

TECH NOTE – digiCLIP DF30DN and DF31DN

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Short description

Example sequence for consistent data transmission via DeviceNet using an Omron PLC.

Introduction

The CX-Integrator example program shows the basic test setup of a digiCLIP DF31DN connected to an Omron Sysmac CJ1M PLC with a CS1/CJ1 DRM21 fieldbus controller.

In this example, consistent (related) data is read and written over the DeviceNet. The DF30DN operating manual provides all possible commands and values.

Procedure

1. Please carefully read the technical documentation for digiCLIP and the communication controller.
2. Use the Assistant to assign digiCLIP parameters. Select the desired poll connection data (assembly) and set the bit rate. In our example, the following is transmitted: Measured value and status 1 as well as control byte 1.
3. Connect the digiCLIP bus lines to the fieldbus controller's communications connection.
4. Connect 24 V for driver supply to the corresponding fieldbus controller pins.
5. Terminate the CAN bus at both ends with 120 ohms.
6. Set the communication controller switches to the following values: UnitNumber = 1, NodeNumber = 53, DIP switches for the baud rate according to the digiCLIP baud rate.
7. Start CX-Integrator.
8. Install DF30DN.eds or DF31DN.eds (Werkzeuge->EDS-Dateien->installieren).
9. Create a new project and add a network (Einfügen->Netzwerk-DeviceNet). Assign network address 53.
10. Add the fieldbus controller and digiCLIP components to this network. Import the EDS file.
11. Assign address 53 to the fieldbus controller and the address set on the two rotary switches to the digiCLIP.
12. Save the project, then activate the PLC connection.
13. Exit CX-Integrator.
14. Start CX-Programmer.
15. Switch the PLC to RUN mode.

16. The PLC writes the digiCLIP output data to the CIO area from address 3303.

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
CIO:3303	3164	000C	0015	0000	0000	0000	0000	0000	0000	0000

0x000c3164 = Measured value
 0x15 = System status 1

17. The data from CIO:3203 is transmitted as input data to the digiCLIP.

	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9
CIO:3203	00FF	0000	0000	0000	0000	0000	0000	0000	0000	0000

0xff = Control byte 1

More (information)

