

# COMETER - THERMOMETERS, HYGROMETERS, BAROMETERS

for measurement and record



- dual line LCD display with special symbols
- adjustable dual alarm with audio
- indication for each channel
- memory of minimum and maximum values
- function Hold - manual storing of actual values for later displaying

Instruments are designed for direct measurement and datalogging to internal nonvolatile memory in adjustable time interval. Recorded data is possible to transfer by means of free program via serial Rs232 link to a PC for archiving or analyzing. Instrument is connected to a PC by included communication cable only for data transfer from the memory. During connection to the PC nor measurement and record is enabled. Instruments are designed for non-aggressive air measurement.

### TECHNICAL PARAMETERS - all instruments:

Operating temperature range:	-10 to +60°C
Temperature sensor:	RTD
Accuracy of temperature measurement:	± 0.4°C at range -50 to +100°C, ± 0.5% from reading from +100 to +250°C
Accuracy of air humidity measurement:	± 2.5%RH at 23°C at range 5 to 95%, resolution 0.1%
Accuracy of dew-point reading:	±1.5°C at range 30 to 95%RH
Accuracy of air-pressure measurement:	± 2hPa at 23°C, resolution 0.1hPa
Power:	battery 9V
Battery life:	4 months typically (barometers 2 months typically)
Dimensions:	141 x 71 x 27mm

### TECHNICAL PARAMETERS - loggers (model names beginning from D) :

Modes of logging:	<ol style="list-style-type: none"> <li>1. manual logging - capacity of 1000 stored value sets</li> <li>2. automatic noncyclic logging (logging stops after filling the memory) - total capacity of 16000 values</li> <li>3. automatic cyclic logging (logging continues after filling the memory - oldest values are being replaced by newest) - total capacity approx. 15200 values</li> </ol>
Real time clock:	year, leap year, month, day, hour, minute, second
PC interface:	serial RS232
Sampling interval in logging mode:	18 adjustable values from 10s to 24hours (10s,1min,2min,3min, 4min,5min,10min,15min,20min,30min,1h,2h,3h,4h,6h,8h,12h,24h)

Model	Description	Measuring range
C3120	THERMOMETER-HYGROMETER with switchable dew-point temperature reading, built-in sensors	temperature -10 to +60°C relative humidity 5 to 95%RH
D3120	same as C3120, in addition 3 logging modes with PC interface	
C3121	THERMOMETER-HYGROMETER with switchable dew-point temperature reading and external temperature-humidity probe with 1meter cable. Cable lengths 2 meters and 4 meters available optionally. Probe diameter of 18mm, length of 135mm.	temperature -30 to +105°C* relative humidity 0 to 100%RH
D3121	same as C3121, in addition 3 logging modes with PC interface	
C3631	THERMOMETER-HYGROMETER with switchable dew-point temperature reading, built-in sensors. A Cinch connector for connection of an external RTD Ni1000/6180ppm temperature probe. Surface, pointed-tip, insertion and other probes with Cinch connector are available. Indication of temperature difference of external probe and dew-point temperature.	air temperature -10 to +60°C probe temperature -50 to +250°C  relative humidity 5 to 95%RH
D3631	same as C3631, in addition 3 logging modes with PC interface	



**031-150/C** - surface temperature probe -30 to +150°C with Ni1000 sensor on 1meter cable for C3631, D3631instruments



**031-60** - surface temperature probe -10 to +60°C with Ni1000 sensor for direct plug in C3631, D3631 connector

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Type	Description	Measuring range
<b>C3633</b>	THERMOMETER-HYGROMETER simultaneous reading of temperature and relative humidity, dew-point temperature reading selectable, built-in sensors. Surface temperature probe on the instrument back side with attaching magnets. Indication of temperature difference of surface probe and dew-point temperature. Adjustable audio and optical alarm for indication of the temperature difference for application of surface coatings	air temperature -10 to +60°C surface temperature -10 to +60°C relative humidity 5 to 95%RH
<b>D3633</b>	same as C3633, in addition 3 logging modes with PC interface	
<b>C4130</b>	THERMO-HYGRO-BAROMETER with switchable dew-point temperature reading, built-in sensors, air pressure trend reading for last 3 hours	temperature -10 to 60°C relative humidity 5 to 95%RH air pressure 800-1100hPa
<b>D4130</b>	same as C4130, in addition 3 logging modes with PC interface	
<b>C4141</b>	THERMO-HYGRO-BAROMETER with external temperature-humidity probe on a 1 meter cable. Built-in indoor temperature and air pressure sensors. Switchable dew-point temperature reading, air pressure trend reading for last 3 hours. Cable lengths 2 meters and 4 meters available optionally. Probe diameter of 18mm, length of 135mm.	outdoor temperature -30 to 105°C* indoor temperature -10 to 60°C relative humidity 0 to 100%RH air pressure 800-1100hPa
<b>D4141</b>	same as C4141, in addition 3 logging modes with PC interface	

\* Temperature from +85 to +105°C with the limitation specified in the graph

### Included accessory:

Traceable calibration certificate from the manufacturer with declared metrological traceability of etalons is based on requirements of EN ISO/IEC 17025 standard.

All instruments are equipped with connector for external ac/dc adapter.

