This product is discontinued!

DL240

Electronic data logger with communication module

Applications

The DL240 is intended for invoicing industrial and commercial customers. The modular hard- and software design enables the integration into remote data transfer systems.

Brief information

The liberalisation of the energy markets now requires that data collection devices must fulfil particularly high standards. The DL240 ensures that both the energy supplier and their customers get the most efficient and most cost-effective use of their energy.
The DL240 is a compact, battery-operated device which can, on request, be equipped with a communication module, e.g. a modem for remote data transfer.
With four digital inputs, two serial interfaces and two digital outputs the device is perfectly suited to carry out the wide range of functions necessary at metering points.

Archive Function: One of the most important features is the event-oriented storage of meter readings. This means that meter readings can be archived either within the prescribed metering period or in the case of any special events (e.g. when a limit has been exceeded) and, as a result, meter readings can be determined at any time without the need to make any complicated calculations. On top of this, any required consumption data can be displayed on the data logger meaning that the user can at any time on site monitor the raw data necessary for invoicing purposes without the need for any additional devices.
With the help of the DL240 it is possible to display the data for various special contracts, e.g. high or low tariff periods or periods free of charge. The tariffs can be programmed as fixed settings, can be controlled remotely or activated locally. A logbook with a capacity of up to 250 records makes it possible to monitor the operation of the DL240 and to trace any errors.

Archive abstract - Metering period archive from input 1

Date	Time	Main Meter	Programmable meter	Event
20.08.2007	03:00:00	00001015	01025534	End of interval
20.08.2007	04:00:00	00001151	01025670	End of interval
20.08.2007	05:00:00	00001302	01025821	End of interval
20.08.2007	06:00:00	00001515	01026034	End of interval
20.08.2007	07:00:00	00001958	01026477	End of interval
20.08.2007	07:44:43	00002355	01026874	Time synchronisation
20.08.2007	07:44:47	00002355	01026874	Time synchronisation
20.08.2007	08:00:00	00002510	01027029	End of interval
20.08.2007	09:00:00	00002987	01027506	End of interval
20.08.2007	10:00:00	00003288	01027807	End of interval
20.08.2007	10:05:28	00003403	01027922	Set meter reading

Main features

- Data collection for the fields of gas, water, district heating or electricity supply
- Associated apparatus for Ex zone 1 Ex II (2)G [E Ex ib] IIC
- Event-oriented storage of meter readings
- Battery-operated
- Mains power unit available
- Various communication modules available for data read-out
- Power unit and communication modules can be retrofitted without breaking official seal
- Special functions, e.g. tariff switching, monitoring of energy consumption
- Separate connection area for each input channel
- Easy to install

