


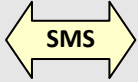




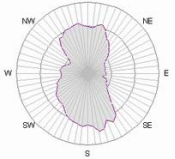


Stylitis-50

**Most advanced
data logger for
Wind Energy
Assessment**



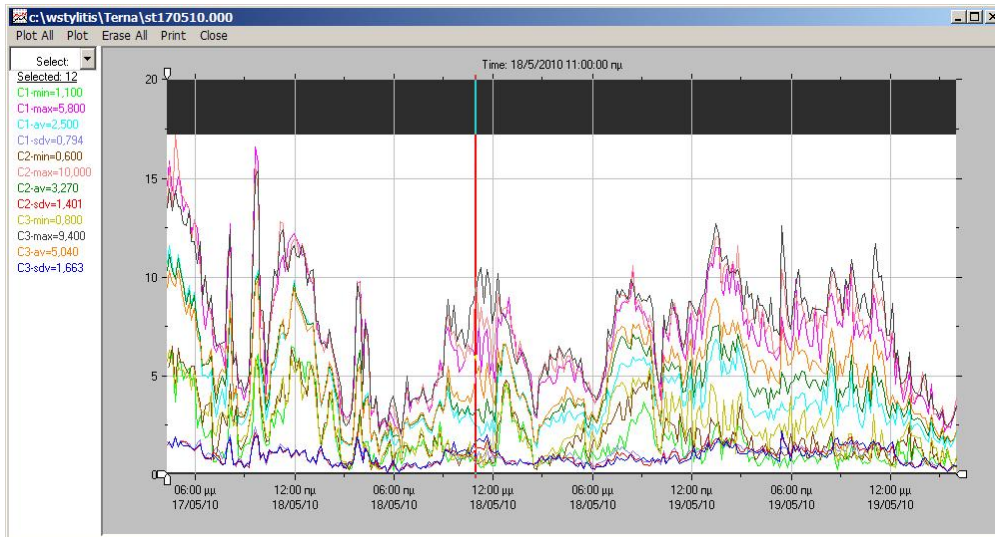
- **Sensor supervising**
- **GPRS connections**
- **Encrypted emailing**

	Feature	Benefit
	Leverages on 19 years of experience with wind energy assessment equipment.	3000 data loggers used by hundreds of companies and organizations around the globe. Lifetime technical support.
	9 counter sensor channels	Compatible with anemometers and rain gauges from Vector, NRG, Thies, Young, Riso, 2EN, etc.
	10 analog sensor channels	Compatible with wind vanes, barometers, thermometers, hygrometers, etc. from most vendors.
	Accepts most available sensors	Direct connection of PT100 sensors, pyranometers, 4-20mA transducers and voltage-output UVW anemometers without modules.
	Up to 2GB removable Compact Flash storage cards.	Virtually unlimited recording space.
	Unique Sensor Supervisor™ technology.	<p>Displays individual sensor condition based on current consumption. Shows fault cause without visiting site.</p> <p>If current consumption is found outside limits, users may initiate a System Health test to isolate the faulty sensor.</p> <p>When battery voltage is found low, high current consumption sensors are disconnected to keep system operating as long as possible.</p> <p>Disconnecting faulty sensors reduces power supply consumption.</p>
	Built-in GSM/GPRS Quad-band modem	Worldwide network compatibility. Optional connection of specialized modems, like satellite, etc.
	GPRS connections with low cost, dynamic IP SIMs	Connections via Diameson tunnel server are possible without expensive static IP SIM cards.
	Automatic data emailing via GPRS	Programmable data and status emailing. Emails are encrypted for data safety.

	Feature	Benefit
	Automatic data downloading via GSM or GPRS connections	Compatible with AutoConnect, Symmetron's auto-download software.
	SMS replies SMS alerts	Check logger status from cell phone. Low battery notification prevents system failure.
	Optional internal GPS module. (under development)	Synchronizes the real time clock and supplies location information
	Auxiliary COM port	Sometimes there is a need to remotely communicate with an additional RS-232 device or sensor, like an ultrasonic anemometer. To avoid using a second modem, the user may connect the peripheral device to the auxiliary RS-232 port on the data logger. The auxiliary RS-232 port appears as a virtual COM port in the user's computer.
	Calibration reports are available free for every new and serviced data logger since 2001.	Customer quality assurance. All units are burned-in before leaving the lab.
	LCD display and 16-key keyboard as standard.	Allows full configuration in situ. Data logger display is synchronized with office software 'virtual' display for easy debugging.
	WindRose cooperation	Direct output to the popular wind data analysis software from CRES.
	Optional Emmetron database software	Allows management of multiple sites, data, equipment and personnel. Based on MySQL database.
	Optional OPC server software.	Allows connection to SCADA systems in wind farms.

