

Type No.

1020.2000



COMBILOG 1020.2000

Datalogger COMBILOG

with new enhanced configuration software, suitable for WINDOWS® 95/98/NT/2000/XP; compact design with integrated LC-display and memory module for PCMCIA memory cards, suitable for applications in meteorological, hydrological and environmental measuring systems, as well as various other industrial applications. The COMBILOG enables the user to enter his individual system configuration in an easy manner, whereby sensors of almost any kind can be integrated (refer to "Configuration").

Basic performance and new features :

- 2 versions of operating frequency: 20 MHz (Standard) or 5 MHz (Low Power).
- 8 analog inputs and 6 digital I/O ports, as well as additional arithmetical channels, thus featuring a maximum of 32 channels. Connection of any common sensor type. Analog inputs with 2-, 3- or 4-line connection. Wide selection of measuring ranges (e.g. for voltage measurement, from ± 6.25 mV). Connection of thermocouples.
- High resolution (16 bit A/D-conversion).
- 2 serial interfaces (RS232 and RS485), suitable for ASCII- or PROFIBUS-format. Networks up to 126 loggers. Master function for data collection from other bus modules, via RS485 interface.
- Baudrate up to 38,400 bps.
- User-achievable menu-guided configuration under WINDOWS 95/98/NT/2000.
- Built-in 256 kB RAM, extendable to max. 32 MB, by means of SRAM-Card. PCMCIA-slot included. Flash memory cards available from 2 MB to 10 MB.
- Compact SMD design. Shell fits on standard rail; plug-in screw terminals for up to 1.5 mm² at the front.
- LC-display and multifunctional switch for online display and change of basic modes. LEDs for "Run", "Error" and I/O Status.
- Wide range of accessories available, such as evaluation software and battery/solar supply.
- Wide operating temperature range (-30...+60°C).
- Extended number of communication commands for memory management incl. use of password.
- Threshold triggered reports via modem resp. SMS, e.g. for alarm purpose.
- Extended ranges for scan rate (0.5 s to 60 min) and averaging interval (1 s to 12 h).
- Averaging interval changeable by process controlled triggering.



COMBILOG 1020, installed in stainless steel housing type 9910

Due to the COMBILOG's low power consumption, battery-supplied systems for about several weeks continuous measuring period can be realized. This period may be extended by the use of solar panel supply. For applications like outdoor use there are stainless steel housings, lockable, protection class IP 65, available. With mains-independent systems, this housing also contains the battery and - eventually - the charge controller.

Upon request, complete systems (mobile or stationary), incl. all sensors, masts and supports, as well as personal computer and software, GSM- or short range wireless modem incl. antenna can be quoted.

Several standard software programs for data transfer and data evaluation are available (COMVIEW 32, COMGRAPH 32, COMAVIA)

Type No.

Datalogger COMBILOG LT

1021.2000



COMBILOG LT 1021.2000

COMBILOG LT 1021 is a simplified version of the COMBILOG 1020, without display and multi function switch, still suitable for a large number of applications mentioned before, and further equipped with some additional features, for example: Baud rate up to 115.200 bps, 1 analog output 0...10 V and a housing version with IP 65 aluminium shell, for outdoor operation. Further details, refer to "Technical Data".

Datalogger COMBILOG LT 1021.2002

1021.2002



COMBILOG LT 1021.2002

IP 65 housing version, with aluminium shell, with 10 cable ducts.

Technical Data

COMBILOG 1020

Inputs: Defined by software

Analog : 8 x, for current-, voltage- and resistance measurement; 16 bit analog/digital conversion, 2-,3- or 4-line connection; resp. single-ended or differential;
 Resolution : 0.003...0.03 %, range dependant
 Accuracy : 0.01...0.3 %; range dependant
 Linearity : 0.01%;
 Temp. drift : 25 ppm/K; 2 ppm/K with drift correction
 Ranges : ± 6.25 mV... ± 10 V; 62.5 μ A...25 mA; 200 Ω ...20 k Ω

Digital : 6 x I/O port, for frequency measurement, counter, status and special Gray Code;

as input : max. 18 V DC resp. max. 2 kHz;
 as output : Open Collector, max. 18 V DC resp. max. 100 mA

