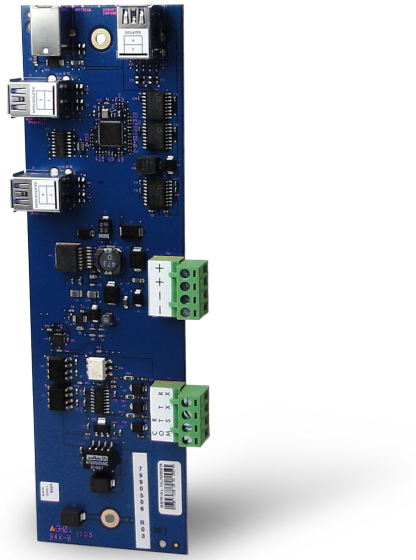
LIFE SAFETY & INCIDENT MANAGEMENT

EST4 USB Hub

4-USBHUB



FM APPROVED | NYC FIRE DEPT. COA # 2022-TMCOAP-008086-RENL | UL | ULC | CE | EN54

Overview

EST4 takes full advantage of high speed USB technology with internal modules supporting Type A and Type B connectors. When additional connections are needed, the 4-USBHUB provides an easily-implemented solution with two Type A isolated host ports, four Type A Non-isolated host ports, and one Type B device port.

The 4-USBHUB is used to connect printers, and coders to the EST4 network. It may be installed in any network control panel or annunciator enclosure.

Standard Features

- **Extends the number of USB Ports Available**
  Efficient way to add USB ports for printers and laptops
- **Isolated and Non-isolated USB Ports**
  Extends ground fault detection to system printers
- **One-half-footprint Mounted**
  Multiple options for mounting within a cabinet
- **CDR-3 Support**
  RS-232 support for CDR-3 coders

Application

The 4-USBHUB Multi-port USB Hub Module makes it easy to connect EST4 to external devices. It does away with special cables and RS232-to-USB conversion dongles, and allows direct high-speed connection with laptops for the exchange of configuration data. It does so quickly and efficiently with data transfer rates of up to 480 Mbps.

Use the 4-USBHUB to connect printers to panels or remote annunciators for on-site event and report printouts. The printer is connected to one of the hub's isolated Type A connectors. The 4-USBHUB can also be interfaced to a CDR-3 coder via RS-232 terminal connection. Terminal connections leave all USB ports available for use.

Engineering Specification

The system shall provide USB connections for external peripheral devices including printers. Where a system printer is required to meet code the printer shall communicate to the system via USB, be supervised and support ground isolation.

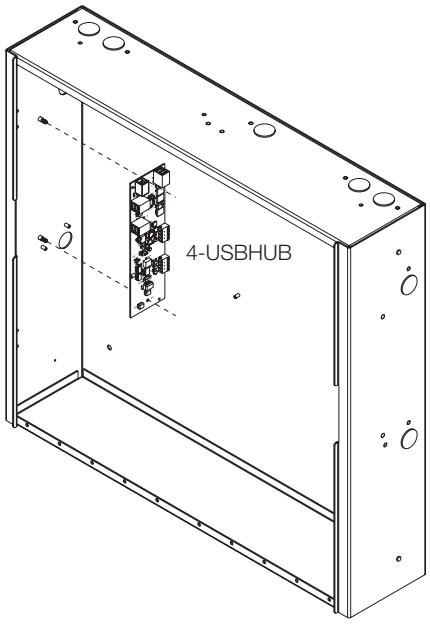
<The event and status printer shall be a nine-pin, impact, dot matrix printer with a minimum print speed of 232 characters per second. Print parameters shall be set up with a menu drive program in the printer. The printer shall be capable of serial or USB communications protocol. The communications speed for RS-232 communications protocol shall be adjustable from 300 to 9600 Baud. The connection to the printer from the panel shall be supervised. The printer shall list the time, date, type and user defined message for each event printed.> Alarm messages shall have a special character printed at the beginning of the message to allow easier location of alarm events on the print out.

< Audible notification appliances shall be coded using a microprocessor based Positive, Successive, Non Interfering (PSNI) coder module. The coder shall have a capacity for 1,000,000 unique codes and be capable of storing pending codes without a loss of an active code or interference from a new code. The coder shall output four rounds of two, three, or four digit code sequences. The coder shall provide both 1 KHz audio tone output as well as a dry relay contact output. The coder shall output a continuous <temporal> <60/90 BPM march time> output at the end of the PSNI code sequence. In the event of a failure of the microprocessor, the coder shall automatically output a temporal code.

