

# Mitec WinLog, Monitor & WinSat

## Technical specification

### System requirements

<b>Computer</b>	PC 386, 486 or Pentium.
<b>Operating system</b>	Windows 3.11, 9x or NT.
<b>Memory</b>	Minimum 4 Mb.
<b>Hard drive</b>	Yes. No size requirements.
<b>Mouse</b>	Yes.
<b>Screen</b>	SVGA 800*600 recommended.
<b>Printer</b>	Yes. All Windows-printers.
<b>Communication</b>	COM-port.

### Generic specification

<b>Installation</b>	Installed from diskette. The program uses approx. 0.5 Mb harddisk space.
<b>Network</b>	Search path to common directory on the server can be given.
<b>Storage format</b>	Binary compression. One directory per object and one file per sensor.
<b>Import</b>	From binary file on disk.
<b>Export</b>	Selectable format to file.
<b>Object structure</b>	Measuring system is freely defined as hierarchical built-up object.
<b>Measuring instrument</b>	Mitec 20-series, 200-series, AT30, AT40-series, SatelLite-series.
<b>Traceability</b>	Automatic registration of serial number on instrument and sensor. Text field for registering calibration etc.
<b>Scaling of measuring sensors</b>	Automatic configuration of quantity and unit with Mitec SmartCableã sensors from AT31 and AT40. Also freely selectable scale factors and formats for normal applications (power, flow etc)
<b>Graphic presentation</b>	X-T and X-Y (only Monitor). Automatic generated or own composition. Free choice of no. of Y axes (max 16), no. of graphs (max 128). Free choice of colours, typestyles, size etc. Text, statistics and graphs can be combined.
<b>Calculation</b>	Formula language for calculation and presentation of statistics and time-series. All mathematical functions along with advanced statistics functions (not WinSat).

## Program family

*Mitec WinLog* is the base program for universal use, suitable for most applications.



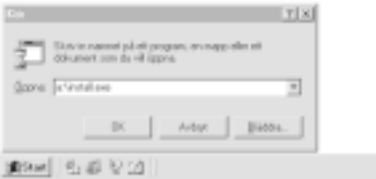
*Monitor* is the most advanced program with functions such as automatic modem communication. *WinSat* is designed for simple measurements using compact loggers in the SatELite family.

## Base functions

The program has inbuilt functions for communication, database management and graphic analysis (simplified in WinSat). No external software is required. The program is designed for Mitec's data loggers.

## Installation

The program is installed from CD on the computer's hard disk using "Start" / "Run". The program code takes approx. 0.5Mb space on the harddisk. The program is not copy-protected and can be used on one computer at a time.



## Capacity

The program is optimised for minimal capacity requirement in the computer and the quantity of information that can be managed is limited primarily by the size of the harddisk.

### Example of max. limits (Monitor)

- No. of measuring objects: 2047
- No. of groups / object: 341
- No. of loggers / object: 1636
- No. of measuring series / sensor: 511
- No. of measuring values / series: 266 billion
- No. of measuring values / sensor: 2000 billion

## User-friendliness

The program is developed by Mitec based on the needs and requests of our users. Simple menus guide the user. Help text is inbuilt. Information about measuring sensors scaling, magnitude and unit are collected automatically

from Mitec's measuring instruments. Presentations are therefore scaled and labelled automatically without complicated calculations.

## Communication

All types of data logger from Mitec can be used, directly via the COM-port, modem, GSM or radio. Data transfer is initiated manually or automatically. Measuring data can be presented on-line. All events are registered in a communication log.



## Measuring instrument

The equipment used is described under the MEASURING SYSTEM menu. The measuring system is described hierarchically using *Object*, *Group*, *Instrument* and *Sensor*. (WinLog and WinSat have a simplified structure.) Each object and group are given individual names. Different instruments can be combined freely in the same object.



## Database

Each measuring object is assigned its own library on the hard disk and each measuring sensor has its own file. Measuring data is saved packed with 2 bytes per value. Data can be edited (protected with password) and exported to other programs.

## Menus

The program is managed from several logical menus. MEASURING SYSTEM is used to define which instrument and sensors should be used. Here is described the communication, sensor name, scale factors etc. This menu can be password-protected. GRAPH is a file menu for completed graphs and graph formats. A graph can be used for several different measuring objects due to the unique matrix structure.

