Stylitis-12

LOW-COST, DIN RAIL DATA ACQUISITION SYSTEM WITH COUNTER, MODBUS AND SDI-12 INPUTS AND CONTROL OUTPUTS

STYLITIS-10 offers low-cost, high performance data acquisition and control and it is installed on an electric panel's DIN rail.

FEATURES

- Versatile networking capabilities, via an external DIN rail module: Ethernet or GSM/GPRS modem.
- 5 counter channels, which can be used as inputs. 1 may be used as control output.
- 22 digital bus channels, for connection of SDI-12 or MODBUS RTU (RS-485) sensors.

APPLICATIONS

- Electric bill cost management.
- Green building certification.
- Machine operation scheduling in factory.
- Monitoring of substations network.

INTEGRATED SYSTEM

Part of a complete system, Stylitis-12 collaborates with other Symmetron products:

- **Opton 4** – data and data logger management software.
- **AutoConnect** – automatic connection and download software.
- **Diameson** – Tunnel Server 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.

DIN rail system with MODBUS multimeter, data logger Ethernet adaptor and power supply.

MEASUREMENTS

Measures directly pulses (frequency and events) and data from MODBUS RTU and SDI-12 sensors. With suitable sensors it is capable of measuring:

- 1-phase/ 3-phase active energy, via a pulsed meter.
- Voltage, current, frequency, power factor, active, reactive and apparent power and energy via a MODBUS RTU multimeter, etc.
- Other parameters via SDI-12 sensors.

CONTROL

Supports user-programmable control outputs according to input values of counter channels. Output is capable of driving a small relays or LED, etc.

ALARMS

SMS or Email alarms on user-programmable conditions in a control output channel. Can work as a simple intruder alarm system for area protection. Alarms may be disabled via password.

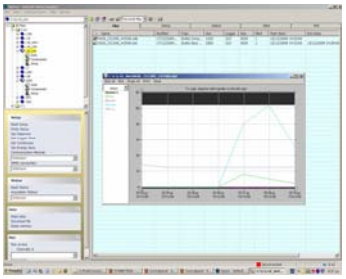
COMMUNICATION OPTIONS

- Local communication via the RS232 serial port.
- Optional RS232 to USB adaptor.
- Connection to LAN/ internet.
- Communication via dynamic/static IP internet connection.
- Modem to modem (CSD data) calls.
- On-line GPRS connections via Diameson.
- Daily data file emailing to your mail account.
- SMS messages with daily data.
- SMS messages/web database update with interval data. Setup dynamic web sites with frequently changing information (i.e. weather, etc).

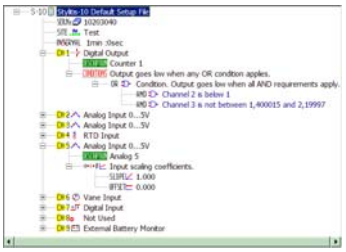
DATA

Data are compressed and stored in the internal 4MB flash memory or removable 2GB micro SD card. Data retrieval is done via any port or modem.
The free **Opton 4** software manages data logger operation. It also downloads and manages data files. These can be exported as:

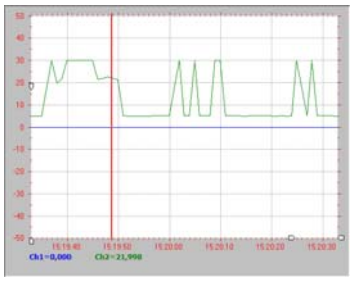
- Text files (ASCII) organized in columns.
- Graphs.
- Excel files.



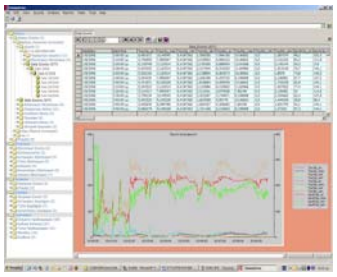
File trends



Graphical setup



Real-time plot



Emmetron

Stylitis-12

TECHNICAL SPECIFICATIONS
(Subject to change without notice)

INPUTS

4 COUNTER INPUT CHANNELS:

- Counter inputs, 16 bit. Accuracy and resolution: ±1 count. Input range: 0~1 kHz. Input impedance: 100kΩ.
- Unipolar TTL signals: minimum sensitivity 1Vp-p.

