



Data logger DL09 / DL09-GSM / DL09-...

The data logger DL-09 is a compact device supported with a very low power consumption technology. The optional available modem is integrated and is supplied with energy by the logger itself. By using the latest battery and GSM technologies, operational life of up to 10 years is possible.

- Maximum number of measurement channels resp. inputs:
 - 5 analogue measuring channels with 14 Bit resolution.
 - 3, 6, 9 or 12 digital counter inputs.
 - 24 digital status inputs.
 - 3 alarm inputs.
- Sensors (e.g.):
 - Level, pressure and temperature.
 - pH-value, conductivity and chemical values.
 - Precipitation, flow and digital status.
- Storage capacity up to approx. 2.040.000 values
- Serial interface for PC (optionally IrDA).
- Power supply:
 - Battery (Alcaline or Lithium).
 - Rechargeable battery.
 - External with 12 VDC or 24 VDC.
 - External with 110 VAC or 230 VAC.
- The operational life of the battery is up to 10 years with daily transfer of measured values (GSM).
- Protection up to IP68.

Options:

- Integrated modem (GSM, ISDN, DECT ...) to send measured values and alarm messages to:
 - Central office.
 - Fax.
 - GSM mobile telephone or conventional telephone line.
- GSM antennas:
 - Rod aerial (direct or by cable).
 - Directional antenna.
 - Monitoring well cap with integrated antenna (vandalism protected).
- 1, 2, 4 or 8 outputs with relays.
- Graphical LCD display with backlight and tactile keypad (8 keys).
- Installation material for 4" monitoring well.
- Connection to external DCF77 radio controlled clock.

Technical data:

- Waterproof robust aluminium housing (IP65 up to IP68).
- Up to 5 differential analog measurement channels for sensors
Resolution: 0.0025 % (accuracy: 0.01 %).
- Adjustable sampling frequency 1 second (0,1 second) up to 30 days.
- Switched sensors powered by the logger (5 Volt $\pm 5\%$, max. 10 mA load).
- Measurement range:
 - Voltage: $\pm 50\text{mV}$, $\pm 200\text{mV}$, $\pm 500\text{mV}$, $\pm 1\text{V}$, $\pm 2\text{V}$, $\pm 10\text{V}$.
 - Current: 0 - ± 20 mA, 4 - 20 mA.
 - Event: e.g. sealed contact up to 1 event per second.
 - Digital: $0\text{V} \leq \text{low} \leq 1\text{V}$, $4\text{V} \leq \text{high} \leq 5\text{V}$.
 - Frequency: 0,01 Hz up to 6 MHz.
 - Period length: up to 24 hours (Resolution 1 μs).
- Storage capacity 512 up to 3072 kByte (approx. 340.000 up to 2.040.000 values).
- Power supply from batteries, rechargeable batteries or main power.
- Operating time without changing or charging batteries:

GSM transfer	Battery version**				NC battery version		
	Measurement cycle				Measurement cycle		
	1 minute	5 minutes	15 minutes	60 minutes	1 minute	5 minutes	15 minutes
none	1 year	4 years	9 years	10 years	50 days	3 months*	3 months*
1 x daily	1 year	4 years	7 years	10 years	45 days	3 months*	3 months*
1 x weekly	1 year	4 years	8 years	10 years	50 days	3 months*	3 months*
1 x monthly	1 year	4 years	9 years	10 years	50 days	3 months*	3 months*

* Limited by the self discharge of the internal NC batteries (with external rechargeable battery up to 1,5 year).

** The lifetime arises as a result of the optionally available equipment with lithium batteries
With according to the standard used alkaline batteries the indicated lifetime halves itself.

- Optionally integrated GSM mobile telephone.
- Dimensions [mm]: 175 mm x 80 mm x 57 mm (L x W x H).
- Order number: D604 M 2300 GSM D

