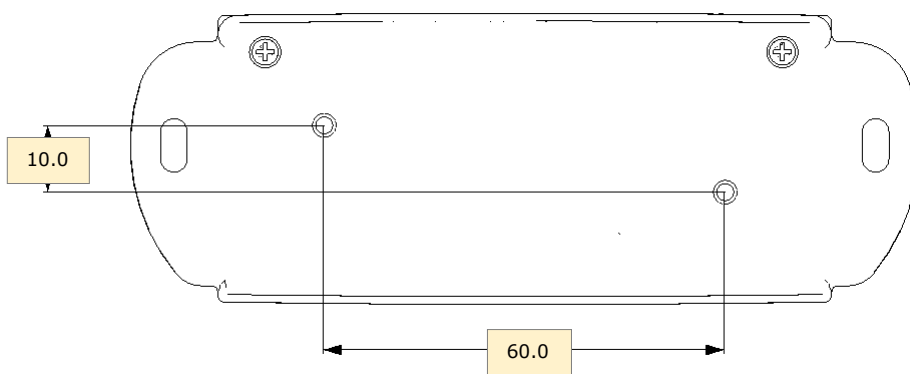


Figure 7 - LDSBus Quad T-Junction Dimension – Bottom View

Note: All dimensions are in millimetres.

8 Contact Information

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

System and equipment manufacturers and designers are responsible to ensure that their systems, and any BRT Systems Pte Ltd (BRTSys) devices incorporated in their systems, meet all applicable safety, regulatory and system-level performance requirements. All application-related information in this document (including application descriptions, suggested BRTSys devices, and other materials) is provided for reference only. While BRTSys has taken care to assure it is accurate, this information is subject to customer confirmation, and BRTSys disclaims all liability for system designs and for any applications assistance provided by BRTSys. Use of BRTSys devices in life support and/or safety applications is entirely at the user's risk, and the user agrees to defend, indemnify and hold harmless BRTSys from any and all damages, claims, suits, or expense resulting from such use. This document is subject to change without notice. No freedom to use patents or other intellectual property rights is implied by the publication of this document. Neither the whole nor any part of the information contained in, or the product described in this document, may be adapted, or reproduced in any material or electronic form without the prior written consent of the copyright holder. BRT Systems Pte Ltd, 1 Tai Seng Avenue, Tower A, #03-01, Singapore 536464. Singapore Registered Company Number: 202220043R.

Appendix A - References

Document References

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

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

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

Acronyms and Abbreviations

Terms	Description
DC	Direct Current
LED	Light Emitting Diode
IoT	Internet of Things

Appendix B - List of Figures and Tables

List of Figures

Figure 1 - LDSBus Quad T-Junction Flush Mount / DIN Rail Plate – Hardware Features.....	5
Figure 2 - LDSBus Quad T-Junction in LDSBus System – Connection Diagram.....	6
Figure 3 - LDSBus Quad T-Junction - Flush Mounting	7
Figure 4 - LDSBus Quad T-Junction - DIN Rail Mount	7
Figure 5 - LDSBus Quad T-Junction Dimension – Top View	8
Figure 6 - LDSBus Quad T-Junction Dimension – Side View.....	8
Figure 7 - LDSBus Quad T-Junction Dimension – Bottom View	8

List of Tables

Table 1 - LDSBus Quad T-Junction Specifications.....	4
--	---

Appendix C – Revision History

Document Title: LDSBus Quad T-Junction Datasheet
Document Reference No.: BRTSYS_000002
Clearance No.: BRTSYS#003
Product Page: <https://brtsys.com/ldsbus/>
Document Feedback: [Send Feedback](#)

Revision	Changes	Date
Version 1.0	Initial Release	27-10-2021
Version 1.1	Updated release under BRT Systems	14-09-2022
Version 1.2	Updated Company Address; Renamed LDSBus HVT Junction to LDSBus Quad T-Junction	11-09-2023