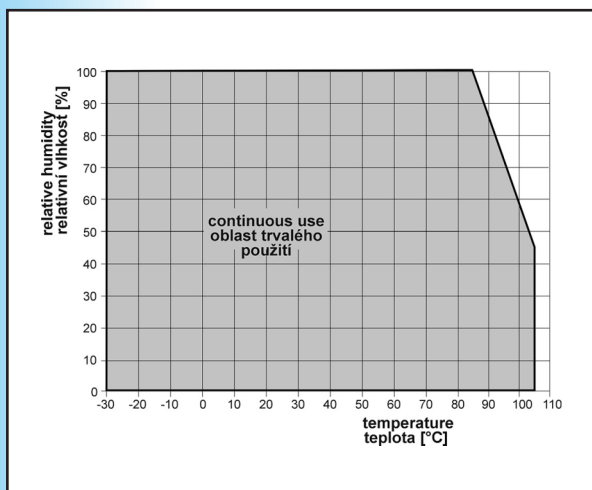
Loggers (models Dxxxx) come complete with a plastic transport case, 9V battery, communication cable for PC. Free Windows program is ready to download at [www.cometsystem.cz](http://www.cometsystem.cz)

Program enables to control all logger functions and viewing and printing of data in numerical and simple graphic formats. It is possible to export data to dbf or txt formats.

Instruments with no PC interface (models Cxxxx) are delivered in a plastic case. 9V battery is included.

### Optional accessory:

- **MP006** - RS232/USB converter for communication with the PC via USB port
- **F5200B** - sensor protection with filter from stainless steel mesh for instruments C3121, D3121, C4141, D4141. Filtering capability 0.025mm.
- **F1000** - sensor protection from sintered bronze for instruments C3121, D3121, C4141, D4141. Filtering capability 0.025mm.
- for easy mounting of C3121, D3121, C4141, D4141 instruments probes it is possible to order circular plastic flange **PP4** with gland or right-angled stain-less steel flange **PP90** with gland for wall mounting.
- **A1515** - adapter 230V-50Hz/12Vdc. 9V battery should be replaced with NiMH accumulator 9V.
- **A3400** - NiMH accumulator 9V
- **SW100** - CD with free PC program for Dxxxx loggers
- **SWR004** - Optional software for Windows - color printing, vertical and horizontal zooming of graphs and other functions (only for Dxxxx loggers) - see page 23
- DBL Logger Program - database program for work with data from Dxxxx loggers - see also page 23.



# OPTIONAL PROGRAMS FOR DATA LOGGERS

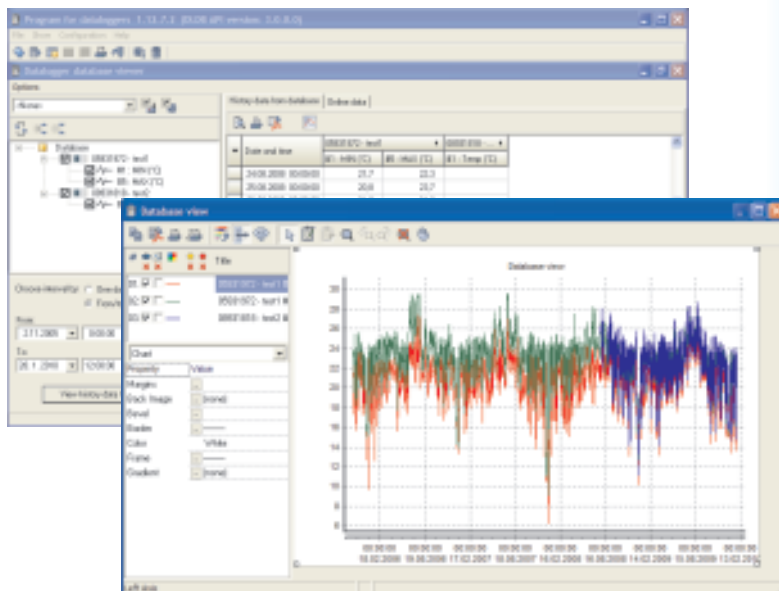
## DBL Logger Program

Database program DBL Logger Program for work with data from Comet loggers

Program enables i.a.:

- \* To set locally the GSM modem via RS232 link by means of the 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, export to PDF - table and graph.

Other freeware needed for system operation:  
- database server Microsoft SQL or MySQL



## SWR004 Program for Data Loggers Sxxxx, Rxxxx, Gxxxx, Dxxxx.

Program is designed for communication with data loggers, read out the configuration of the device and setting up the parameters. It also allows to read out the data from the device in order to get the measured values. For the temperature and humidity devices is possible to select one counted value (dew point temperature, absolute humidity, specific humidity, mixing ratio, specific enthalpy). Data can be viewed and printed as table or graph. It is also possible to export data to DBF or TXT files. You can change the axis and select any time range to view or print out the data. It is allowed to zoom the graph, modify the drawing width and the its color. It is also possible to separate the quantities from each other and print some of them or all of them separately.

The main advantages of optional software comparing to the freeware:

- \* different graphical engine (zoom, selection of the curves, axis modification)
- \* selection of the values from table to print them out
- \* communication with more LAN adapters (freeware supports only one)
- \* statistic values, counting of MKT (Mean Kinetic Temperature)
- \* online visualization of actual values
- \* communication via GSM modem (dialling) or GPRS (data)
- \* autodownload from more data loggers
- \* automatic export to DBF or TXT after data download
- \* selectable path to store data

