

ESENET

Ethernet gateway for Woodward Easygen genset controls, LS-5 and DTSC-200 controls



ESENET is an Ethernet gateway specifically designed to interface Woodward's Easygen series genset controls with Modbus/TCP networks. It interfaces via the load sharing CAN bus with the Woodward controls.

The ESENET offers cost savings compared to traditional Modbus/TCP to RTU gateways as no separate RS-485 wiring is required. In addition the ESENET takes advantage of the multi-master capability and fast transmission speed of CAN to offer short Modbus/TCP poll cycles as well as concurrent access. Both cannot be achieved using conventional serial Modbus half-duplex data transfers.

A single ESENET added to the CAN network will make all Visualisation Data of connected Woodward CANopen controls available without adding additional load to the CAN bus communication. In addition concurrent and fast read and write access to device Parameter IDs is possible utilising parallel CANopen SDO transfers.

Usage and configuration of the gateway is simple and conveniently performed using a web browser which connects to the embedded web server.

Common applications include:

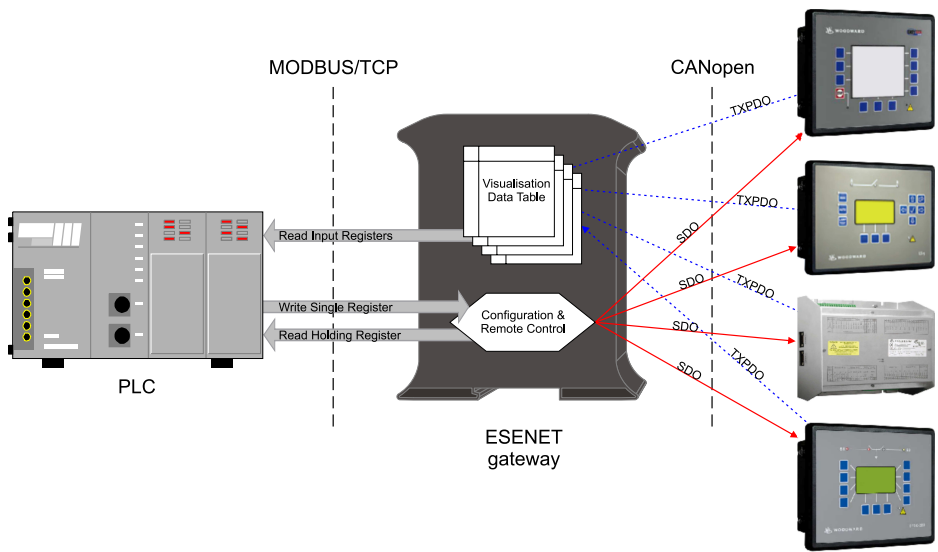
- PLC connection
- Operator panel interfacing
- HMIs
- SCADA integration
- Power station automation
- Gen set control
- Remote control & monitoring
- Data logging

Features

- Supports Easygen 3500, 3400, 3200, 3100 and 2000 models
- Supports LS-5
- Supports DTSC-200
- Addresses up to 16 controls
- Uses existing CAN wiring
- Multiple concurrent Modbus/TCP connections
- Fast Modbus poll rates for Visualisation Data (< 7 ms)
- Concurrent reads and writes of Parameter IDs
- Register layout and address range compatible with serial Modbus data protocol 5003 for Easygen-3000 devices
- Internal buffer for Visualisation Data
- Supports alternative Modbus register range below address 50000
- Transparent handling of data guarantees future compatibility
- Low configuration overhead, just an IP address
- Embedded web server for easy configuration and commissioning using a web browser

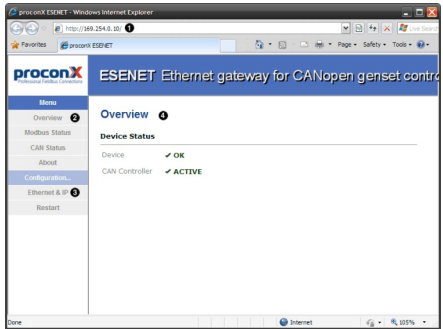


Usage

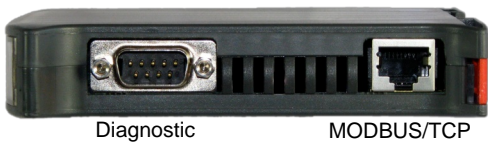


Order Information

| Model number | Configuration |
|--------------|----------------------------------------------------------------|
| ESENET | Gateway with Ethernet and CAN interfaces in DIN rail enclosure |



Connections



Specifications

Interfaces

- 1 Ethernet
- 1 CAN
- 1 RS-232 Diagnostics

User interface

- Power, Ethernet, Device & Modbus/CAN Status LEDs
- Web browser interface for Monitoring & Configuration

Ethernet port

- IEEE 802.3i 10BASE-T
- Modbus/TCP Slave
- IP, TCP, HTTP, ARP, TFTP
- 1.5 kV galvanic isolation

CAN port

- DE9M with CiA DS-102 pinout
- ISO 11898 physical layer
- 250 kBit/s
- CANopen consumer & client
- Addresses up to 16 nodes

Modbus/TCP

- 8 concurrent connections
- Function codes 03, 04, 06 and 16

Power requirements

- 10-30 V DC, 750 mW
- 30 mA typical @ 24 V DC

High availability

- Watchdog supervision
- Brown-out detection

Electromagnetic compatibility

- Emissions CISPR 22/EN 55022 (Class A)
- Immunity EN55024
- Electrostatic discharge EN61000-4-2
- Radiated RF EN61000-4-3
- Fast transients EN61000-4-4
- Conducted RF EN61000-4-6

Environment

- 0° to 60 °C / 32 to 140 °F operating temperature
- 25° to 80 °C / -13 to 185 °F storage temperature
- 10 to 95% humidity, non-condensing

Form factor / enclosure

- Self-extinguishing PC/ABS (UL 94-V0)
- 35 mm DIN rail mountable
- IP 20 / NEMA Type 1
- Convection cooling
- 101 x 22.5 x 120 mm / 3.98 x 0.886 x 4.72 in
- 0.13 kg / 0.287 lbs

Compliance

- C-Tick
- CE, RoHS
- FCC Part 15 (Class A)
- ICES-003 (Class A)