Folder Name	Last Accessed	Site Name	Map	Model	Last Download	Last Auto Status	Last Auto Connection	Last Manual Status	Last Manual Connection
L100	24/6/2009 3:45:22	npj		S100					
L40	3/7/2009 9:42:55	npj		S-10					
stylis emails	26/2/2011 11:07:49	KA 3380		S40					
wstylis	27/2/2011 2:25:41	npj		S100					
acciona	28/9/2010 6:09:37	npj		S40	3/4/2010 1:47:06				
ad araplysi	30/10/2010 1:07:12	npj		S40	14/10/2010 2:49:30	✓ OK			23/1/
aoia	17/12/2010 10:44:45	npj S		S40 #12345678	17/10/2005 2:29:04				
ehals	15/12/2010 11:31:22	npj S		S100					
haldvento	31/7/2010 1:39:03	npj		S100	4/3/2009 12:22:35				
test	26/1/2010 5:10:02	npj		S100					
lense	31/7/2010 1:38:11	npj		S40	16/7/2009 5:38:32	✓ OK			16/7/
cavo10flash	31/7/2010 1:38:15	npj		S40					
cavo40flash	1/5/2008 9:32:52	npj		S40					
eni	31/7/2010 1:39:19	npj		S40	21/1/2009 2:30:19				
demo100down	31/7/2010 1:39:22	npj		S100					
demo100flash	31/7/2010 1:39:29	npj		S100					
demo40down	1/5/2008 9:32:41	npj		S40					
elko	27/2/2011 2:24:43	npj		S40					
entek-a	27/2/2011 2:25:04	KA 3380		S40 #001	10/5/2009 10:40:45	✓ OK			11/5/
erovolec	31/7/2010 1:40:16	npj		S40					
etria	27/2/2011 2:25:20	npj		S40					
et	16/2/2011 10:03:18	npj		S100					
evust	31/7/2010 1:40:24	npj		S40	11/2/2009 3:52:32				13/1/2009 12:22:53
forest	27/2/2011 2:25:29	npj		S40					28/6/2010 9:16:21
gnis	13/10/2010 10:58:13	npj		S100	13/10/2010 10:52:17	FILE NOT FOUND	29/5/2008 3:48:35	✓ OK	13/10/2010 11:13:42
georgadis	31/7/2010 1:54:51	npj		S40					
istos anavocoines	27/2/2011 2:25:58	npj		S40					25/6/2010 2:22:18
ia	23/1/2010 5:59:46	npj		S40					23/1/2010 3:24:41
kabazitis	31/7/2010 1:56:10	npj		S100					27/4/2008 9:25:08
kafia	31/7/2010 1:55:07	npj		S40	14/7/2004 12:41:53				30/6/2004 10:10:05
kust	31/7/2010 1:50:14	npj		S40	23/6/2009 2:02:40	✓ OK			16/6/2004 6:27:20
knak	31/7/2010 1:58:18	npj		S40	13/10/2004 4:02:55	✓ OK			13/2/2009 12:25:08
klitor	17/12/2010 4:06:56	npj		S100 #33333333	23/2/2010 5:44:00	✓ OK			23/2/2010 9:37:32
ehals	17/12/2010 4:09:34	npj		S40					
mek-a	1/5/2008 9:32:09	npj		S40	20/9/2004 3:14:13				20/9/2005 12:33:36
meltem-kastri	1/5/2008 9:32:08	npj		S40					4/3/2008 9:30:28

