ELKOR

ETSCAL

PROGRAMMABLE SIGNAL SCALER/LINEARIZER

FEATURES:

- Microprocessor based design
- User programmable using Windows® GUI software
- Two input/output channels
- 0-5V or 0-10V input/output range
- Voltage or resistance (10K nominal) inputs

APPLICATION:

The ETSCAL may be used to scale and/or linearize signals based on 16 user programmable data points. The device is capable of calculating a linear approximation between two user defined points, thus providing a simple method to convert an input signal to a user re-scaled output signal.

The device may be used to provide a linear output voltage based on a non-linear input voltage or a non-linear input resistance. It may be used as a NTC thermistor transducer.

SPECIFICATIONS:

Power: 12 to 24 VAC or 15 to 24VDC (100mA minimum).

Input: Resistive (10K nominal) or 0-5VDC or 0-10VDC (both channels)

Output: 0-5VDC or 0-10VDC (user programmable)

Indication: Power - Green LED
Channel Status - Amber LED
- Solid = Input within defined range
- Slow Flash = Input below defined range
- Fast Flash = Input above defined range

Dimensions: (W x L x H); (1.9" x 3.8" x 1.7"); (48 x 96 x 43 mm), DIN rail mount enclosure

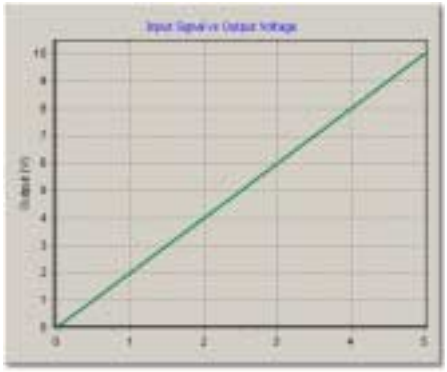
Computer Interface: serial communications (TTL output). TTL to RS232 converter required (see ET232)
Windows® based software (free for download)

PRODUCT DESCRIPTION:

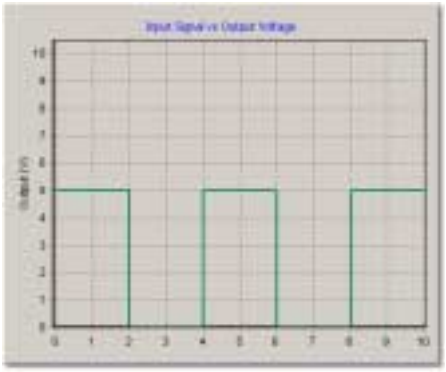
The ETSCAL is a user-programmable device that allows the conversion of an input signal into a pre-defined output voltage. Based on the input voltage (or resistance) and the programmed data points, the device will calculate the output voltage and provide an output signal. The device accepts up to 16 user defined data points, and interpolates input values which land between two user entered points.

The ETSCAL uses high-speed microprocessor technology and incorporates a 10-bit successive approximation A/D converter providing high accuracy (0.5% of full scale). Three input settings (resistance, 0-5V or 0-10V) allow high resolution readings, and a 16-bit DAC provides stable and accurate output signals.

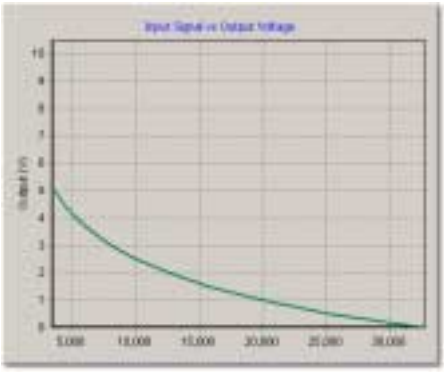
The device contains two independent input/output channels which both share the user defined data table. For example, the device may be calibrated to linearize a thermistor reading or to provide an output voltage between two data points.



0-5V in, 0-10V out



"Digital output": 0V out for 2-4V and 6-8V in; 5V out otherwise.



Linearized 10K thermistor output. 0-5V output for 0-50°C input