

## DL 64 datalogger

DL 64's compact design combines a menu-driven firmware package with versatile I/O module options for optimum performance in monitoring systems. DL64 offers a broad range of communication to upper systems and portable devices of system operators and servicing personal. DL64 datalogger is primarily designed for CEMS in accordance to EN 14181 standard.

### DL software capabilities

Built-in capabilities of the Model DL 64 far exceed more expensive PLC's or PC-based data loggers, with no customer software programming required. The Model DL 64 onboard menu is offering a broad repertoire of available functions.

The Model DL 64 interfaces with virtually any sensor output, whether analog or digital and is readily adapted to the newest serial-based analyzers, including stack gas monitors, particle / flow instruments and gas chromatographs. Representing the culmination of over 20 years of experience in the field of microprocessor-based data acquisition components, each Model DL 64 is backed by ECM's reputation for quality, reliability and uncompromising service.



Many practical features needed specifically for ambient and CEMS are built in. For example, the Model DL 64 computes and stores block and rolling averages (up to 3 user-selectable averages per parameter), as well as more complex mathematical functions (vector average calculations, sensor linearization, standard deviations, etc.) using built-in math channels. It detects and reports alarms based on digital inputs, min/max analog input levels, or logger-computed parameters. Monitored data and calibration results are treated separately. DL64 is designed to provide automatic calibration or calibration check of connected analyzers, including automatic multi point calibration. Reports of topical or stored data are provided in either tabular or graphical form.

Beyond standard functions DL64's language (similar to BASIC) allows free programming of input / output channels to allow control of monitoring system components like channel switching, purge control, filter and flow watch, etc.

### **Model DL 64 Hardware and I/O Options**

The Model DL 64 hardware is optimized for CEMS and ambient air monitoring applications. Its flexibility is based on rear-mounted I/O modules in different combinations. These I/O modules can fit analyzer analog outputs, digitally controlled devices and multi-point calibrators, provide analog output signals (instantaneous, averaged or computed) to an upper system or strip-chart recorder. In addition to these features, a MODBUS interface permits bi-directional data transfer of plant operational parameters between the Model DL 64 and upper systems. The meteorological interface module provides direct support for wind speed and direction, rainfall, temperature and other sensors.

The Model DL 64 can be used as a stand-alone data logger or as a node in a multi-station monitoring system, with any of ECM's PC-based data management software packages. ECM data systems simplify real time and historical data management and automate reporting tasks to meet European Standards and local regulations. Most international regulatory requirements for stack emissions and ambient air quality monitoring can also be achieved with ECM data systems using the Model DL 64 Data Logger.

### **Standard DL 64 Equipment**

Model DL 64 Data Logger  
CPU : AMD 64bit  
RAM: 512MB  
Storage: 40GB  
Optical drive: DVDRW  
Output interface: RS232/RS485/RS422/Ethernet  
Case: 19" rack case, 4U  
I/O interface connector : Cannon DB25 or  
Dimensions: 482.5x450x177

### **Analog Input modul**

Channels: insulated 8 differential  
Resolution: 16-bit  
Input type: mV, V , mA  
Input range:  $\pm 150\text{mV}$ ,  $\pm 500\text{mV}$  ,  $\pm 1\text{V}$ ,  $\pm 5\text{V}$ ,  $\pm 10\text{V}$ ,  $0 \pm 20\text{mA}$ ,  $4\text{-}20\text{mA}$   
Sample rate: 10 Samples/Second  
Accuracy:  $\pm 0.1\%$   
Input Impedance: 20M Ohms

## **Analog output modul**

Photo-isolation: 3750 Vrms

Channels: 4

Output type: mA, V

Output range: 0~20mA, 4~20mA, 0~5V, +/-5V, 0~10V, +/-10V

14-bit resolution

Accuracy:  $\pm 0.1\%$  of FSR

Resolution:  $\pm 0.02\%$  of FSR

## **Binary Input**

Channels: 16 dry contact

Wet Contact: optional

## **Binary Output**

Output Channels: 8 relay outputs

Output Type: 8 Form A

Expected Life: 100.000.000 cycles

## **Communication options**

- Modbus Protocol Serial Interface
- External Modem with Cable
- Ethernet TCP/ IP communication
- Bluetooth / IR communication
- GPRS communication
- Extension of serial RS232/485 port for up to 16 in total