



Standard Features

- Converts Ethernet data to an isolated, scaled 4-20 mA or 0-10V transmitter output
- Supports Modbus TCP, Modbus RTU, Modbus ASCII, and Laurel ASCII protocols
- Able to retrieve data from long character strings
- Serial data rates from 300 to 19,200 bps
- Analog output is isolated from communications and power
- Analog resolution 0.0015% of span (16 bits), accuracy $\pm 0.02\%$ of span
- Dual solid state relays for alarm or control, isolated (standard)
- Universal 85-264 Vac / 90-300 Vdc or 10-48 Vdc / 12-32 Vac power
- Power over Ethernet (PoE) jumper selectable with 10-48 Vdc supply

Description

The LTSE6 Ethernet input, analog output transmitter accepts Ethernet serial data using the Modbus protocol, Laurel ASCII protocol, or direct ASCII characters, and converts this data to an isolated, scalable 4-20 mA, 0-20 mA or 0-10V analog output. The unit is housed in transmitter case which is only 22.5 mm (0.89") thick and fits on a 35 mm DIN rail. It is normally powered by AC (85-264 Vac), but can optionally be powered by low voltage AC or DC.

Standard Features Include:

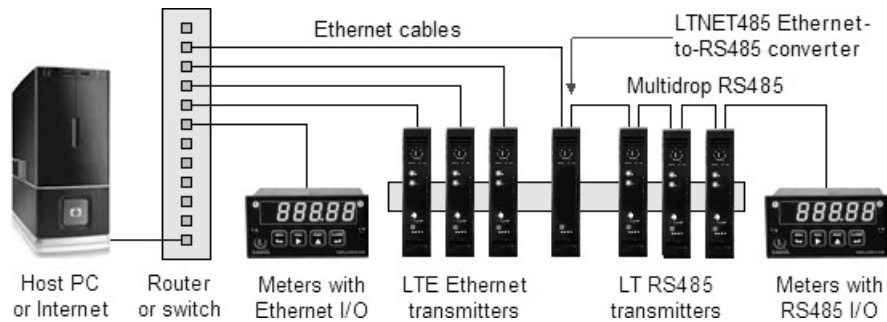
- **Ethernet serial data input, isolated.** The Modbus protocol, Laurel ASCII protocol, or ASCII characters are supported at data rates to 19200 bps. Modbus implementation is fully compliant with Modbus over Serial Line Specification V1.0 (2002) in RTU or ASCII operation, with up to 247 digital addresses. Using the Laurel ASCII protocol, the serial-to-analog converter is able to retrieve digital data from long character strings. Users can specify character positions, start and stop ASCII characters, how many characters to skip, and how many characters to process. Slave operation requires connection to a master.
- **Analog transmitter output, 16-bit, scalable and isolated.** User selectable 4-20 mA, 0-20 mA or 0-10V levels. 16-bit resolution provides an ultra-fine resolution of 0.0015% and accuracy better than 0.02% of output span. Output isolation from signal, power and serial communication grounds is provided by a separate on-board transmitter power supply, thereby eliminating potential problems caused by ground loops. The supply can drive 20 mA into a 500 ohm (or lower) load for 10V compliance, or 10V into 5K ohm (or higher) load for 2 mA compliance.



- **Ability to extract readings from long ASCII data strings.** You can specify character positions, start and stop ASCII characters, how many characters to skip, and how many characters to process. Slave operation requires connection to a master. Not applicable to the Modbus protocol.
- **Dual solid state relays for control or alarm.** Rated 120 mA at 130 Vac or 170 Vdc, isolated.
- **Universal AC power supply for 85-264 Vac.**
- **Optional low voltage power,** 10-48 Vdc or 12-32 Vac.

Discovery and configuration of Laureate Ethernet Nodes is easily achieved with Laurel's Node Manager Software, and the discovered transmitters can then be programmed using Laurel's Instrument Setup Software. Both softwares run on a PC under MS Windows and can be downloaded at no charge.