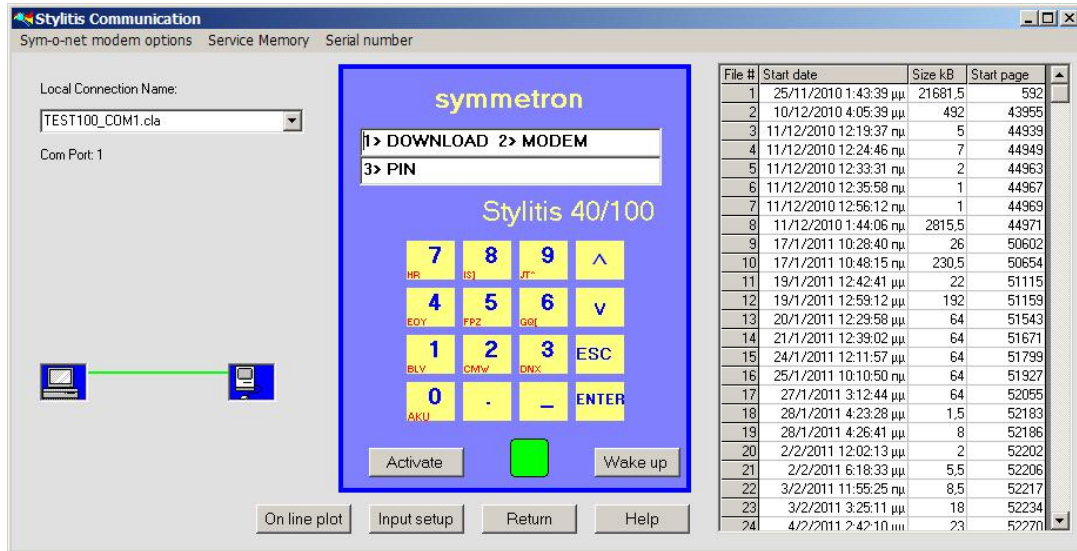
Global Site overview highlights downloading and data integrity problems at a glance.



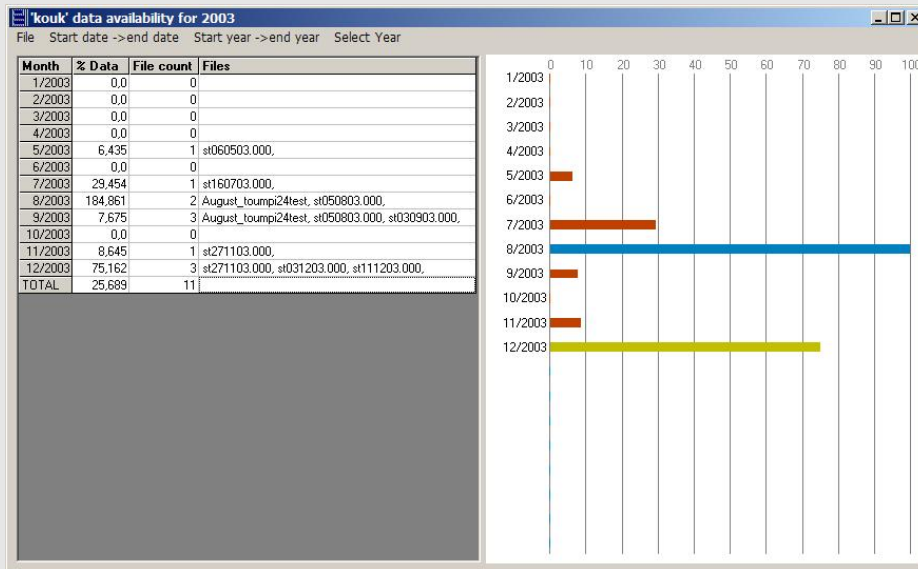
Data graph zooms and scrolls for easy data inspection and comparison.

Name	Min	Avg	Max	Sum
C1-min	0.3	1.73	6.5	496.4
C1-max	2.0	6.896	16.6	1979.1
C1-av	1.17	4.129	11.59	1184.91
C1-sdv	0.142	0.993	2.443	285.08
C2-min	0.3	2.108	6.5	605.1
C2-max	2.0	7.288	17.2	2091.7
C2-av	1.19	4.596	11.16	1318.91
C2-sdv	0.142	0.987	2.149	283.386
C3-min	0.3	2.419	6.3	694.3
C3-max	2.1	7.547	15.4	2166.0
C3-av	1.03	5.022	10.34	1441.26
C3-sdv	0.142	0.971	2.265	278.693
C4-min	0.2	2.657	8.4	762.5
C4-max	2.2	7.813	15.3	2242.4
C4-av	1.06	5.264	12.08	1510.81
C4-sdv	0.173	0.962	2.321	275.953