Fig. 1: CX-Integrator

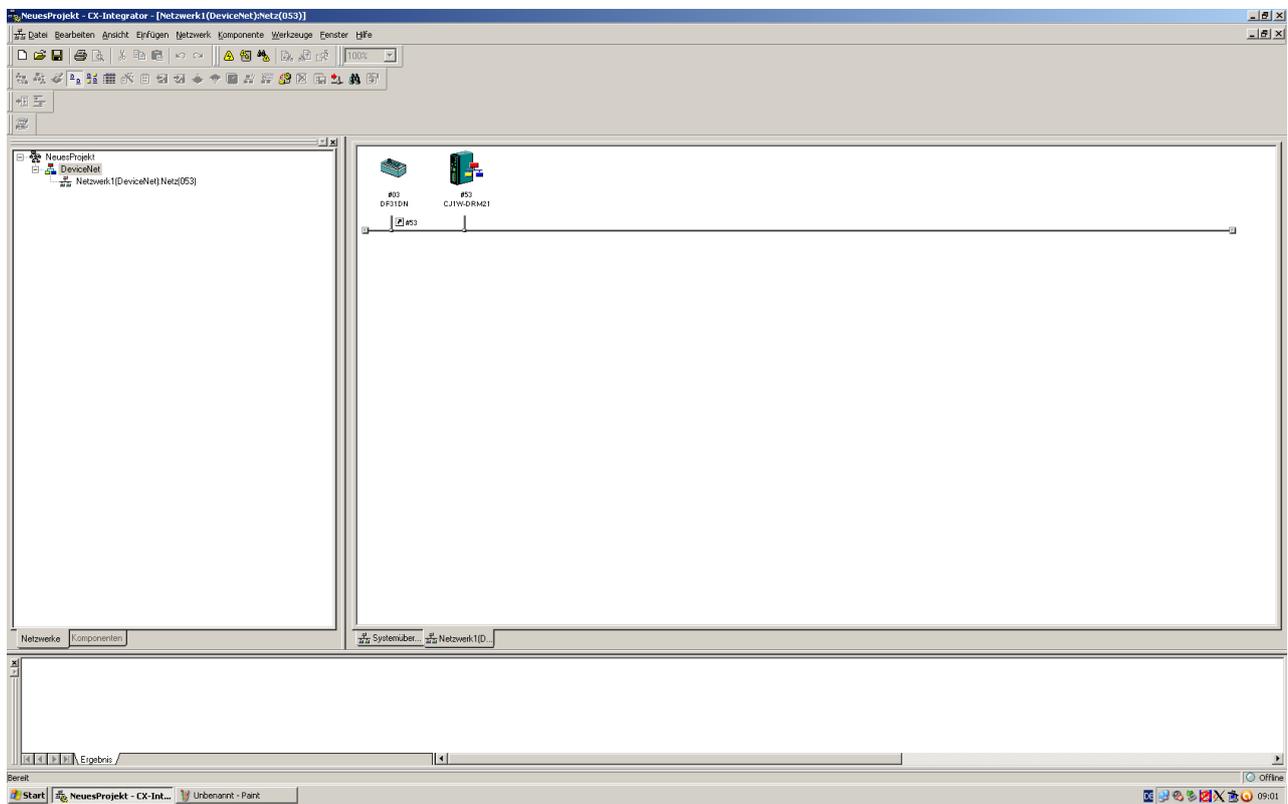
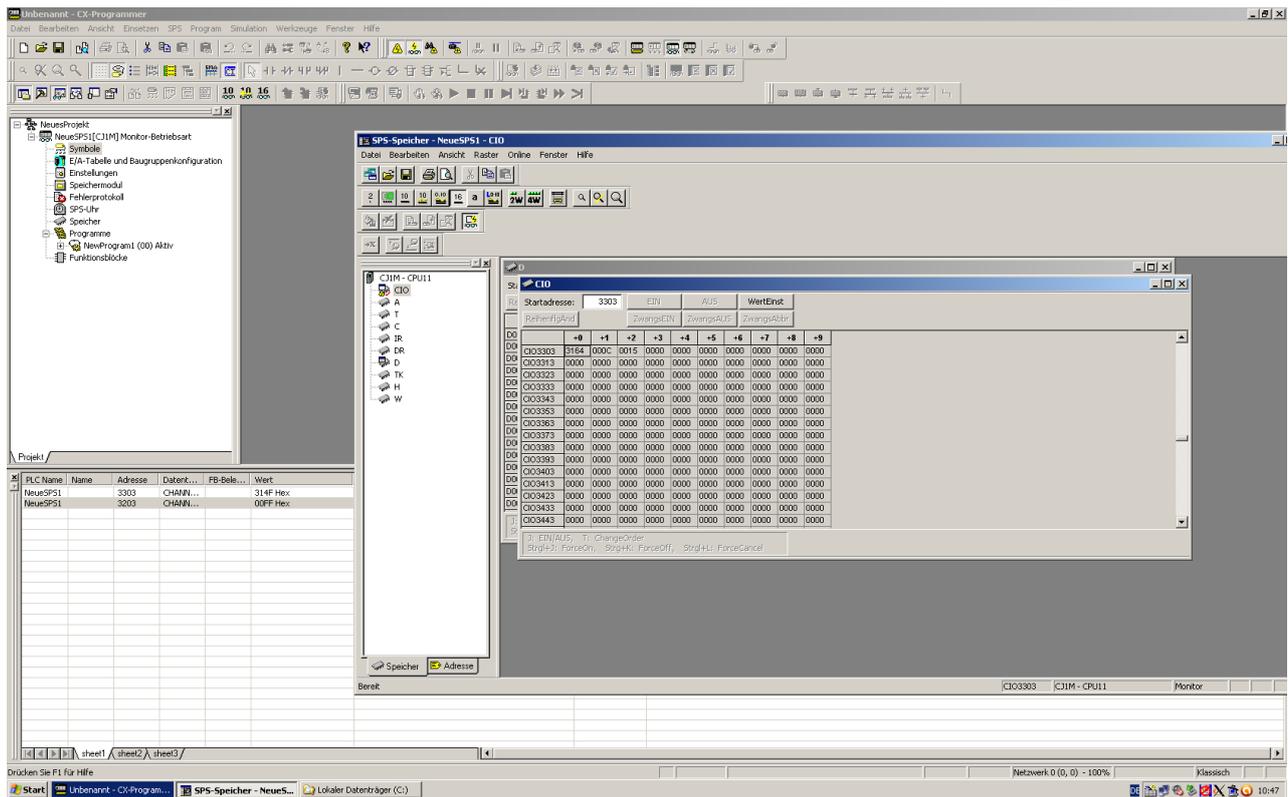


Fig. 2: CX-Programmer



TIP

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Legal notice

This example is only to illustrate integration of the HBM amplifier into a DeviceNet network. HBM declines all responsibility or liability for this example.