

# Stylitis-10

PORTABLE, LOW-COST DATA ACQUISITION AND CONTROL

**STYLITIS-10 offers low-cost, high performance data acquisition and control.**

## FEATURES

- Versatile networking capabilities.
- 8 multi-function channels, which can be used as measurement inputs or control outputs.
- 4-button keyboard and 2-line LCD display.
- 2 serial communication ports.

## APPLICATIONS

- Data acquisition networks.
- Weather stations.
- Tank level monitoring.
- Solar park measurements.

## INTEGRATED SYSTEM

Part of a complete system, Stylitis-10 collaborates with other Symmetron products:

- **Opton** – data and data logger management software.
- **AutoConnect** – automatic connection and download software.
- **Diameson** – Server gateway software that allows on-line connections in GPRS networks.
- **Emmetron** – Software that consolidates measurement data, resources and events in a central database.

For detailed specs please refer to individual product data sheets.



## MEASUREMENTS

It is capable of directly measuring voltage, current, frequency and events.

With suitable sensors it is also capable of measuring:

- Temperature, humidity, pressure.
- Wind speed and direction.
- Solar radiation, rain height, water speed, electrical energy, etc.

## CONTROL

Supports user-programmable control outputs according to input values. Outputs are capable of driving small relays, LEDs, etc.

## COMMUNICATION OPTIONS

- 2 built-in RS232 serial ports for communication to a PC, external modem, etc.
- Optional internal GSM modem. On-line GPRS connections via the Diameson server.
- Optional internal Ethernet port.
- Optional internal wireless Ethernet module.
- SMS alarms.
- SMS messages with interval data. Easily setup dynamic web sites with frequently changing information (i.e. weather, etc)

## DATA

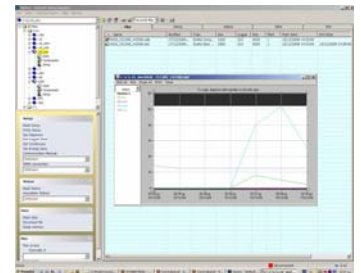
Data are compressed and stored in the internal 4MB flash memory. Data retrieval is done via any port or modem.

The free **Opton** software manages data logger operation. It also downloads and manages data files. These can be exported as:

- Text files (ASCII) organized in columns.
- Graphs.
- Excel files.

The optional **Emmetron** software imports Opton files into an Access or MySQL database. Emmetron presents:

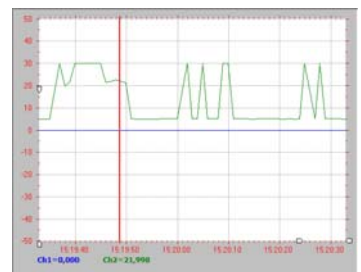
- Statistics
- Reports
- Queries
- Graphs
- Station comparisons



File trends



Graphical setup



Real-time plot



Emmetron

# Stylitis-10

## TECHNICAL SPECIFICATIONS

(Subject to change without notice )

### INPUTS

#### CHANNEL 1:

- Counter input, 16 bit. Accuracy and resolution:  $\pm 1$  count. Input range: 0~5 kHz. Input impedance: 100k $\Omega$ .
- Selectable signal threshold. Bipolar AC signals: min sensitivity 200mVp-p. Unipolar TTL signals: minimum sensitivity 1Vp-p.

