# LogMessage – Data logger

Stand alone and intelligent

LogMessage is a stand alone operating device for acqui-ring, monitoring, calculating and logging measurement data. It is equipped with a 1 GB memory for logging up to 128 million measurement values.

The LogMessage's analog inputs are differentially and galavanically isolated from each other as well as from the power supply. Earth loops and non-isolated sensors there-fore present no problem. All analog inputs can be used universally and are capable of measuring any type of thermo-couple, RTD, voltage or current signal.

Channel configuration takes place via the easy to use DataService Configurator software included with the deli-very. The devices are supplied as complete systems with the ProfiSignal Go software – professional software for online or offline monitoring and analysis of measurement data.

Configuration and measurement data read-out takes place via a network interface. LogMessage's two serial ports enable modem connection for either remote access or connecting to external hardware for data transfer purposes. Alarm notifications and text messages may be transmitted using a GSM modem. When the LogMessage device is operated within a network, measurement data can be transmitted online and processed using the ProfiSignal Go software.
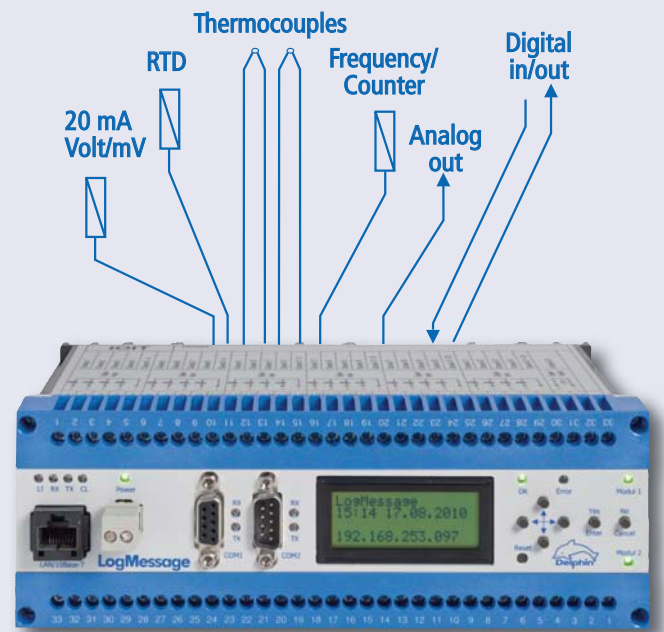
Product features

- ProfiSignal Go software included in package
- Differential and galvanic isolation of inputs
- LAN interface for data transfer
- 1 GB internal memory for 128 million data records
- Monitoring and alarm functions

- Integrated signal conditioning
- Web Server interface
- 2 configurable serial ports
- A range of internal calculation and logic channels
- Protocols: Modbus RTU and TCP

Full signal pre-processing

LogMessage is equipped with a range of internal calculation, monitoring and logic functions that are set up as software channels.

These software channels process online measurement data and make it available for visualization, storage or control purposes. Whole program sequences can be configured into the device, simply and intuitively using control functions. These then run independently and require no PC support.

The functions listed in the table opposite are available as standard.

Icon	Function	Description
Ø	Average	Min, max, moving, time-based …
f(×)	Calculation channel	Trigonometry, +-*/, root, power …
⇔Xₙ	Markers	Variable
Σ	Integrator	Integrator, edge counter, stop clock …
d/dt	Differentiator	Slope calculations
⌐	Set point	Set point curves
PID	PID controller	P, PI, and PID controller
⌣	Linearization	Linearization tables
	Strain gauge rosette	Calculation from δ and ϕ
	Limit value	Monitoring, wire breaks, watchdog …
	Logic	NOT, AND, OR, NOR, EXOR …
	FlipFlop	Type D, J-K, S-R
🕐	Timer	Alarm, signal generator, PWM …
EVENT	Event	Email, text message via GSM/UMTS router
	X-Message	Direct connection between 2 devices
	Modbus (LAN)	Modbus TCP connection

Complete system including software

LogMessage devices are supplied with the powerful ProfiSignal Go software. ProfiSignal Go is professional PC software for the online and offline monitoring and analysis of measurement data.

