Models:
CONV-E

CONV-E
Ethernet - RS485 Converter

Overview

The Innotech *Conv-E* is a bi-directional protocol converter between Ethernet and RS485. It is intended to act as an intermediate translator between a computer network and an Innotech Genesis or Maxim network. The *Conv-E* is compatible with Windows® 7 (32 & 64 bit), Vista (32 bit) and XP operating systems.
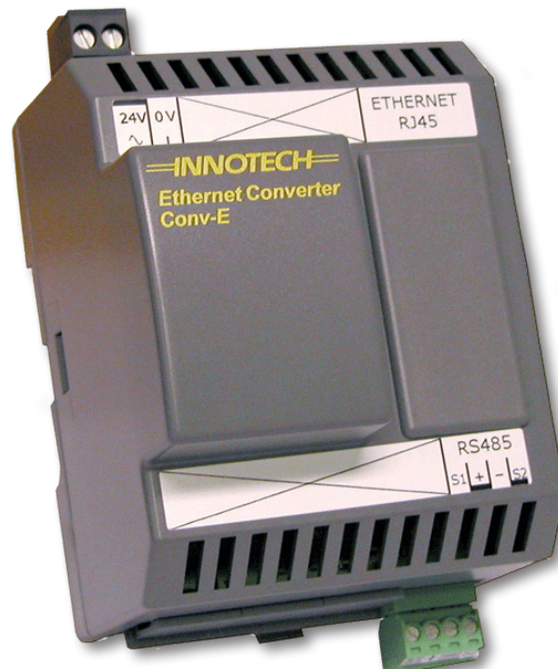
Features

- Fully Isolated RS485 Communications
- Supports the *GENESIS II* DDC (Direct Digital Controller), *GENII MPC* (Mid Points Controller) and *MAXIM* RS485 devices
- Provides remote network access via the internet or any computer on the network
- DHCP client for automatic IP address assignment
- Can be remotely configured via a web browser or using the *ETHERMATE* software configuration utility
- All wire connections by removable terminals
- LED indication of network traffic and Ethernet connection status
- Fully compatible with the *iComm* Communications Server
- User Configurable Baud Rate up to 115Kbps

Applications

The *Conv-E* functions as a network bridge between a computer Ethernet network and an RS485 network. Data from the RS485 network is only re-transmitted over Ethernet when a computer maintains a connection to the *Conv-E* via iComm. This reduces network traffic. When iComm is connected to *Conv-E*, a green status LED illuminates.

iComm can create connections to multiple *Conv-E* devices on the same network using different TCP/IP addresses. The TCP/IP address and port number can be configured using the *ETHERMATE* software package. Serial Port parameters such as parity, stop bits and baud rate are also configured using the *ETHERMATE* configuration software.

Isolated RS485 circuitry prevents voltage irregularities on the comms cabling from damaging the computer, and reduces the likelihood of communication errors.

Specifications

Power Supply

- 12-24VAC ±10% @ 50/60Hz
  Power Consumption: 2VA
- 12-30VDC ±10%
  Power Consumption: 1 Watt

RS485 COMMS Connection

SHLD 1	Shield from incoming Comms Cable
+	RS485 (+) signal
-	RS485 (-) signal
SHLD 2	Shield from outgoing Comms Cable

Enclosure/Mounting

The Innotech Conv-E product is housed in a rectangular case suitable for DIN rail mounting. The house is moulded from flame retardant plastics recognised by UL as UL 94-V0.

Colour:	Grey
Dimensions:	71mm(w) x 115.40mm(h) x 58mm(d)

Temperature Ratings

Storage	0 to 50°C non-condensing
Operating	0 to 40°C non-condensing

Approvals

The Innotech Conv-E conforms to the requirements of the Australian/New Zealand standard AS/NZS CISPR 22:2002 Class A for purposes of RCM certification.