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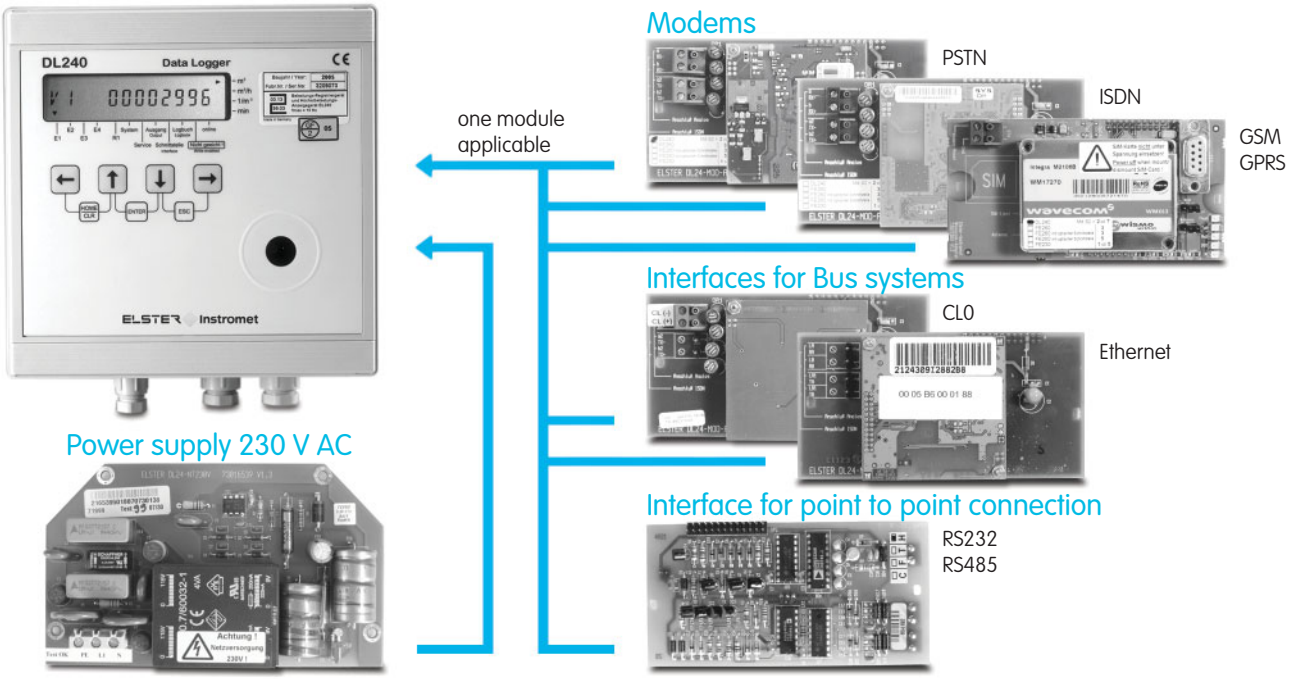
DL240: Electronic data logger with communication module



Readout

There are a number of different ways to read out the data from the archive. It can be read out on site with the help of a readout device (Read Mobile, AS-200) or the WinPADS parameterisation software. The data can also be read out via remote data transfer. For this purpose the WinCOMS program is available enabling an interactive and automatic readout of the devices on site. In addition to this, the remote readout systems of other manufacturers (Görlitz, Fröschl, Bittner & Krull, among others) also support the readout of the data logger. It is possible to program specific time periods in the DL240 within which it is possible to establish telephone contact so at the same time another telephone can be used in parallel.

Evaluation

When the readout is complete, the meter readings from the DL240 can then be further processed with the help of the WinVIEW data management software.

Operation

Four keys are available for the purpose of operating the DL240 and setting parameters. The data is displayed on a 12-digit display whereby the individual values are identified by abbreviated codes.

Additional functions

The DL240 has two digital outputs with which information can be transferred to any follow-up evaluation devices. This can be done in the form of pulses or status information. Both outputs can be programmed separately. No additional power supply is required for continuous operation.

Parameterisation

The Windows program WinPADS and the corresponding connection cable are available in order to make setting parameters and reading out data as user-friendly as possible.
Alternatively, the parameters can also be set via the keypad.

Versions

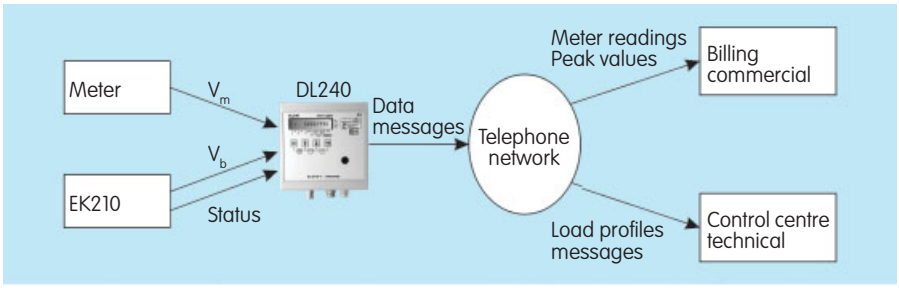
The basic battery-operated device not including a modem comes with a wall mounting. The version including an integrated communication module also includes a 230 V AC mains power supply unit.
Appropriate modems are available for different telephone networks (analogue/ISDN/GSM). With the help of a GPRS-TSC modem it is also possible to communicate via the GPRS network*. In this case, in order to address the DL240, the dynamic IP addresses allocated by the network providers for the modems are switched to static telephone numbers with the aid of a software package (TAINY Switching Centre) in the control centre. This means that existing call-up systems can also use the GPRS technology without the need for any changes.
Alternatively, the DL240 can also be connected directly to external modems via RS232, CL0 and TCP/IP interface cards.

