DATALOGGER CR1000

The CR1000 is our most widely used datalogger. It can be used in a broad range of measurement and control functions. Rugged enough for extreme conditions and reliable enough for remote environments, it is also robust enough for complex configurations.

The CR1000 builds on the foundation of our CR10X dataloggers, and has already been put to use all over the world. Increased memory and more measurement channels make it a powerful core component for your data-acquisition system.

The CR1000 consists of a measurement and control module and a wiring panel. This datalogger uses an external keyboard/display and power supply. Low power consumption allows the CR1000 to operate for extended time periods on a battery recharged with a solar panel—eliminating the need for AC power. The CR1000 suspends execution when primary power drops below 9.6 V, reducing the possibility of inaccurate measurements.

The CR1000's module measures sensors, drives direct communications and telecommunications, reduces data, controls external devices, and stores data and programs in on-board, non-volatile storage. The electronics are RF shielded and glitch protected by the sealed, stainless-steel canister. A battery-backed clock assures accurate timekeeping. The module can simultaneously provide measurement and communication functions. The on-board, BASIC-like programming language supports data processing and analysis routines.

The CR1000WP is a black, anodized aluminum wiring panel that is compatible with all CR1000 modules. The wiring panel includes switchable 12 V, redistributed analog grounds (dispersed among analog channels rather than grouped), unpluggable terminal block for 12 V connections, gas-tube spark gaps, and 12 V supply on pin 8 to power our COM-series phone modems and other peripherals. The control module easily disconnects from the wiring panel allowing field replacement without rewiring the sensors.

Originally, the standard CR1000 had 2 MB of data/program storage, and an optional version, the CR1000-4M, had 4 MB of memory. In September 2007, the standard CR1000 started having 4 MB of memory, making the CR1000-4M obsolete. Dataloggers that have a module with a serial number greater than or equal to 11832 will have a 4 MB memory. The 4 MB dataloggers will also have a sticker on the canister stating “4M Memory”.

Specifications:

Maximum Scan Rate	:	100 Hz
Analog Inputs	:	16 single-ended or 8 differential individually configured
Pulse Counters	:	2
Switched Excitation Channels	:	3 voltage
Digital Ports[1]	:	8 I/Os or 4 RS-232 COM[2]

[1] Certain digital ports can be used to count switch closures.

[2] I/O ports can be paired as transmit and receive for measuring smart serial sensors.

Communications/Data Storage Ports	:	1 CS I/O, 1 RS-232, 1 parallel peripheral
Switched 12 Volt	:	1
Input Voltage Range	:	±5 Vdc
Analog Voltage Accuracy	:	±(0.06% of reading + offset), 0° to 40°C
Analog Resolution	:	0.33 µV
A/D Bits	:	13
Temperature Range Standard	:	-25° to +50°C
(Temperature Range Extended)	:	-55° to +85°C
Memory	:	2 MB Flash (operating system), 4 MB (CPU usage, program storage, data storage)
Power Requirements	:	9.6 to 16 Vdc
Current Drain	:	0.7 mA typical; 0.9 mA max. (sleep mode) 1 to 16 mA typical (w/o RS-232 communication) 17 to 28 mA typical (w/RS-232 communication)
Dimensions	:	23.9 x 10.2 x 6.1 cm
Weight	:	1.0 kg
Protocols Supported	:	PakBus, Modbus, DNP3, FTP, HTTP, XML, POP3, SMTP, Telnet, NTCIP, NTP, SDI-12, SDM

CE Compliance Standards to which Conformity is Declared : IEC61326:2002

DR. ALFRED MÜLLER
METEOROLOGISCHE INSTRUMENTE KG
Chausseestraße 39 / 42c
D-15712 Königs Wusterhausen

Tel.: +49 3375 9025-32
Fax: +49 3375 9025-36
e-mail: dr.a.mueller-r.fuess@t-online.de
www.rfuess-mueller.de