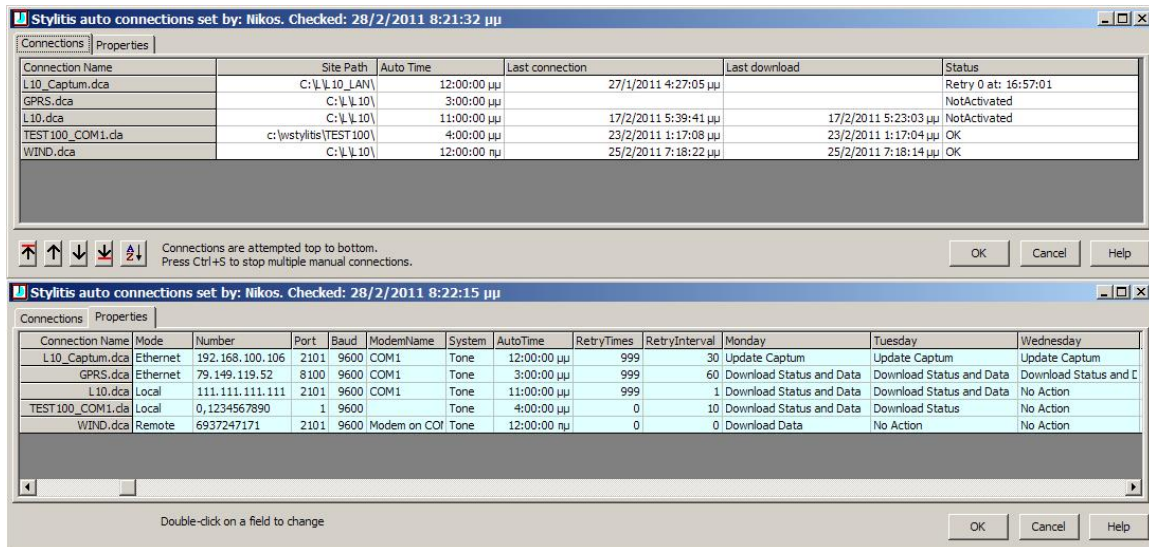
Statistics window shows minimum, maximum, average and sum for each file column.



Remote card file directory allows selective file downloading by date and size.



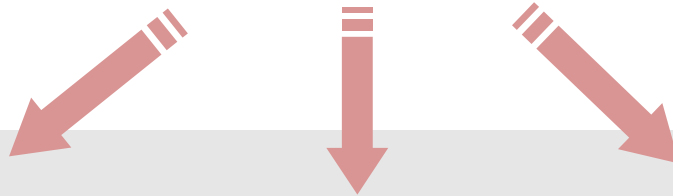
Data availability function displays percentages over user-definable periods.



Automatic file download with full connection status information.

Communication Options

(may require additional office equipment)



GSM data calls

AutoConnect supports fully automatic downloading, decompressing and archiving to site folders.



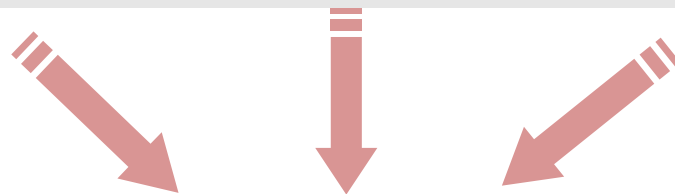
GPRS online

Diameson tunnel server allows continuous on-line communication using low-cost, dynamic IP SIM cards.



Data emails

Single-click retrieval, decryption and archiving, directly from mail account to site folders.



Technical Specifications

(Subject to change without notice)

INPUTS

COUNTER INPUTS:

- 9x, 16-bit, individually selectable counter inputs. Suitable for anemometers, rain gauges, etc.
- Input types: Frequency counter, Slope/Offset and Event counter.
- Input modes: SIN (Sensitivity 110 mV), #40 (Sensitivity 110 mV and low pass filter), TTL (Sensitivity 1.5 V), REED (Sensitivity 1.5 V and low pass filter)
- Input range: 0 to 5 kHz.
- Input impedance: 100 kOhms.
- Accuracy: ± 100 ppm
- Resolution ± 1 count

ANALOG INPUTS:

- 8x, 12-bit, single-ended, individually selectable analog voltage inputs. Input ranges: 0 ~ 40 mV to 0 ~ 5V. Suitable for wind vanes, barometers, thermometers, hygrometers, pyranometers, etc.
- Input types: Vane, Slope/Offset and Temperature.
- 2x, 12-bit, differential analog voltage inputs for connection to PT-100 sensors. Input ranges: 0 ~ 250 mV
- Input impedance: 10 MOhms
- Accuracy: $\pm 0.2\%$
- Resolution 0.01 to 1.22mV.
- Vane resolution 1.4 degrees.