Start-up

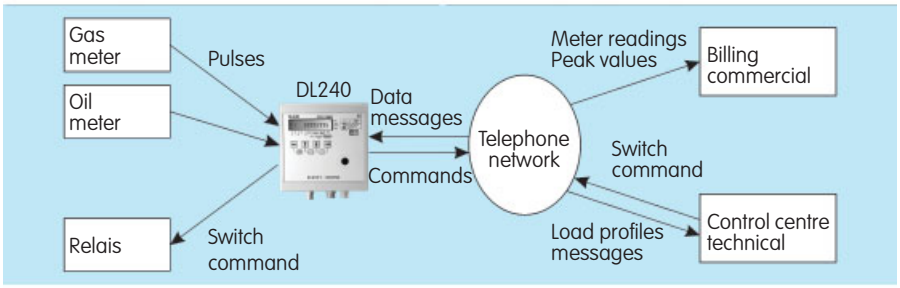
Both the hardware and the software are designed to be as flexible as possible.
Each input has its own separate connection area meaning that it is possible to connect metering devices from hazardous as well as non-hazardous areas simultaneously. With the help of these connection areas individual inputs can be sealed separately in order to isolate channels which are used for official invoicing. At the same time, process oriented inputs, e.g. message inputs remain freely accessible.
Even during operation, access to non-occupied inputs or outputs, to the interface or the battery is guaranteed as only internal circuits, the calibration switch and the invoice-relevant inputs are sealed, and not the entire housing.

* (starting from firmware version 2.0)

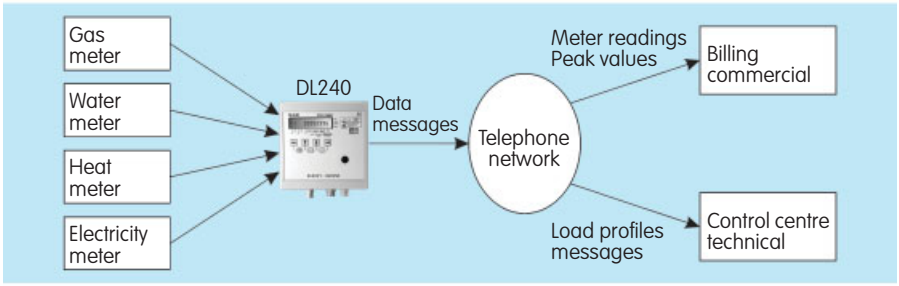
Examples of Applications



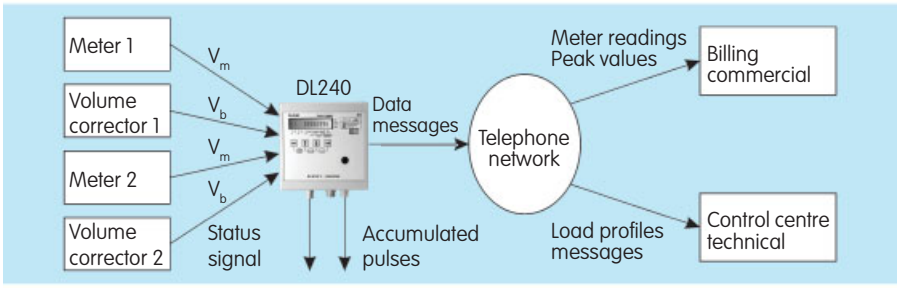
DL240 data collection device in combination with a volume corrector (e.g. EK210)



