EST3 to BMS Communications Bridge

FSB-PC

Overview

The FSB-PC Communication Bridge is an ancillary device that provides protocol translation between EST3 serial data and the serial or Ethernet input of an external device controller. The FSB-PC converts the EST3 External Communications Protocol (ECP) to any one of several supported protocols including Modbus RTU, BACnet MSTP and Metasys N2. It operates over RS-232 or RS-485 serial communications or Ethernet (10/100 Base-T). Signal flow is typically one way from the EST3 network to the building automation system.

The FSB-PC comes complete with the EST3 driver and ability to enable any one of the supported protocols.

Standard Features

- **Links EST3 with building Management System**
  Sends EST3 events to a BMS system via serial or Ethernet connections, helping to reduce interface hardware costs
- **Supplied with field protocols, Modbus, BACnet and Metasys**
  One module provides selection of any single protocol – no need to purchase separate software or hardware modules
- **Serial and Ethernet ports**
  Flexible connection type for the BMS system: RS-232 or RS-485 or Ethernet 10/100 Base-T
- **Software configuration**
  Speeds installation and setup
- **Two RS-232/485 software selectable serial ports**
  Enable Serial-to-Serial protocol translation for bridging EST3 to Industrial Automation or Building Automation equipment
- **RoHS compliant**
  Provides readiness for the Restriction of Certain Hazardous substances (RoHS) directives that are becoming prevalent in many jurisdictions.

DATA SHEET 85010-0142
Not to be used for installation purposes. Issue 1

Application

The FSB-PC communicates with EST3 via an installer-supplied RS-232 cable connected between the EST3 RS-232 port and one of the DB-9 connectors provided by the FSB-PC. Either Serial or Ethernet communications, along with the appropriate communications protocol, is selected through software configuration, depending on the requirements of the external device controller.

Setup of the individual points that are to be relayed to the external device controller can be quickly accomplished in two steps: first export their addresses from EST3, then import this data into the FSB-PC configuration software and create a new configuration file for download to the FSB-PC . This method streamlines programming while ensuring that only the required data is relayed by the FSB-PC to the building management system.

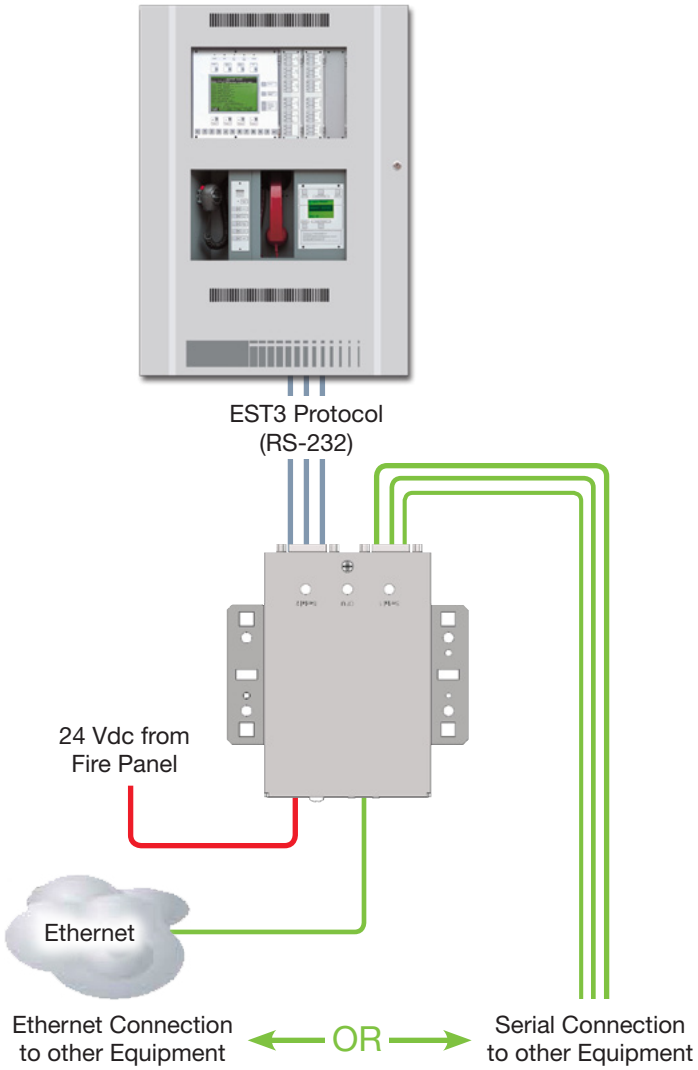
Installation

The FSB-PC mounts directly inside the EST3 panel enclosure using the separately-ordered FSB-BRKT (or NETCOM BRKT) mounting kit. This eliminates the cost and effort of installing a separate cabinet. If an external cabinet is required, the FSB-PC may be mounted inside an MFC-A. The FSB-PC is powered directly from the EST3 24VDC power supply.

