

Recovery of Evaluation Board for	Bus Interface Modules M130, M131, M132 and M135 KNX-Processors 184/01, 184/11 and 184/21
-------------------------------------	---

Recovery and Analysis of the BIM M13x Evaluation Board

Content of this document:

1	Introduction	2
2	Error Analysis	2
2.1	STEP 1: Preparation	2
2.2	STEP 2: Check hardware	2
2.3	STEP 3: Check system software	2
2.4	STEP 4: Stop user application	2
2.5	STEP 5: Connect the OCD	3
2.6	STEP 6: Reload the system software	3

Document-Version: 1.1

1 Introduction

The BIM-EVB (Evaluation Board) is based on the BIM circuit. It has nearly the same electrical characteristics as the BIM.

2 Error Analysis

This Step by Step guide helps you to test and analyze possible error conditions of the EVB. Possible errors are:

- No reaction if the programming button is pressed
- Unable to load a program by KNX
- Unable to load a program with the OCD

2.1 STEP 1: Preparation

Please remove all cables and connections from the EVB. Check that only JP6 is shortened by a jumper. Now connect the KNX line to JP1. Check the polarity of the KNX line with the marking on the board.

2.2 STEP 2: Check hardware

Now measure the VDD Voltage. It should be in the range from 17V to 23V (nominal 19V). If there is no VDD voltage check the KNX Line voltage. The KNX Line voltage should be in the range from 21V to 30V. Now check the VCC voltage (4.65V to 5.3V). Go to the next step if both voltages are ok. If not the EVB has a hardware defect.

2.3 STEP 3: Check system software

Press now the programming button of the EVB.

- If the LED is on: Everything is o.k.
- If the LED is only on for a short time: Error in user application, go to step 4
- If nothing happens: the system software may be defect, go to step 5 to reload it.

2.4 STEP 4: Stop user application

You can remove a malfunction user program with two methods:

- Use the OCD and start a new debugging session
- Connect the board with this sequence:
 - Disconnect the KNX line
 - Press and hold the programming button
 - Reconnect KNX line, release programming button after the led is on
 - The user application will not be started if the board is connected this way. You can now reload a new application

If everything is o.k. go to step 5.

2.5 STEP 5: Connect the OCD

Connect the Renesas E1 via the Renesas F14T16 adapter to the JP3 of the evaluation board. Connect the Renesas E1 via an USB Cable to your computer and connect the KNX line to JP1 (if not done yet).

Attention: There is no galvanic separation between the computer and the EVB!

2.6 STEP 6: Reload the system software

If it is necessary reload the system application according to the “BIM M13x Getting Started”.