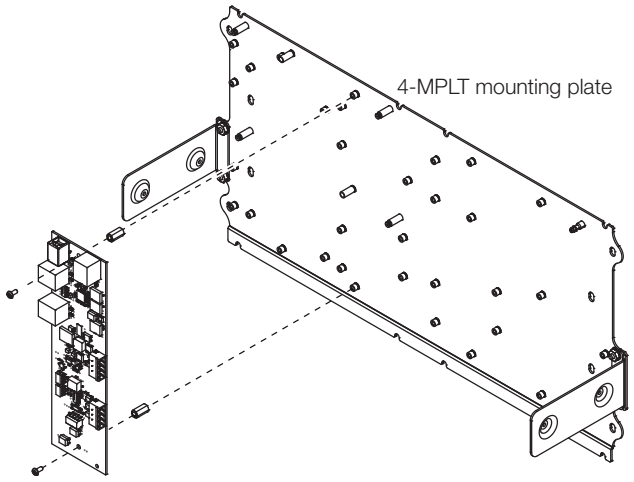
Mounting

4-USBHUB installation in a 3-RCC7R

3-CAB14 backbox

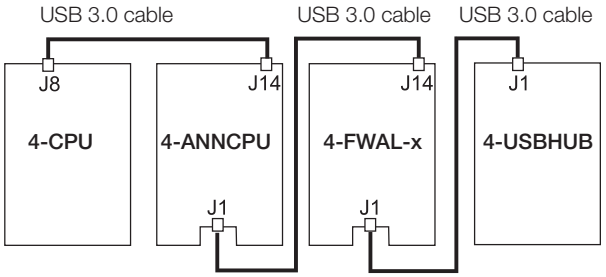


4-USBHUB installation on a 4-MPLT



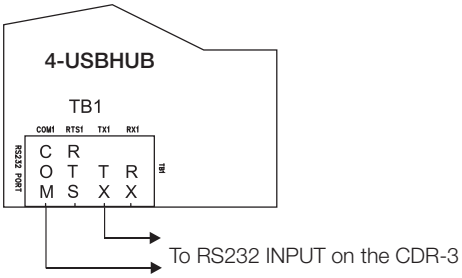
Typical Wiring

CPU connections to the 4-USBHUB



The 4-USBHUB's J1 connector may be connected directly to a 4-CPU, 4-ANNCPU, 4-NET-AD, 4-CPU-GRPH, or 4-FWAL and must always be the last device on the data bus.

RS-232 wiring to CDR-3



Technical Specifications

Current Standby/Active	44 mA (zero nonisolated ports used) 129 mA per nonisolated ports used. 560 mA for a fully loaded 4-USBHUB. All four non-isolated ports used.
RS-232 Ports	24 to 12 AWG (0.2 to 2.5 mm²)
USB Ports	Two USB Type A – isolated host ports [1], Four USB Type A – non-isolated host ports, One USB Type B – device port
Mounting	Mounts in half footprint space in CAB series and 4-ANNMT series enclosures.
Agency approvals	UL, ULC, FM, CSFM, EN54, CE, NYC Fire Dept.
Operating Environment Temperature Relative Humidity	 32 to 120 °F (0 to 49 °C) 0 to 93% noncondensing

[1] For USB printer connections a USB Type 2 cable (sourced locally) is needed with Type A to Type B connectors. The maximum length supported is 16ft (5m).

[2] Maximum USB cable length is 5 meters per the USB standard. For ancillary printer applications a USB extender may be used to extend the distance from the panel to the printer. For proprietary applications the printer must be located within 5 meters of the panel.

Ordering Information

Model # (SKU)	Description	Shipping Weight
4-USBHUB	The 4-USBHUB Multi-port USB Hub module mounts in a ½ footprint module space and provides isolated RS-232 USB and terminal block connections for RS-232 to CDR connections.	0.9lb (0.39kg)
Accessories and related equipment		
4-CABLUSBLG	Optional Cable, USB 3.0 A-B, Male, length approx. 51in (1300 mm).	0.3lb (0.14kg)
4-CABLUSBSM	Cable, USB 3.0 A-B, Male, supplied with 4-USBHUB, cable length approx. 29 in (750 mm).	0.3lb (0.14kg)

Note 1: Unless otherwise specified, all SKUs may be used in EN54/UL/ULC applications.

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