Engineering Specification

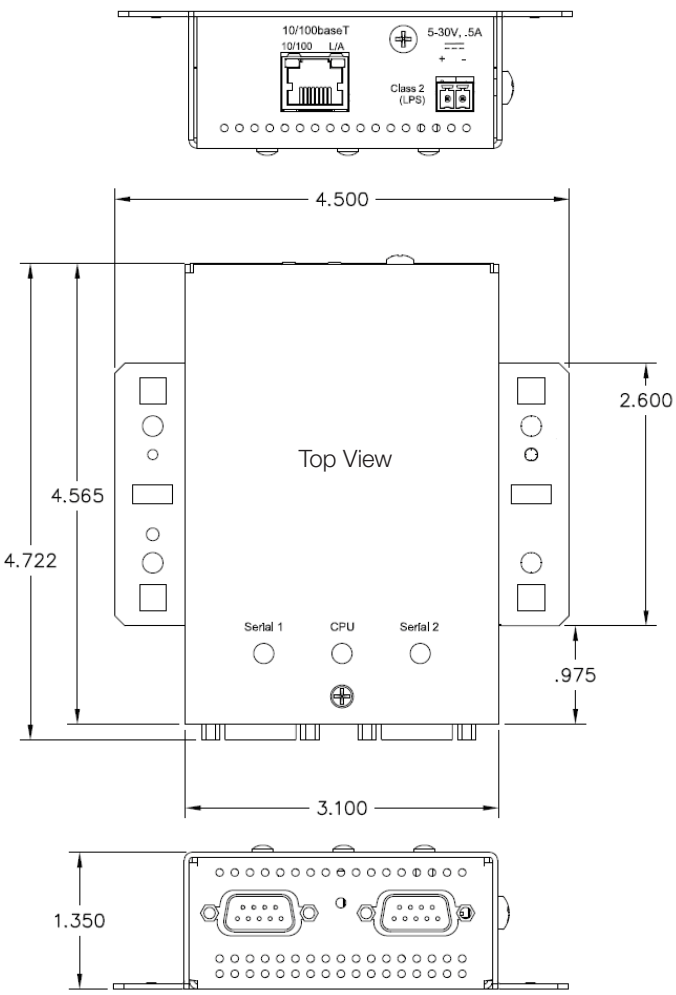
The system shall proved an interface from the fire/life safety system to the Building management system. The interface shall be via < Modbus RTU> <BACnet MSTP> <Metasys N2> <BACnet IP> <BACnet Ethernet> <Modbus TCP/IP> protocol. The interface shall be software configurable as to which points from the fire systems shall be provided to the BMS. The BMS interface shall be powered from and mount within the fire panel without affecting the agency listing of the fire panel.

Typical Wiring



Dimensions

Rear View



Front View

Technical Specifications

Operating Current	500mA
Input voltage	5V-30Vdc
Storage & Operating Environment	32 to 120 oF (0 to 49 oC) 5-90% RH, non-condensing.
Regulatory Approvals	FCC Class A, Part 15, ICES-003 EN 55022, EN 55024 CE (EN 55022, EN 55024) UL916 Surge Suppression: EN61000-4-2 ESD, EN61000-4-3 EMC, EN61000-4-4 EFT
Construction and Finish	Light Grey metal enclosure with mounting ears.
Mounting	Within EST3 cabinet using mounting kit model FSB-BRKT.
Communication Interfaces Serial Ethernet	 Two ports configurable as RS-232 or RS-485 with DB-9 connector. One 10/100 Base T (auto sensing) for RJ-45 connector.
Configuration	Software programmable for protocol supported as well as specific EST3 points to be translated.
Maximum Points	2,500 per bridge[1]
Maximum Bridges	Two per EST3 node; 10 per EST3 network
Supported field protocols Serial connection Ethernet Connection	 RS232 or RS485 - Modbus RTU, BACnet MSTP, and Metasys N2 10/100 Base-T: BACnet IP, BACnet Ethernet and Modbus TCP/IP
Dimensions	4.722 in. x 4.5 in. x 1.35 in. (11.56 cm x 11.68 cm x 3.43 cm)

[1] A single FSB-PC can support up to 2,500 points. Total points are a combination of the programmed points coming into the FSB-PC and the programmed points going out to the building management system. For example, if you program 1,250 points to come into the FSB-PC, you can program up to 1,250 points to go out to your building management system.

Ordering Information

Model	Description	Ship Wt. lb (kg)
FSB-PC	EST3 to BMS Communications Bridge. Mounts on separately ordered FSB-BRKT or NETCOM-BRKT.	3.0 (1.36)
FSB-BRKT	Mounting bracket for FSB-PC. Allows FSB-PC to mount in MFC-A cabinet or on side of EST3 Chass7.	1.0 (0.45)
NETCOM-BRKT	Provides mounting space for one FSB-PC in 3-CHAS7 or MFC-A cabinet.	1.0 (0.45)
MFC-A	Multifunction Fire Alarm Cabinet, red.	7.0 (3.1)

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