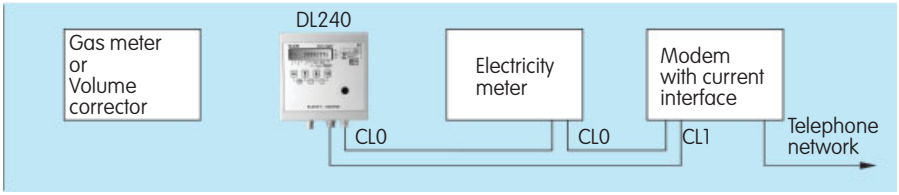
DL240 data collection device including remote-controlled digital output to switch from gas to oil



DL240 as data collection device for different media



DL240 data collection device for a dual-stream gas metering system



DL240 registration device for remote data transfer together with an electricity meter, connected to a telephone network via modem with CL interface

The examples, shown here represent only a few of the applications possible with the DL240.

Further applications and settings are also available:

- Tariff switching (high/low tariffs)
- Time periods free of charge
- Time synchronisation in the DL240 via switch
- Time synchronisation in another device with the help of a digital status output
- Monitoring of metering period and daily maximum values including spontaneous warnings or messages
- Switching from summer to winter time

DL240: Electronic data logger with communication module

Technical data	
Order number	83 480 050
Housing	Synthetic material for wall mounting
Dimensions	W 160 x H 160 x T 90 mm (without connections)
Weight	Approx. 1.4 kg
Protection class	IP 64 in accordance with EN 60529
PTB approval	PTB approval 7.732 / 99.03 as peak-load display and registration device
ATEX approval	Associated apparatus for Ex-Zone 1 Ex II (2)G [E Ex ib] IIC
Ambient conditions	Temperature : -10 °C to +60 °C Relative humidity max. 93%, non-condensing Avoid exposure to direct sunlight
Power supply	1 lithium battery, 3.6 V, 8 Ah Battery change possible without breaking official seal and without loss of data Optional: 230 V AC mains power unit (standard if equipped with integrated modem)
Modems and interfaces: select any one module (optional)	The use or replacement of any one of the following communication modules is possible without breaking the official seal: - PSTN modem for analogue telephone networks - ISDN modem for digital telephone networks - GSM modem for mobile data communication networks - GPRS-TSC modem for communication via GPRS network with TAINY SwitchingCenter - RS232 interface to connect external modems - CL0 interface to connect external modems with CL1 interface - Ethernet interface for use in a PC network (Intranet, Internet) for TCP/IP transmissions
Control panel	4-key plastic-coated keypad
Display	12-digit LCD Description of displayed information in form of abbreviated codes
Pulse inputs	Four inputs (intrinsically safe), input frequency max. 10Hz, freely definable as: - Pulse input - Status input - Time synchronisation input - Comparison input (pulser monitor, reference meter)
Signal outputs	Two digital transistor outputs, frequency max. 4 Hz, periods and pulse duration pre-settable, freely definable as: - Pulse output - Warning/alarm output - Status output - Time synchronisation output
Archives	Monthly archive - Invoice-relevant meter readings as well as daily and monthly maximum values - Time when day is to begin can be set as required - Storage capacity 15 months Measurement period archive - Event-oriented registration of meter readings including time stamp - Registration interval (metering period) settable as required - Storage capacity 5 months per input channel based on a metering period interval of 60 minutes Logbook - Recording of non-periodic events (e.g. time change) including time stamp - Storage capacity for 250 records
Data interface	Optical interface in accordance with IEC 62056-21 (IEC 1107) for setting parameters and reading out data
Measuring error	No loss of pulse Display of current flow rate 5%

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