Interfaces: 1 x RS232, 1 x RS485; each ASCII- or PROFIBUS compatible, baud rate max. 38,400 bps

Analog output : none

Data storage : PCMCIA Flash Memory Card up to 10 MB; resp. 256 kB internal RAM, extendable up to 32 MB

Display : LCD, 2 x 16 characters, contrast adjustable,

Power supply : 10...18 V DC; upon configuration, from 70 mW

Operating Temperature : -30...+60°C; storage: -30...+85°C

Construction : Aluminium/ABS housing for installation on standard rail 35 mm, acc. to EN 50022; connection with plug-in terminals for up to 1.5 mm²

Dimensions : 189 x 90 x 83 mm (W x H x D)

Weight : approx. 720 g

COMBILOG LT 1021

Inputs: Defined by software

Analog : 6 x, for current-, voltage- and resistance measurement; 10 bit analog/digital conversion, 2- or 4-line connection; single-ended
 Resolution : 4-line connection; single-ended
 Accuracy : 0.1%
 Temp. drift : < 0.2 %
 Ranges : < 0.1 %
 25 ppm/K;
 ± 50 mV, 0... 1 V; 0...10 V; current measurement with ext. shunt, 0...2 k Ω

Digital : 16 x I/O port for status, 6 of these channels also for counter, frequency measurement or special Gray Code;
 max. 30 V DC resp. max. 2 kHz
 as input :
 as output : Open Collector; max. 30 V DC resp. max. 100 mA

Interfaces : 1 x RS232, 1 x RS485; ASCII, PROFIBUS or MODBUS RTU, baudrate max. 115,200 bps

Analog output : 1 x 0...10 V, 40 mV resolution

Data storage : Internal RAM 512 kB

Display : None

Power supply : 10...30 V DC; upon configuration approx. 1 W

Operating Temperature : -30...+60°C; storage: -30...+85°C

Construction : Aluminium/ABS housing for installation on standard rail 35 mm, acc. to EN 50022; connection with plug-in terminals for up to 1.5 mm². Optional IP 65 aluminium shell.

Dimensions : 189 x 90 x 83 mm (W x H x D), housing version: 220 x 120 x 80 mm

Weight : approx. 575 g

Configuration

Configuring the COMBILOG, as well as the COMBILOG LT, is accomplished by means of a WINDOWS® 95/98/NT/2000/XP based PC-software.

Hereby the channel layout for all inputs is supported by a data base, comprising data of all common sensors. Configuration and connection is displayed and stored and printed out, if required.

Next to analog and digital inputs, mathematical adaptations as well as control- and alarm functions may be realized.

The configuration carried out on a PC is directly transmitted to the COMBILOG via RS232 resp. RS485 interface, and is similarly accessible in reverse direction. Measuring values of all channels can equally be displayed.

For use with different applications, a number of configurations can easily be created and entered to the COMBILOG correspondingly.



Example for configuration: Measuring system for waste treatment plant

Thanks to its WINDOWS based menu, the configuration table can easily be created or changed by the user. Each field within the matrix can be activated by mouseclick, thus opening a window, showing all options available. Further mouseclick will activate the chosen option.

The complete matrix can be printed as a screen hardcopy and can be used as a hardware connection plan, as well.

Type No.

Accessories and peripheric modules :

Digital connection board, to connect up 8 parallel status signals to a digital COMBILOG input

1025.0000



Embedded Ethernet / Internet Controller

1025.5000

Module allowing simultaneous data transmission via Ethernet (TCP/IP Module)



GSM Modem

1026.0000

GSM data transmission-system incl.

