

## Analog current input board 0/4-20mA (FCII)

The analog current input board gives the F4 up to two analog inputs. This information can then be sent over M-Bus. The board is only suited for mains supplied F4. Such values as pressure, flow or temperature can be rerouted through the F4 over the M-Bus. One application could be differential pressure measurement in the district heating system. Other analog input boards are "FCIU" voltage input 0/2-10V and "FCIP" PT100 sensors (-50 to +210°C).

### Current input 0/4-20mA

The analog current input board can be ordered with 0-20mA or 4-20mA. The inputs are protected against current and voltage transients. The measured analog input values are updated with the frequency 10Hz. The standard unit on the board is set to [%] with the resolution 0.01%.

#### Calibration

The board is calibrated prior to delivery.

#### Power failure

At power failure the relevant display sequence will show "ULOW" and the output value will be zero (0). The board will output measured values first one minute after power has returned to calculator.

### Configuring

The unit and resolution can be altered, by using the F4-adapter kit (FT-4-adapt-kk) with the Plug & Play configuration utility, see also separate document.

### Card slots

Allowed slots for analog input board are primarily **B** or **E**. Slot **A** can be used when no communication option board is to be fitted into the integrator.

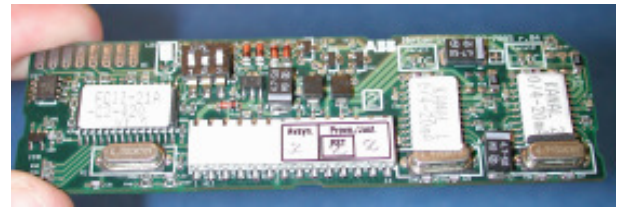


Fig.1, Analog input board, component side

### Technical data

Analog current input board FCII 0/4-20 mA	
Input signal	4 - 20 mA 0 - 20 mA
Input resistance	<500 Ohms
Output over M-Bus	% *
Output on display	%
Resolution	0.01%
Inaccuracy	±0.1 mA
Ambient temp.	5-55°C
Slots allowed	B, E or A
Allowed power	Mains supplied only supply F4

Table 4, Technical data.

\*) Can be reconfigured in many different ways.

### Connection

The connection of the input signal depends on which card slot is used for the board. **Note:** The connection differs depending on placement on slots B/E or slot A.

D/A converter	Channel	+	-
Slot A	1	A1	A2
	2	A3	A4
Slot B	1	B3	B4
	2	B1	B2
Slot E	1	E3	E4
	2	E1	E2

Table 5, Terminal connection for slots.

**Example:** Board with one channel installed in slot B. Connect (+) wire to terminal B3 and (-) to terminal B4.

## Dipswitches

To make sure that the board will install itself and communicate properly, the dipswitches “S1” must be correctly set:

Slot	BY 1	BY 2	BY 3
A	On		
B		On	
E	On		On

Table 1, dipswitch settings on option board

**Important!** Never change the dipswitch settings when option board is powered.

## Installation

It is important that the power from mains and battery are cut when installing. Following procedure is recommended:

1. Short circuit connection “Save data”.
2. Disconnect flow sensor (by removing at least one cable connected to the calculator terminal).
3. Set calculator “power off”, by removing the 4-wire connectors “K2” and “K3”.
4. Check that the dipswitches are correctly set for slot and put option board into the slot. The component side shall be turned to terminals, e.g. align the option board (facade side) to the right side of the calculator box. Ensure that all the pins are properly connected to the option board.
5. Turn power on by reconnecting the 4-pole connectors “K2” (RawV) and then “K3” (back-up battery). **Note:** The F4 must be connected to mains when the board will be installed.
6. Check the installation. The diode “LD1” blinks and then it is turned off. Check the display sequence connected to the slot to ensure proper installation, see also the F4 manual.
7. When additional boards shall be installed, repeat positions 3-6 (above) for each board.
8. Reconnect flow sensor.

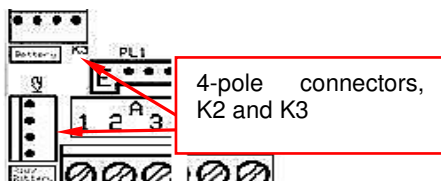


Fig 2, connection terminal F4

## Ordering

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

Variable	No	Description
A	1	One (1) 0/4-20mA input
A	2	Two (2) 0/4-20mA inputs
B	1	Board delivered separately
B	4	Board mounted inside F4
C	A	Board for slot A
C	B	Board for slot B
C	E	Board for slot E

Table 2, Variable number for ordering

### Parameter files,

- 1 input: -C1-420 – 1 input 4-20mA  
 -C1-020 – 1 input 0-20mA
- 2 inputs: -C2-420 – 2 inputs 4-20mA  
 -C2-020 – 2 inputs 0-20mA

**Example:** Analog current input option board, 4-20mA 2 inputs, mounted in slot B, standard parameter file.  
 Article number: FCII-24B-C2-420

**Example 2:** Analog current input option board 4-20mA, 0-20mA, 1 input, delivered separately for slot E, standard parameter file.  
 Article number: FCII-11E-C1-020

## Article number key

Table 3, help to acquire correct article number, fill up the blanks.

FCII-	A	B	C	-	Parameter file*
				-	

Table 3, Article number key