

Log option board (FCLG)

The calculator F4 can be equipped with option boards to add extra functionality to the F4. The log option board logs energy and volume values. The board is fully Plug & Play compatible, e.g. it can be installed in a calculator on site without reconfiguring the F4 or F4HC.

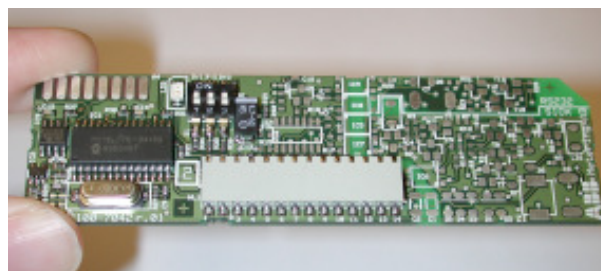


Fig. 1, Log option board component side (FCLG)

Energy & volume log

The log option board logs values over a period; this period can be configured prior to installation. The log option board can also be configured to log cooling values for F4HC. The length of the period can be set with a number (1-255). The time base can be set as: minutes, hours, days, months or years. The “number of periods” selectable is from 1 to 422. The maximum number of periods depend on how many values are to be logged. If all values are selected, the maximum number of periods is 120 for heat, 76 for heating/cooling.

Example: Time base, days and value set to 7, the option board logs the values every week.

The log option board can log following values:

- Accumulated energy (total accumulated energy)
- Accumulated volume (total accumulated volume)
- Energy consumption (over the period)
- Volume consumption (over the period)
- Momentary flow
- Momentary temperature forward (hot)
- Momentary temperature return (cold)

F4HC

For F4HC (F4 heating/cooling) the option board logs the above values for both energy and volume registers.

Configuring

Set the option board into service mode, see table 1, and by using a service adapter and the Windows program “Plug & Play configuration utility” the option board can be configured. The configuration of the option board can be stored to a file. See also the program documentation for further instructions.

The memory capacity is 32kb (standard), but the option board can also be ordered with 64kb or 128kb memory capacity. The 32kb and 64kb have 1 million write cycles and the 128kb has only 100000 write cycles.

Note: The log option board will not install itself in a standard F4 when cooling values are selected.

Card Slots

The log option board can be installed in card slot **A, B or E**.

Data output

All the data from the log option board can be read via the display or the M-Bus.

Display

The display will show the latest logged values, the user can toggle by using the “push-button” to the previously saved values until the last logged value stored in log option boards memory.

The display will indicate in sequence for:

- Dt – date when values are stored (YYMMDD)
- tn – Time when values are stored (HH:MM)
- CH – Consumption energy (heat)
- CC – Consumption cooling*
- AH – Accumulated energy (heat)
- AC – Accumulated cooling*
- FI – Momentary flow
- st – Momentary temperature forward
- rt – Momentary temperature return

On the display the “indicator arrow” will indicate the unit for the log value.

* Only available in F4HC

Example: Display shows “CH” sequence and “indicator arrow” indicates kWh. The value is consumption (heat) energy.

M-Bus

According to M-Bus protocols, the log option board will have maximum 37 telegrams.

Data Collection

The log option board collects the accumulated total energy and volume at the end of each period. Then the log option board uses these values to calculate the consumption values over the period (only when consumption values are selected).

Dipswitches

Option boards must be set correctly so that the meter will recognize the board correctly, see below:

Slot	BY 1	BY 2	BY 3	
A	On			On - on
B		On		- off
E	On		On	() - on/off has no effect
Service	()	On	On	

Table 1, dipswitch settings on option board

Important! Never change the dipswitches setting during power on.

Installation

Avoid loosing any meter values by “short-circuiting” the “Save data” contact, see also fig 2 using the “short-circuit key”, see also fig 2.

Important! Cut all power from mains or battery when installing the option board, or F4/option board can be damaged. The power is cut by removing the 4-wired connector “K2” and “K3”.

Important! Remove the flow sensor or the installation can be interfered and aborted.

Important! Only one option board can be installed at the same time, otherwise the option boards and the meter malfunction. Recommended procedure:

1. Save data, short circuit connection “Save data”.
2. Power off; remove connectors “K2” and “K3”
3. Disconnect the flow sensor; remove one cable connected to calculator terminal
4. Install the board; check DIP-switch settings. Faced side align to the right side of the calculator, component side turned to terminals of the calculator.
5. Turn power on; connect connectors
6. Check that the board is properly installed; light “LD3” on the option board first blinks and then is turned off
7. Connect the flow sensor, power and connectors

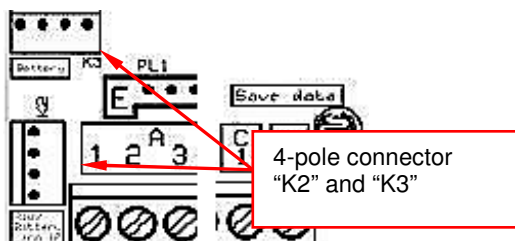


Fig 2, connection terminal F4

Ordering

The full article number consists of product designation, delivery options and parameter file. To get the full article number, combine these numbers with a dash “-”

Product designation: **FCLG**
 Delivery options: **ABC**
 Parameter file No.: **XXXXXX**

Product design are the number of the option board “FCLG”, log option board.

Delivery options are the logical variables that decide how the option board shall be delivered:

Variable	No	Description
A	4	Option board for F4 (32kb)
A	X	For F4 with (64kb memory)
A	Y	For F4 with (128kb memory)
B	1	Board delivered separately
B	4	Board mounted inside meter
C	A	Board slot A
C	B	Board slot B
C	E	Board slot E

Table 2, Variable number for ordering

Parameter file is the programming number of the specific board. This number can vary from “000000 to ZZZZZZ”. This number is provided by SVM when ordering option boards.

StandA – Standard parameter file for F4 (heat)

LoggHC – Standard parameter file for F4HC (heating/cooling).

StandA

Consummated and energy for heating, time base = 1 hour, periods = 281.

LoggHC

All values selected for heat and cooling; F4HC, time base = 1 hour, periods = 76

Example:

Log option board “FCLG”, for F4HC, mounted in the F4 slot A, “44A”. Parameter file standard provided by SVM, “LoggHC”

Full article number: FCLG-44A-LoggHC

Article number key

Table 3 helps to acquire correct article number.

FCLG-	A	B	C	-	Parameter file*

Table 3, article number key

- If uncertain always choose StandA for F4 and LoggHC for F4HC.