1 COUNTER INPUT CHANNEL:

- Counter input, 16 bit. Accuracy and resolution: ±1 count. Input range: 0~1 kHz. Input impedance: 100kΩ.
- Selectable signal threshold. Bipolar AC signals: min sensitivity 200mVp-p. Unipolar TTL signals: minimum sensitivity 1Vp-p.
- Usable as output.

22 DIGITAL BUS CHANNELS/NODES:

- Reading per recording interval. Individually selectable as:
- MODBUS RTU. Up to 32 bytes per node are read.
- SDI-12. Up to 16 values per node are read.

1 ANALOG INPUT CHANNEL:

- 0~5V. Accuracy ±0.7%. Input impedance: 100kΩ.

PROTECTION

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

CONTROL OUTPUTS

- 1 counter channel selectable as Active-Low output (Open drain). Output state depends on values of input channels. Output impedance: 30 Ω. Max sink current: 60 mA.
- The 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, cyclic. Typical capacity (8 channels, 10min interval, average only): 32 months.
- **EXTERNAL MEMORY:** microSD 2GB.
- **REAL TIME CLOCK:** With automatic lap year correction. Typical Accuracy: ± 20 seconds/ month.

DATA PROCESSING

COUNTER INPUTS

- Individually programmable slope, slope^2 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.

DIGITAL BUS INPUTS

- Instantaneous values reading at intervals from 1 minute to 60 minutes

COMMUNICATION OPTIONS

- 1 built-in RS232 DTE serial port for communication to a PC, or the external Ethernet or GSM modules.
- 1 built-in RS485 MODBUS port.
- 1 built-in SDI-12 port.
- Optional external GSM/GPRS module.
- Optional external Ethernet module.

REMOTE COMMUNICATION (via the optional external Ethernet/GSM module)

- LAN/Ethernet communication via a dynamic or static IP ADSL line.
- GPRS online communication via a standard, dynamic IP SIM card
- CSD data call (modem to modem). Requires a data service SIM card.

DATA EMAILS (via the optional external Ethernet/GSM module)

- Daily email: File emailing.

Opton 4 software supports decompression and storage of the emailed files in the corresponding site folders.

SMS/EMAIL MESSAGES/ WEB DATABASE UPDATING (via the optional external Ethernet/GSM module)

- Email Alarms (instead of SMS): Via an Ethernet module and for **online GPRS** via GSM modem: on Control output change (see above). The alarms are also sent to a web database.
  SMS Alarms (instead of Emails): Via a GSM module.
- Data Messages: Via an Ethernet module and for **online GPRS** via GSM modem, statistical data are sent to a web database, upon completion of an interval. Respectively, with a GSM module, they are sent via SMS.
- Daily SMS (with a GSM module): message with statistical data every midnight.

POWER SUPPLY

- **EXTERNAL**: 5~20VDC. Typical: 12V. Optionally, a DIN rail 12V power supply is available.
  Typical consumption: <20mA.

VARIOUS

- **ENCLOSURE**: DIN RAIL MOUNT MULTIBOARD BOX.
- **MATERIAL**: Plastic PC/ABS UL94V-0
- **DIMENSIONS**
- WIDTH: 53.30mm (3 DIN units)
  HEIGHT: 90.20mm
  DEPTH: 57.50mm
- **CONNECTORS**
  12 SCREW TERMINALS
  1 DB9 male for communication
- **OPERATING TEMPERATURE**: -35°~ +70°
- **WARRANTY**: 2 Years.
- **APPROVALS**: CE.

SOFTWARE

- **INCLUDED**: Opton 4, AutoConnect.
- **OPTIONAL**: Emmetron database.

0115

SYMMETRON
ELECTRONIC APPLICATIONS
Tel: +30-2106034002
Fax: +30-2106034003
http://www.symmetron.gr