

RELATIVE HUMIDITY AND TEMPERATURE LOGGERS



S3120 logger

- Food and beverages industry (HACCP)
- Pharmaceutical industry
- HVAC (heating, ventilation, air conditioning, cooling)
- Building and energy management
- Research and development, Laboratories (GLP)
- Technological processes and warehouses
- Museums, archives, galleries

Loggers are designed for record of air relative humidity and temperature, optionally in combination with voltage signal 0-5V. 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.

- easy user adjustment and calibration of relative humidity by means of optional accessory and PC software
- included calibration certificate from the manufacturer - Comet
- variability of connection to the computer - USB, RS232, Ethernet, GSM modem
- fast data transfer to the PC (full memory of 32 000 readings for approximately 30s)
- permanent connection to the PC enabled, data is possible to download even during logging
- large dual line display with special symbols, switchable
- 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 or LED
- two alarm modes: instant or with memory (detected alarm is indicated till alarm memory is cleared)
- robust watertight case, easy installation, locking enabled
- low power consumption - battery life up to 7 years, indication of remaining battery life, easy battery replacement
- standard temperature sensor is Pt1000
- combination of measurement of temperature and RH with two user calibrated voltage signals 0-5V
- also logging mode enabled, when logging runs only, if measured values are out of adjusted alarm limits
- each logger is possible to describe with text of maximum 32 characters
- each channel is possible to describe with text of maximum 16 characters
- password protection is enabled to prevent unauthorized manipulation with logger

TECHNICAL PARAMETERS

Operating temperature range of no display loggers R312x:	-30 to +80°C, -40 to +80°C logger R0110
Operating temperature range of display loggers S3xxx:	-30 to +70°C
Accuracy of the Pt1000 input without probe : (S3631 logger) :	±0.2°C from -50 to +100°C ±0.2% from reading from +100 to +260°C ±0.4% from reading from -90 to -50°C
Accuracy of humidity measurement:	±2.5% RH from 5 to 95% at 23°C
Accuracy of dew point measurement:	±0.5°C from 30 to 95% RH
Resolution of the reading:	0.1°C, 0.1%RH
Real time clock:	year, leap year, month, day, hour, minute, second
Logging interval:	adjustable from 10s to 24h (1 minute to 24h in low-power mode)
Display and alarm refresh:	each 10 s
Total memory capacity:	32000 values in noncyclic logging mode
Logging modes:	noncyclic logging stops after filling the memory cyclic after filling memory oldest data is overwritten by new
Dimensions without connectors and sensor cover:	loggers with display 93x64x29mm loggers without display 93x64x26mm
Power:	Lithium battery 3,6V, size AA
Typical battery life in low-power mode (1 minute sampling):	7 years R3120, R3121, 6 years S3120, S3121, S3631, S3541
Typical battery life in fast mode (10 second sampling):	3 years R312x, 2.5 years S3120, S3121, S3631, S3541
Battery life in continuous on-line mode with interval 1 min:	reduced to 70% of the above lives
Battery life in continuous on-line mode with interval 10s:	1 year
Protection of the electronics:	IP67- protected against influence of temporary immersion into water



start/stop magnet

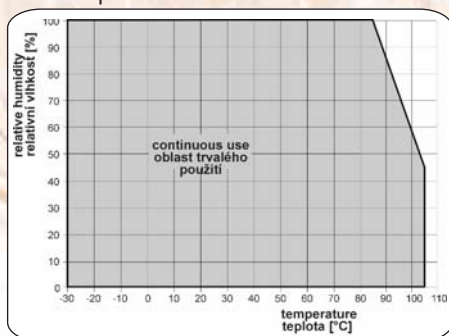
USB adapter for communication via USB and COM adapter for communication via RS232



