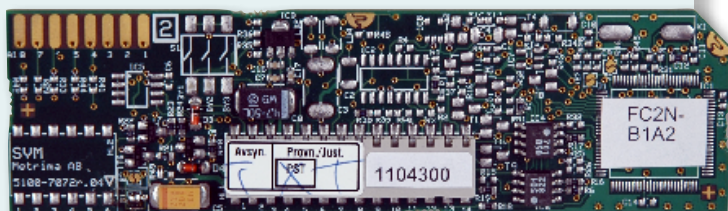


# SVM M-Bus/RS232 Option board (FC2N)

## DATA SHEET

- M-Bus via RS232
- Point to point communication without an interface
- Install in battery or mains supplied F4
- Easy to install



### M-Bus/RS232 Option board (FC2N)

Calculator F4 can be equipped with an option board for an M-Bus/RS232 output for extended functionality. The option board FC2N acts as an interface and gives the F4 an RS232 output and thus enabling the calculator to be connected directly to a modem or a PC with an AMR system, e.g. MCom.

The option board FC2N can be ordered for both mains or battery supplied calculators. The installation is very simple since the option board does not need to be installed in the meter memory. Also when removing the board, no uninstallation from the meter memory is required.



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## DATA SHEET

### M-Bus/RS232 (FC2N)

The M-Bus/RS232 option board enables point to point communications without a costly M-Bus interface. The board itself acts as an interface and allows an M-Bus output via RS232 from the calculator. The FC2N option board is galvanically isolated from the meter and is delivered in two different versions:

**FC2N-M:** Option board for mains supplied F4 calculators. This version offers unlimited number of readings per day. The board may not be installed in battery supplied calculators, and will not work during power failure.

**FC2N-B:** Option board for battery supplied F4 calculators. This version allows only one reading per day, also when installed in mains supplied meters.

**Note** that the built-in M-Bus output in the F4 calculator is deactivated, and no cables may be connected to the terminals labelled “M-BUS” when an FC2N option board is installed.

### Card slots

The FC2N option board shall be installed in card slot A.

### Connecting RS232 to a PC or modem

Table 1 below shows how the RS232 output from the F4 is connected to a PC. When connecting to a modem, just swap “TXD” and “RXD”.

Terminal no. in F4	Function	9-Pole connector	25-poles connector
A1	RXD ->	2	3
A2	DTR <-	4	20
A3	TXD <-	3	2
A4	GND --	5	7

Table 1, Connection M-Bus/RS232 in slot A to PC

### Installation

**NOTE:** Cut the power from mains and battery before installation to avoid damaging the meter or the option board.

**NOTE:** Disconnect any flow sensor connected to the meter, see below for more information.

**NOTE:** Install only one card at a time.

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### Installation

Recommended installation procedure:

1. Save data by short circuiting the “Save data” circuit.
2. Disconnect the flow sensor by removing at least one of the flow sensor cables.
3. Cut the power by disconnecting the four-pole connectors K2 and K3, cf. Fig.1.
4. Install the option board into slot A. The component side shall be turned towards the terminals. Align the chambered end of the board with the right side of the calculator box. Ensure that all pins on the option board are properly connected.
5. Turn power on, reconnect the four-pole connectors. 'K3' (battery) first and then “K2” (RawV).
6. Reconnect the flow sensor.

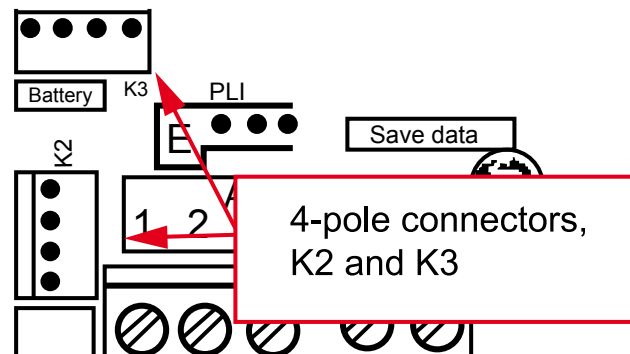


Fig. 1, F4 connection terminals

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## DATA SHEET

### Ordering

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

Product designation: **FC2N**

Delivery options: **ABCD**

**Product designation**, is the number of the option board, “FC2N“ M-Bus/RS232 option board.

**Delivery option**, is the logical variable that decides how the option board shall be delivered:

FC2N	A	B	C	D
Mains version	M			
Battery supplied version	B			
Delivered separately		1		
Mounted in calculator		4		
Configured for slot A			A	
Standard (no echo)				2

Table 2, Delivery options for FC2N

**Example:** Option board M-Bus/RS232 for battery supplied calculators, delivered separately, for slot A, standard configuration.

**Article number:** FC2N-B1A2

### Ordering key

Fill out the blanks to acquire the correct article number.

FC2N-	A	B	C	D
			A	2

Table 3, Ordering key

### RS232 connection cables

TERM284-RS232-modem	Cable for connecting FC2N option board to modem (9pM)
TERM284-RS232-PC	Cable for connecting FC2N option board to PC (9pF)
TERM284-OPK4	Cable for connecting FC2N option board to GS01 (GSM modem, 9pM)