

SVM SIOX Option board (FCSX)

DATA SHEET

- SIOX communication for calculator F4
- Adjustable address
- Up to 9600 baud
- Selectable units for the 2 extra pulse inputs



SIOX Option board (FCSX)

The calculator F4 can be equipped with option boards for increased functionality. The option board for SIOX provides the ability to communicate with SIOX protocol in the "String Mode". The connection to a SIOX system requires an interface between the meter and the PC. SIOX is a robust field bus for applications in industrial environments. The relatively low communication speed ensures a stable communication and the SIOX bus is rather insensitive to disturbances that may occur close to high voltage cables. The two wires of the bus are interchangeable and it may be branched off at will.

The option board FCSX is fully Plug & Play compatible, which means that it can be installed in any F4 calculator without configuring the calculator. The option board may be configured with a service adapter and the Plug & Play configuration utility, both which are included in the F4 adapter kit, with ordering number FT-4-adapt-kk. With the Plug & Play configuration utility it is possible to change the baud rate, the

SIOX address and to set a unit for the two extra pulse inputs in the F4. Further, the FCSX option board may be configured for sleep mode.

The baud rate is by default 300 or 2400 baud, but can also be set to 600, 1200, 4800 and 9600 baud. The SIOX address can either inherit the M-Bus address of the meter or be set manually.

The unit for the extra pulse registers can be set individually and are specified with full flexibility in a text field.

An F4 calculator with a SIOX option board installed can be read e.g. with MCom or similar systems compatible with SIOX String mode.

The SIOX option board is also available in a version for RS232 (FC2S). With this option board it is possible to connect the F4 directly to a PC without the need of an interface.



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SIOX

SIOX (Serial I/O X-change) is the name of a remote module communication system. Up to 62 modules may be connected in parallel to a two wire bus loop. An interface is required in order to connect the PC to the SIOX-bus.

The SIOX option board enables the F4 to communicate with a SIOX-bus system. The option board communicates with SIOX "String Mode".

Configuring the SIOX board

The option board FCSX can be configured prior to installation by using a service adapter and the "Plug & Play service utility". Both the adapter and the service software are included in the F4 adapter kit with part number FT-4-adapt-kk.

The baud rate of the SIOX communication is usually set to 300 or 2400bd, but alternatively may also be set to 600, 1200, 4800 or 9600bd. Baud rates exceeding 2400bd may cause unstable communication and the meter may not answer. If this occurs it is not possible to change the baud rate in order to restore the communication. Short cables of good quality ensure a stable communication also at high baud rates.

The two extra pulse inputs can be configured in terms of an informative text field. This may be used e.g. to set the unit, for example "m³" or "kWh", or may be used to explain what kind of meter is connected, for example "gas" or "hot water". This information can be set individually for input 1 and 2.

The SIOX communication address can either inherit the M-Bus address of the F4 calculator (01-62), or may be set separately. The M-Bus address in the F4 calculator can be set when the meter is in service mode, cf. the F4 manual.

Sleep mode is required when the FCSX option board is installed in battery supplied F4 calculators. Sleep mode may also be used in mains supplied calculators, but is not compulsory.

Sleep mode is used to preserve the battery, and means that the FCSX board goes into a low power mode after 2 seconds of inactivity. When the next meter reading occurs, the first meter on the SIOX loop will not respond at the first attempt due to sleep mode. If the next re-try is done within 2 seconds, also the first meter will respond.

Card Slot

The FCSX option board may be installed in card slot A.

DIP-switches

The dipswitches must be set correctly in order for the option board to function properly, cf. Table 1.

Slot	BY 1	BY 2	BY 3
A	On		
Service	()	On	On

On – on
- off
() – on/off has no effect

Table 1, Dipswitch settings

Important! Never change the dipswitch settings when the power is on.

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Connecting the SIOX-loop

When the FCSX option board is properly installed in slot A, connect the SIOX bus to the terminals marked A1 and A2.

Connection	Terminal
SIOX Bus	A1
SIOX Bus	A2

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.

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. Check that DIP switches are correctly set for card slot A, and install the option board into the slot, cf. Table 1. 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. Check that the board is properly installed; the LED “LD3” first blinks and is then turned off.
7. If another board is being installed, repeat steps 3-6.
8. Reconnect the flow sensor.

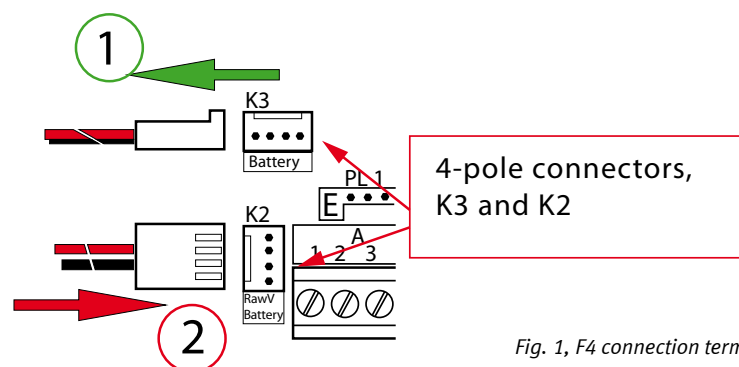


Fig. 1, F4 connection terminal

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Ordering

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

Product designation: **FCSX**
Delivery options: **ABC**
Parameter file: **XXXXXX**

FCSX	A	B	C
Option board for F4	4		
Delivered separately		1	
Mounted in F4		4	
Board for Slot A			A

Table 2, Delivery options

Parameter files

File	Description
StandA	Standard, 300bd, sleep mode
2400bd	2400bd, sleep mode
0300no	300bd
2400no	2400bd

Example: Option board FCSX for F4, delivered separately, for slot A, 300bd, sleep mode.

Article no: FCSX-41A-StandA.

Note! SIOX boards with the sleep mode de-activated (parameter files 0300no and 2400no) will cause the back-up battery to discharge when 230V mains is not connected. It is therefore recommended that these boards are delivered separately.

Article number key

FCSX-	A	B	C	-	Parameter file*
	4		A	-	

Table 3, Article number key

*If uncertain, always chose "StandA".