Wiring

- DO NOT connect 240VAC to any terminals
- Ensure polarity of the power supply is correct. Centre pin is (+)
- The Comms cable must be organised as a bus topology (Daisy Chained). No "Stubs" are allowed
- The cable used for RS485 Comms must be shielded single twisted pair with 120 ohms characteristic impedance and not exceed 45pF per metre capacitance between conductors
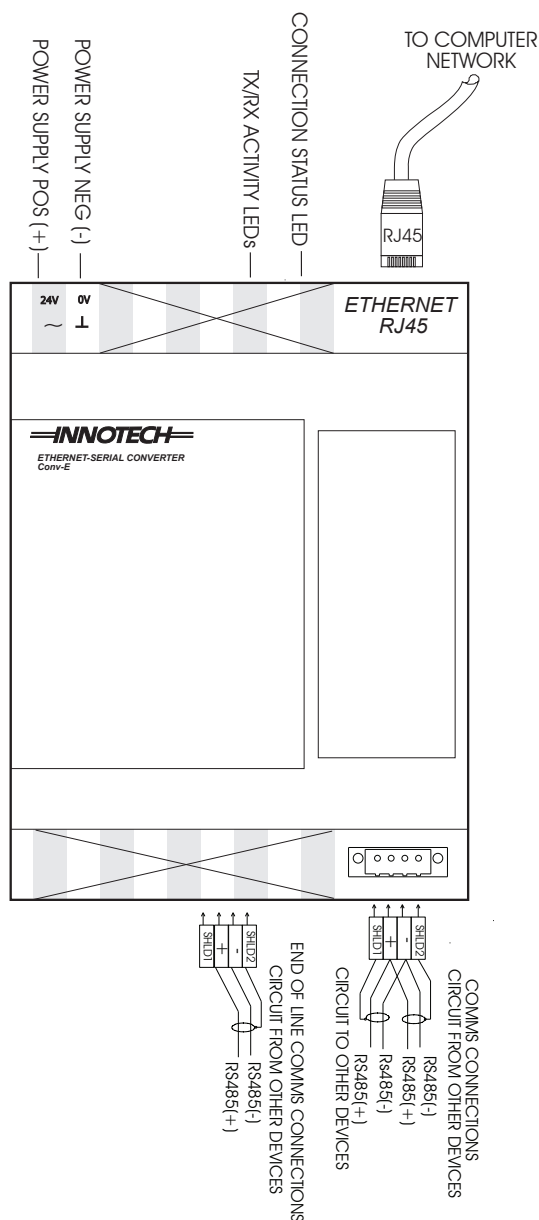
For more information, please refer to the Innotech Network Cabling Manual DS99.04.

Initial Setup

The Conv-E requires some initial setup according to the network configuration it is being installed on to. ETHERMATE is used for the configuration of the Conv-E.

1. The Conv-E will require an IP address. The factory settings will enable the device to acquire an IP address from a DHCP server. If there is no DHCP on the network then the device will need a static IP address assigned. ETHERMATE can configure the IP address using the Ethernet interface or the RS485 interface. See the ETHERMATE online help for more information on IP address assignment.
2. The Serial Port will need to be configured to match the RS485 network settings. The default is 9600bps, No parity, 8 data bits and 1 stop bit.
3. The Port number used for the Ethernet connection will need to be configured to match the setting used in iComm. The default is 20000.

See the ETHERMATE online help for more information.

POWER SUPPLY POS (+)

POWER SUPPLY NEG (-)

TX/RX ACTIVITY LEDs

CONNECTION STATUS LED

TO COMPUTER NETWORK

RJ45

24V ~ 0V ⊥

ETHERNET RJ45

INNOTECH
ETHERNET-SERIAL CONVERTER
Conv-E

SHLD1 + - SHLD2

END OF LINE COMMS CONNECTIONS
CIRCUIT FROM OTHER DEVICES

RS485(-)
RS485(-)
RS485(+)

SHLD1 + - SHLD2

RS485(-)
RS485(-)
RS485(+)
RS485(+)

CIRCUIT TO OTHER DEVICES

COMMS CONNECTIONS
CIRCUIT FROM OTHER DEVICES