To enable integration into existing software systems, the following drivers are included with Log Message in addition to the ProfiSignal Go software:

- LabVIEW™, DASYLab™, OPC Server
- Modbus TCP drivers for deployment in industrial environments
- OCX driver, dot.net programming interface
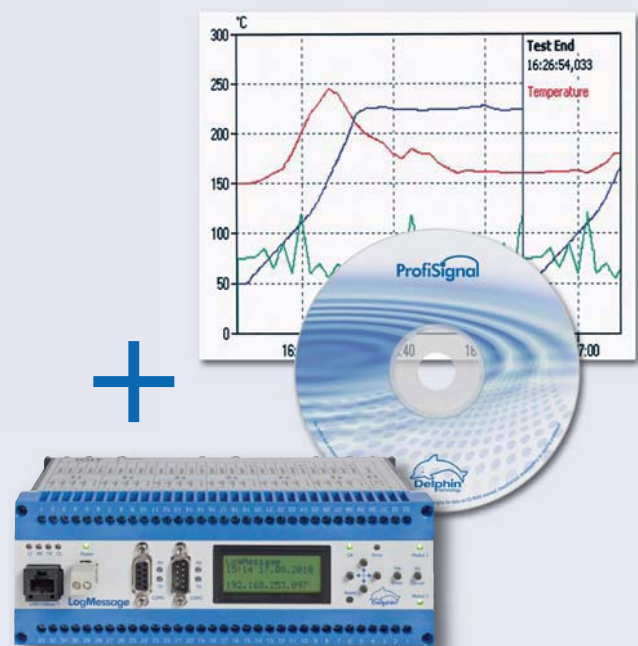
LogMessage – Models

Models

LogMessage devices are available in seven different models. The models differ in their number of inputs and outputs. All models have identical interface options, internal functions, galvanic isolation and data logger storage functions.

LogMessage 100 –
The entry model with 15 analog inputs

The LogMessage 100 is equipped with 15 analog inputs and a sampling rate of up to 600 measurements per second. The inputs can be used for data acquisition from mV, mA signals or any type of thermocouple. All inputs have differential and galvanic isolation.

LogMessage 200 –
Data acquisition and automation

The LogMessage 200 is equipped with 10 universal analog inputs, one analog output, 12 digital inputs (11 counters) and 17 digital outputs. The device has a range of internal monitoring and control functions that enable it to be used as a data acquisition device as well as an independently operating system for control, automation or monitoring.

LogMessage 300 –
Fault diagnostics made easy

The LogMessage 300 is equipped with 15 analog inputs (600 Hz sampling rate) and 24 synchronous digital inputs (with a time resolution of 1 msec). The device is highly suited to fault analysis as well as to digital and analog events.

LogMessage 400 –
The monitoring device

The LogMessage 400 is ideal for monitoring requirements. Any number of alarm and logic channels can be defined for the 15 analog inputs. Any of the 24 digital outputs are directly switchable irrespective of the current alarm situation.

LogMessage 500 –
Very high isolation voltage

The LogMessage 500 is equipped with 16 universal analog inputs. The inputs are designed to cope with high voltages between the individual inputs. The LogMessage 500 therefore has no problem in measuring non-isolated signals.

LogMessage 600 –
The universal logger

The LogMessage 600 is equipped with 25 analog inputs. The device can be used for direct data acquisition, monitoring and recording from any thermocouple or RTD sensor.

LogMessage 700 –
The thermocouple logger

The LogMessage 700 can acquire measurements from up to 30 thermocouples. Configuration software is used to set channels to specific thermocouple types.

Type	LM100	LM200	LM300	LM400	LM500	LM600	LM700
Analog inputs (mV, mA, thermocouple)	15		15	15		15	30
Analog inputs (mV, mA, thermocouple, RTD)		10			16	10	
Analog outputs (mA)		1				1	
Digital inputs (counter)		12 (11)	24	1			
Digital outputs		17	1	24		1	
Sampling rate in Hz	600	600	600	600	120	1200	1200

LogMessage versions

Various Applications

- Stand alone, universal data logging
- Temperature measurement
- Remote data transfer via GSM / UMTS
- Process data acquisition
- Fault analysis with recorder functions
- Laboratory data acquisition and management
- GPS logging
- Status and event logging
- Energy consumption acquisition and measurement

An integrator channel accumulates energy figures, volume flows or consumption figures. By using a limit value channel, permanent monitoring can be performed with an event being triggered when the limit is over-run or under-run. A digital output can then be activated or an alarm sent by email.