OUTPUTS (SENSOR SUPPLY)

PULSED 5V:

- 8 pulsed precision 5V outputs. Current 25mA each. Accuracy $\pm 0.2\%$.

PULSED 1mA:

- 1 pulsed precision 1 mA output. Accuracy $\pm 0.2\%$.

FIXED 2.5V:

- 1 fixed precision 2.5V output. Current 25mA each. Accuracy $\pm 0.2\%$.

FIXED 5V:

- 9 fixed 5V outputs. Current 10mA each. Accuracy $\pm 5\%$.

FIXED 11V:

- 2 fixed 11V outputs. Current 25mA each. Accuracy $\pm 10\%$.

DATA PROCESSING

- Individually programmable slope and offset for each input. Sampling @ 1 Hz. Calculation and storage of Minimum, Maximum, Average and Standard Deviation selectable @ 1, 2, 5, 10, 15, or 60 minute intervals.
- Vector averaging algorithm for vanes.

DATA STORAGE

- **INTERNAL MEMORY:** 512 kBytes internal SRAM buffer.
- **REMOVABLE MEMORY:** Socket for Standard Compact Flash memory card. 64MBytes to 2 GBytes.
- **REAL TIME CLOCK:** With automatic lap year correction. Accuracy: ± 1 minute per month. Backed-up by internal, long-life Lithium battery.
- **SETTINGS:** Backed-up by internal, long-life Lithium battery.

HUMAN-MACHINE INTERFACE

- 2 x 24 Character LCD for full inspection.
- 16-key keyboard allows full programming in-site.

DATA TRANSFER AND PROGRAMMING

- **MAIN RS-232 PORT:** Bidirectional 9600 baud for connection to external modem or computer.
- **AUXILIARY RS-232 PORT:** Bidirectional 9600 baud for connection to external device.
- **MODEM:** Quad-Band GSM/GPRS Modem. GPRS connections using dynamic IP SIM cards via Diameson Server.
- **SMS MESSAGES:** The logger returns current measurement values.
- **SMS ALERTS:** The logger sends a message when battery voltage is lower than 11 volts.
- **EMAIL:** Encrypted email sent at programmable intervals. Email contains data and status information.

POWER SUPPLY

- **INTERNAL BATTERY:** 2x9V alkaline- typical life 2 months (2 sensors, 10 min intervals).
- **EXTERNAL:** 6~15V, DC/AC typical consumption 500 μ A (energy save mode) or 25 mA (continuous mode).

SENSOR SUPERVISOR

- Monitors current consumed by each sensor. Faulty sensors may be remotely connected and disconnected from power supply.

VARIOUS

- **ENCLOSURE:** IP65 sealed.
- **DIMENSIONS:** 27 x 17 x 11 cm.
- **WEIGHT:** 1.5 kg.
- **CONNECTORS:** Removable terminal strips on right side.
- **OPERATING TEMPERATURE:** -30 $^{\circ}$ ~ +70 $^{\circ}$ (LCD: 0C~+50C)
- **APPROVAL:** CE.
- **WARRANTY:** 2 Years.

OPTIONAL

- **INTERNAL GPS MODULE:** Supplies clock synchronization and location information.
- **EXTERNAL ETHERNET ADAPTER:** Allows operation in LANs.
- **POWER SUPPLY:** Solar panel, charger and lead battery.
- **SHELTER BOX:** 40 x 30 x 17 cm polyester, IP65 sealed.

PROTECTION

- Dual level transient over voltage protection on all inputs/outputs.

SOFTWARE

- **INCLUDED FREE:** Stylitis Explorer, AutoConnect.
- **OPTIONAL:** WindRose, wind data analysis software. Emmetron, database archiving and site management software.

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Related Equipment

Stylitis-50/OS: IP67 immersion-sealed version for offshore applications



Stylitis-10: integrated low cost data logger for meteorological & general applications

Shelter box, solar panel, charger and battery



Thermometers

Tubular masts



Barometers

Lattice masts



Hygrometers

Cup anemometers



Mast tilt sensor

Wind vanes



Memory cards

Vertical wind component anemometers



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