#### CHANNELS 2~8:

- Individually selectable as Analog inputs or TTL-level digital inputs. Channels 5, 6, 7 may also be configured as wind vane inputs.
- Up to 7 single-ended input channels. Up to 3 differential and 1 single-ended input channels. Resolution: 13bit plus sign. Accuracy:  $\pm 0.3\%$ .
- Programmable input voltage range: min 0 ~ 125mV/ max: 0 ~ +2.5 V (Resolution: min 15  $\mu$ V/ max 305  $\mu$ V). Input impedance: 1 M $\Omega$ .
- Programmable input current range: min 0~+5 mA/ max 0 ~ +50 mA (Resolution: min 0,61  $\mu$ A/ max 6,1  $\mu$ A). Input impedance: 25  $\Omega$ .
- PT100/1000 resolution: 0.06 degrees.
- Wind vane resolution: 2.8 degrees.
- Channel 8 may be set as TTL level 16 bit counter input. Accuracy and resolution:  $\pm 1$  count. Input range: 0 ~ 5 kHz. Input impedance: 1 M $\Omega$ . Minimum sensitivity 3 Vp-p.
- Analog input channels may be ordered with 0~5V or 0~10V input range (Stylitis-10/5 or Stylitis10/10). In this case input impedance is 40 kOhms.

### ANALOG OUTPUTS (Sensor excitation)

- 1, pulsed 2.5V. Total current 20mA. Accuracy  $\pm 0.2\%$ .
- 1, pulsed 0.5mA (for PT100, etc.). Accuracy  $\pm 0.6\%$ .

### PROTECTION

- Over voltage & fuse protection on all inputs and outputs.

### CONTROL OUTPUTS

- All channels individually selectable as Active-Low output (Open drain). Output state depends on values of input channels. Output impedance: 30  $\Omega$ . Max sink current: 60 mA.
- Each output has up to 5 Conditions which are ORed together. At least one Condition must be true.
- Each Condition has up to 7 Requirements which are ANDed together. All Requirements must be true.
- A Requirement uses the measured value of any specified input channel and compares it to user-programmed values using 4 operators: *Above, Below, Between and Not Between*.

### DATA STORAGE

- **INTERNAL NON-VOLATILE MEMORY:** 4MBytes. Typical capacity (All channels, 10min interval, average only): 32 months.
- **MAXIMUM FILES IN MEMORY:** 4000
- **REAL TIME CLOCK:** With automatic lap year correction. Accuracy:  $\pm 60$  seconds/month.

### DATA PROCESSING

- Individually programmable slope, slope<sup>2</sup> and offset for each input. Sampling: 1 Hz. Calculation of  $ax^2+bx+c$ .
- Selectable storage of Average only or Average, Min, Max values at intervals from 1 second to 60 minutes.
- Dedicated wind vane algorithm computes vector averaging.

### COMMUNICATION

- 2 built-in RS232 serial ports for communication to a PC, external modem, etc. (standard in all models).
- Optional internal GSM modem (Stylitis-10+GSM).
- Optional internal Ethernet port (Stylitis-10+Ethernet).
- Optional internal wireless Ethernet module (Stylitis-10+WiFi).

### SMS MESSAGES (with optional GSM modem)

- SMS Alarms: on Control output change (see above).
- SMS Data: message with statistical data upon completion of an interval.

### USER INTERFACE

- 2 x 16 LCD display and 4 buttons.
- Allows examination of input measurements and enabling/ disabling options.

### POWER SUPPLY

- **INTERNAL BATTERY:** 9V alkaline- typical life 2 weeks.
- **EXTERNAL:** 6~15VDC. Typical consumption: Without optional communication modules: 0.9mA (LCD off), 5mA (LCD on); With internal GSM modem: 10mA (LCD off), 15mA (LCD on).

### VARIOUS

- **ENCLOSURE:** Plastic ABS. Desktop stand and wall mounting attachments included.
- **DIMENSIONS:** 18 x 10 x 4cm.
- **WEIGHT:** 200g.
- **CONNECTORS:** Removable screw terminal strips on front panel.
- **OPERATING TEMPERATURE:** -30 $^{\circ}$  ~ +70 $^{\circ}$  (LCD: 0C~+50C).
- **WARRANTY:** 1 Year.
- **APPROVALS:** CE.

### SOFTWARE

- **INCLUDED:** Opton, AutoConnect.
- **OPTIONAL:** Emmetron.