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Types	LOGGERS WITH DISPLAY	Input signals	Measuring range
S3120	THERMOMETER-HYGROMETER with internal T+RH sensors. Alternative display of dew-point temperature.	T+RH	temperature -30 to +70 °C Humidity 0 to 100%
S3121	THERMOMETER-HYGROMETER with external T+RH probe with 1 meter cable. Alternative display of dew-point temperature. Cable lengths 2 meters and 4 meters available optionally. Probe diameter of 18mm, length of 105mm.	T+RH	temperature -30 to +105 °C* Humidity 0 to 100%
S3631	THERMOMETER-HYGROMETER with internal T+RH sensors. Additional connector for external temperature probe. Alternative display of dew-point temperature, external probe temperature and the temperature difference of external probe and dew-point temperature.	T+RH +Text	internal -30 to +70 °C external -90 to +260 °C humidity 0 to 100%
S3541	THERMOMETER-HYGROMETER with internal T+RH sensors. Additional connectors for two signals 0-5Vdc ($\pm 0.2\%$ FS accuracy). Alternative display of dew-point temperature.	T+RH + 2x0-5V	internal -30 to +70 °C humidity 0 to 100%
Types	LOGGERS WITHOUT DISPLAY	Input signals	Measuring range
R3120	THERMOMETER-HYGROMETER with internal T+RH sensors. Calculated reading of dew-point temperature.	T+RH	temperature -30 to +80 °C humidity 0 to 100%
R3121	THERMOMETER-HYGROMETER with external T+RH probe with 1 meter cable. Calculated reading of dew-point temperature. Probe diameter of 18mm, length of 105mm. Cable lengths 2 meters and 4 meters available optionally.	T+RH	temperature -30 to +105 °C* humidity 0 to 100%

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



No accessory is included. For basic use it is necessary to order at minimum a COM adapter or USB adapter for communication with computer, optionally a 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 - only model S3541.

INCLUDED ACCESSORIES: Traceable calibration certificate from the manufacturer, instruction manual. Calibration certificate 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 ACCESSORY:

- 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.
- LP004 - start/stop magnet
- MD036 - self adhesive Dual Lock for easy installation
- A4203 - spare Lithium battery 3.6V, no leads, size AA
- for S3631 it is necessary to order probe with Pt1000 sensor equipped with K1321 connectors there is a symbol /E behind probe name
- K1321 - spare female connector for connection of temperature probe of S3631 logger, protection IP67
- K0921 - watertight female connector Canon 9 pins for connection of 0-5V signals of S3541 logger, protection IP67
- K0925 - female connector Canon 9 pins for connection of input signals of S3541 logger, protection IP20
- K0945 - adapter with terminals for easy connection of 0-5V signals of S3541, protection IP20
- F5200 - grey sensor cover with filter from stainless steel mesh, filtering ability 0,025mm
- F5200B - black sensor cover with filter from stainless steel mesh, filtering ability 0,025mm for S3121, R3121 loggers
- F0000 - sensor cover from sintered bronze for thermo-hygrometers S3xxx, R3120, R3121

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- ☐ **F9000** - wall holder with lock
- ☐ **LP006** - GSM adapter for communication of Sxxxx, Rxxxx loggers via GSM
- ☐ **MP009** - GSM modem Fastrack Supreme, without accessories
- ☐ **MP009/1** - GSM antenna 3dB for modem Fastrack, right-angled
- ☐ **MP009/2** - Data cable for setting of GSM modem Fastrack
- ☐ **MP009/3** - Ac/dc source 230V/12V for powering of GSM modem Fastrack
- ☐ **SWR004** - optional software for Windows color print, vertical and time zooming of graphs and other functions

WARRANTY: 2 years



Logger R3120



Thermo-hygrometer S3121



F9000-wall holder with lock



KO945 adapter for S3541



KO921- watertight connector for input signals of S3541



LAN adapter LP005



F5200

F5200B

Sensor cover with filter from stainless steel mesh

Accessory for humidity adjustment and calibration by the user:

- **MD046** – vessel for humidity calibration and adjustment
- **HM023** - set of 5 humidity standards 10% RH with 5 application pads
- **HM024** - set of 5 humidity standards 80% RH with 5 application pads