- GSM Modem
- External antenna

12V power cable

PCMCIA Flash Memory Card, 2 MB

1035.4000

PCMCIA Flash Memory Card, 10 MB

1035.5000

RAM extension; PCMCIA SRAM Card 2 MB

1036.1000

RAM extension; PCMCIA SRAM Card 6 MB

1036.2000

Reader unit for PCMCIA Flash cards, PC built-in version, incl. software

1039.1200

12V/7Ah battery incl. charger

1050.0000

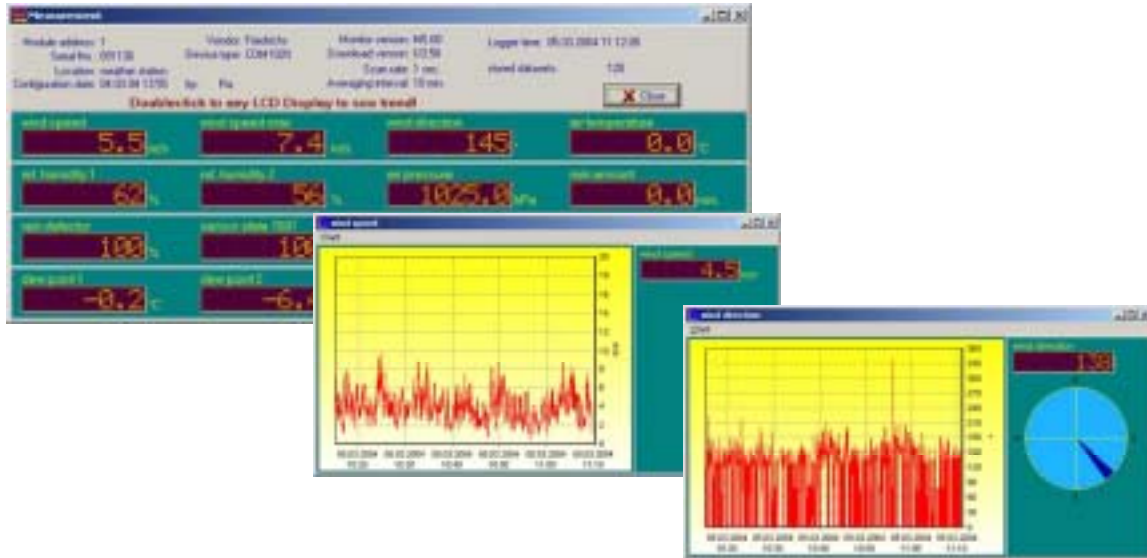
Display Software COMVIEW 32

1029.2001

Software for numerical and graphical data display, for COMBILOG 1020 and COMBILOG LT 1021, suitable for WINDOWS® 95/98/NT/2000/XP.

Data transfer via serial interface, optionally via modem.

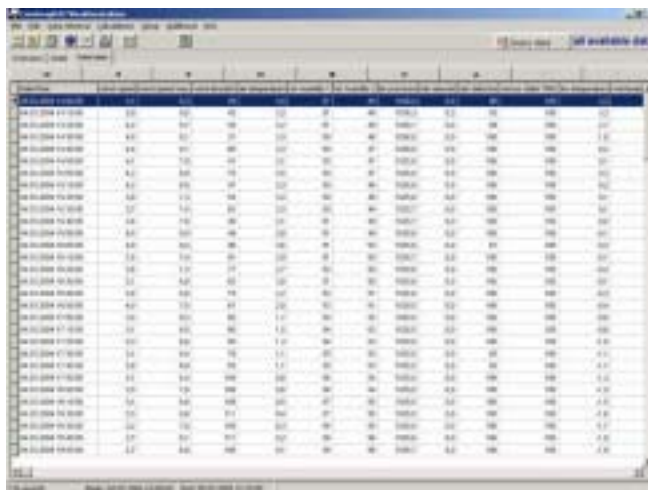
Next to the instantaneous values, all data from 1 hour past are accessible in a graphic mode



Data transfer and evaluation software COMGRAPH 32

1029.3001

This WINDOWS® 95/98/NT/2000/XP based program enables transfer of all data, stored in a COMBILOG or COMBILOG LT datalogger. Depending on the datalogger's configuration, the data are either transferred via the serial interface to a PC or stored in the memory card. The card has to be taken out and read by a suitable PCMCIA drive.



The screenshot shows a data table with multiple columns and rows. The columns represent different data points over time, with timestamps ranging from 08.03.2004 07:00:00 to 08.03.2004 17:00:00. The rows contain numerical values for each parameter at each time interval.

The program supports management of several dataloggers, creating an individual table of data storage for each logger. Data storage is accomplished within a data base; export of data to ASCII code is possible, thus featuring further data processing by common programs, such as MS EXCEL®. The processed data are displayed as numerical or graphical schemes and can be printed out, upon requirement.