OPTIONS is used to make general settings such as background colour, time format etc. ANALYSIS contains graphic analysis toolbox. COMPOSITION is used to create and change graph presentations and graph formats.

## Analysis and presentation

The program contains powerful functions for analysis and presentation. Measuring data is presented in X-Y and X-T graphs in a Windows window. Line graphs or bar charts can be selected. An unlimited number of diagrams can be composed, using standard formats if required.

A number of easy to access analysis tools are available. Graphs can be zoomed, scrolled and sections can be framed and enlarged. Axes can be stretched. Cursor position shows the current measuring value. Scaling is done freely using the mouse or keyboard.



## Graph formats

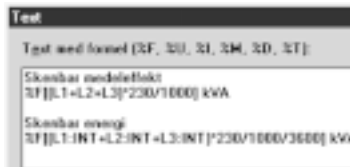
Presentations are made using graphs which can be created as general formats. These can be used for all measuring objects with similar measuring structure. The object to be presented is selected using a button from a list of all measuring objects.

Labels and other general information can be fixed or variables that are taken from a selected object. Object name, addresses and information can therefore be defined as variables during graph composition. The graph can easily be created by the user using the inbuilt drawing toolbox or generated by the program.

## Formula language

An extremely powerful formula language for calculations is inbuilt (not WinSat). Calculations can be made between defined constants and variables (measuring values in time series). Formula language is easy to use. Modifiers include:

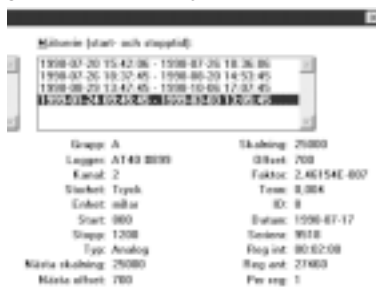
MIN, MAX, AVG, INT, RMS. Operators are the 4 mathematical symbols as well as EXP. Functions are trigonometric functions, logarithms, exponents. Selectors select a time series from the measuring data and can be freely defined, for example DAY, NIGHT, SUMMER, WORKTIME. Text and formulas can be freely combined. The sort can for example be automatically collected from the measuring sensor and the prefix (milli, kilo, mega, etc) managed automatically.



## Traceability and quality assurance

Information about the origin of the data is also saved along with the measuring data, eg the serial number of the measuring sensor and the manufacturing code. Also information about the correction factor and manually entered data from different calibrations is saved.

**NOTE.** Mitec's measuring instruments manage each sensor as an electronically-stamped individual. Each sensor change is registered automatically and documented in the history. Information can be read using a function in the program. Full traceability can therefore be assured.



# Technical data

Function	Monitor	WinLog	WinSat
Communication			
Com-ports	•	•	•
Modem	•		
GSM	•		
Radio	•		
Multidrop	•	•	
Automatic calendar-based data acquisition	•		
Automatic data collection on-line	•		
Mitec data logger 20 / 30 series	•	•	
Mitec data logger 40 series	•	•	
Mitec data logger SatelLite series	•	•	•
Diagram			
Max number of Y-axes per graph	16	16	2
Max number of graphs per diagram	127	127	4
Object / format structure	•	•	
X-T	•	•	•
X-Y	•		
Line	•	•	•
Bar	•	•	
Analysis tools			
Zoom, scroll, stretch	•	•	•
Formula language	•	•	
Macro	•		
Time-selector	•		
Sensor scaling			
Free selection	•	•	
Automatic SmartCable™	•	•	
Automatic SatelLite	•	•	•
Pre-programmed formats	•	•	•
Traceable ID	•	•	•
Calibration functions	•	•	
Max number of measuring objects	2047	2047	
Maximum number sensors / object	618	*	*
Max number measuring values / sensor	2 billion	2 billion	2 billion
Export			
ASCII raw data	•	•	•
Calculated data	•	•	
Graphics to clipboard	•	•	•
Alarm			
Local	•		
SMS to GSM telephone	•		
Printout	•	•	•

\* Depends on the number of sensors the data logger uses