LOGGERS for current 0-20mA, voltage 0-5Vdc and binary signal

- locations with no electric power
- technological processes and laboratories
- long term field measurement

Loggers are designed for recording of voltage signal 0 - 5V (optionally 0 - 10V) or current signal 0 - 20mA.
Values are stored to a non volatile electronic memory.
Data transfer to the personal computer for further analysis is performed via serial interface RS232, USB or Ethernet by means of a proper adapter or GSM modem.

Advantages:

- included traceable calibration certificate
- variability of connection to the computer - USB, RS232, Ethernet, GSM modem
- fast data transfer to the PC - full memory for approximately 30s
- permanent connection to the PC enabled, data is possible to download even during logging
- large data memory 32000 values
- large dual line display with special symbols
- optional display of minimum and maximum measured values (reset of min/max memory from PC or by magnet)
- dual level alarm is enabled for each channel, alarm is indicated by blinking of the value on the LCD display
- two alarm modes are enabled: instant or with memory (detected alarm is indicated permanently till alarm memory is cleared)
- robust watertight case, easy installation, locking enabled
- low power consumption, battery life up to 6 years, indication of remaining battery life, easy battery replacement
- logging start/stop is enabled: at certain time and date programmed from computer or by delivered magnet
- also special logging mode is enabled, when logging runs only, if some of measured values are out of adjusted alarm limits
- input signal is recalculated and displayed in real measured physical units by means of the PC software
- each channel is possible to describe with text of 16 characters, each logger with text of maximum 32 characters
- password protection enabled to prevent unauthorized manipulation

TECHNICAL PARAMETERS	
Measurement accuracy:	±0.2% FS
Resolution of voltage input:	13 bits (8192 levels)
Resolution of current input:	7900 levels
Signal character at binary input:	from potential-less contact or two-state voltage signal
Minimum pulse duration at binary input:	500 ms (shorter pulses may not be recorded)
Maximum frequency at binary input:	0.5 Hz (i.e. maximum 5 pulses for 10 s)
Power current through contact at binary input:	3 uA (contact closed)
Voltage accross open contact at binary input:	maximum 3.6 V
Low voltage level at binary input:	0 to +0.2 V (maximum current from the input 3 uA
High voltage level at binary input:	+3.0 to +30 V (maximum current to the input 100 nA
Logging interval:	adjustable from 10s to 24hours
Display refresh and alarm state refresh:	every 10 s
Total memory capacity:	32000 values (in non cyclic mode)
Logging modes:	**noncyclic** logging stops after filling the memory
	cyclic after filling memory oldest data is overwritten by new
Operation temperature range:	-30 to +70°C
Real time clock:	year, leap year, month, day, hour, minute, second
Dimensions without connectors, weight:	93x64x29mm, 130g
Power:	Lithium battery 3.6V, size AA
Typical battery life:	6 years
Battery life in on-line mode with interval 1min:	4 years
Battery life in on-line mode with interval 10s:	1 year
Protection:	IP67 - protected against influence of temporary immersion into water

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Model	DESCRIPTION	measuring range
S5011	Single channel voltage logger	0-5V dc + binary signal
S5021	Dual channel voltage logger. Input channels are not galvanic isolated and have common ground.	0-5V dc + binary signal, optionally range 0-10V dc
S6011	Single channel current logger. The current loops should be powered from external power supply.	0-20mA dc + binary signal
S6021	Dual channel current logger. The current loops should be powered from external power supply. Input channels are not galvanic isolated and have common ground.	0-20mA dc + binary signal

No accessory is included. For basic use it is necessary to order USB adapter or COM adapter for communication with computer, optionally start/stop magnet, if needed to control logging the other way than directly from computer. Also connector for input signals connection is necessary to order.
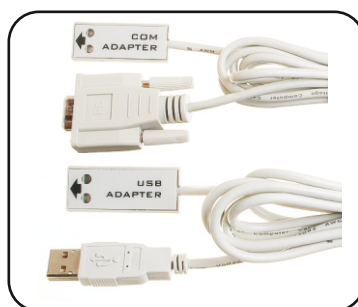
Included accessories:

Traceable calibration certificate from the manufacturer with declared metrological traceability of etalons is based on requirements of EN ISO/IEC 17025 standard. Included is also battery. Free program for Windows is ready to download from www.cometsystem.cz. Program enables to control all logger functions and viewing and printing of record in numerical and simple graphic format. It is possible to export logged values to dbf or txt formats for further analysis.
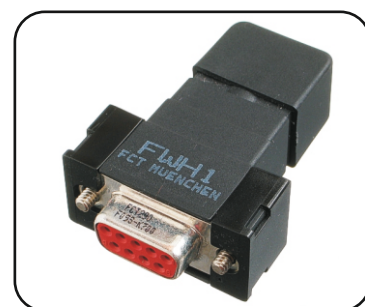
Optional accessories:

○ **SWR004** - optional software for Windows - color print, vertical and time zoom of graphs and other functions
○ **DBL Logger Program** - database program for work with data from Comet loggers. Program enables i.a.:
   - To set locally the GSM modem via RS232 link by means of QMS2901 cable.
   - To view selected channels from any Comet logger together with selected channels of other Comet loggers.
   - Measurement from different Comet devices is possible to combine in one table or graph.
   - To choose any time interval for analysis, print or export to PDF - table and graph - see also page 23.
   SW100 - CD with free PC program
○ **LP002** - COM adapter for communication with personal computer via RS232 serial port
○ **LP003** - USB adapter for communication with personal computer via USB port
○ **LP005** - LAN adapter for communication with the PC via Ethernet, including ac/dc adapter 230Vac/5Vdc.
○ Exceeding of adjusted limits is alarmed by sending e-mail message or trap.
   Accessories for wireless communication with loggers via GSM - see further
○ **LP004** - start/stop magnet
○ **MD036** - self adhesive Dual Lock for easy installation
○ **K0921** - watertight female connector Canon 9 pins with cover for connection of input signal, protection IP67
○ **K0925** - female connector Canon 9 pins with cover for connection of input signal, no protection (IP20)
○ **K0945** - adapter with terminals for easy connection of input signals, protection IP20
○ **F9000** - wall holder secured against unauthorized removal
○ **A4203** - spare Lithium battery 3.6V, no leads, size AA

Adapter for input signals connection

COM and USB adapter for communication with PC

K0921- watertight connector

LP005 - LAN adapter

LP004 - start/stop magnet

F9000 - wall holder with lock