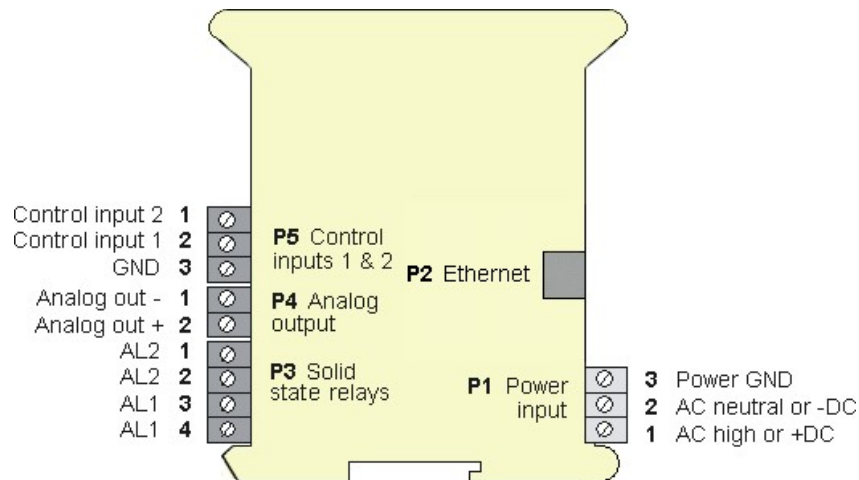




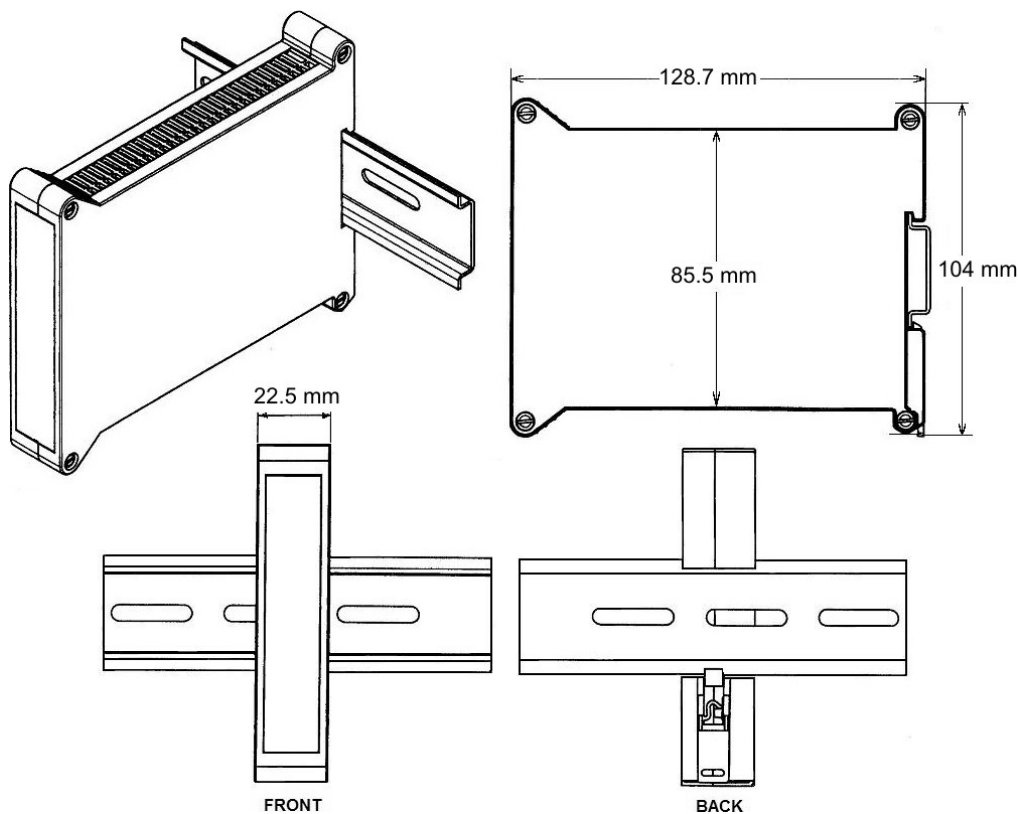
Specifications

Serial Data Input (standard)	
Type	10/100Base-T Ethernet per IEEE 802.3
Data Rates	300, 600, 1200, 2400, 4800, 9600, 19200 baud
Isolation	250V rms working, 2.3 kV rms per 1 min test
Serial Protocols	Modbus TCP, Modbus RTU, Modbus ASCII, Laurel ASCII
Modbus Compliance	Modbus over Serial Line Specification V1.0 (2002)
Digital Addresses	247 for Modbus, 31 for Laurel ASCII
Analog Output (standard)	
Output Levels	4-20 mA, 0-20 mA, 0-10 Vdc (selectable)
Compliance, 4-20 mA	10V (0-500Ω load)
Compliance, 0-10V	2 mA (5 kΩ load)
Output Resolution	16 bits (65,536 steps)
Output Accuracy	0.02% of output span
Output Update Rate	Determined by input data rate
Output Isolation	250V rms working, 2.3 kV rms per 1 minute test
Dual Relay Output (standard)	
Relay Type	Two solid state relays, SPST, normally open, Form A
Load Rating	120 mA at 140 Vac or 180 Vdc
Power Input	
Standard Power	85-264 Vac or 90-300 Vdc
Low Power Option	10-48 Vdc or 12-32 Vac
Power Frequency	DC or 47-63 Hz
Power Isolation	250V rms working, 2.3 kV rms per 1 min test
Power Consumption	2W typical, 3W with max excitation output
Mechanical	
Dimensions	129 x 104 x 22.5 mm case
Mounting	35 mm rail per DIN EN 50022
Electrical Connections	Plug-in screw-clamp connectors
Environmental	
Operating Temperature	0°C to 55°C
Storage Temperature	-40°C to 85°C
Relative Humidity	95% at 40°C, non-condensing
Cooling Required	Mount transmitters with ventilation holes at top and bottom. Leave 6 mm (1/4") between transmitters, or force air with a fan.

Pinout



Mechanical



Ordering Guide

Create a model a model number in this format: **LTSES60**

Transmitter Type	LTSE6 Serial input transmitter, Ethernet in, 4-20 mA out LTS6 Serial input transmitter, RS232 or RS485 in, 4-20 mA out
Power	0 85-264 Vac or 90-300 Vdc 1 Isolated 12-32 Vac or 10-48 Vdc