

Distribution Box ebus



Overview

EBDB The Extron EBDB is an eBUS ® distribution hub that reduces cable runs by providing a convenient PS 1220EB The Extron PS 1220EB is a 12 volt, 24 watt.

Key Takeaways

An eBUS distribution box is a hub that centralizes and distributes eBUS communication signals, simplifying wiring and enabling efficient control system integration. Overview

An eBUS distribution box serves as a central connection point for eBUS wiring infrastructure, reducing cable runs and organizing communication between multiple devices in a control system . It allows each port to function as both an input and output, enabling flexible communication with eBUS-enabled devices. Distribution boxes are particularly useful in larger or complex systems where multiple eBUS devices need to be connected reliably .

Examples

- Extron EBDB: A 1U, quarter-rack width hub with 10 eBUS distribution ports. Each port is connected in parallel, and a front panel LED indicates power presence on the ports. It can be mounted on rack rails, tables, or lecterns .
- Extron EBDB MINI: A smaller version with 4 distribution ports, also featuring a status LED for power monitoring .

Functionality



The eBUS distribution box ensures that all connected devices receive the necessary eBUS voltage and signals. In systems like EtherCAT, the E-bus voltage (UEBUS) and peripheral voltage (UP) are supplied to the distribution board, allowing connected terminals to operate correctly . The box maintains proper communication and power distribution across all connected devices.

eBUS System Basics

The KBR eBus operates on a 2-wire RS-485 serial line using a master/slave principle. Only one master controls the bus, sending requests to slave devices and analyzing their responses. Devices are connected in a line topology, terminated with resistors at both ends, and stubs are avoided to maintain signal integrity . The distribution box facilitates this structured wiring by providing a centralized hub for connections.

Installation Considerations

- Mount the distribution box securely on racks, tables, or other suitable surfaces .
- Ensure proper termination of the eBUS line at the first and last devices .
- Avoid stubs or branching lines to prevent communication errors .
- Verify power supply to the distribution box and connected devices, ensuring voltage levels meet system requirements .

Benefits

- Reduces cable clutter and simplifies wiring.
- Provides a clear, centralized point for monitoring and troubleshooting.
- Supports scalable and complex eBUS control systems.
- Enhances reliability and maintainability of the eBUS network. In summary, an eBUS distribution box is an essential component for organizing and managing eBUS communication in control systems, providing both power and signal distribution while simplifying installation and maintenance .

Article Content

Extron EBDB 60-1170-01 Distribution Hub – Ampronix

The Extron EBDB 60-1170-01 is an eBUS® distribution hub that reduces cable runs by providing a convenient connection point for

Extron EBDB MINI Mini eBUS Distribution Hub with Mount New FREE

The Extron EBDB MINI is an eBUS® distribution hub that reduces cable runs by providing a convenient connection point for eBUS

Design Guide Signal distribution board for standard EtherCAT

The signal distribution board should have a power supply designed for the maximum possible current load of the module string.

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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

