

# SIEMENS

## Connection of a handheld unit type B-MPI to the SINUMERIK 840D sl – parameter setting

The handheld unit type B-MPI is connected to the SINUMERIK 840D sl via the MPI bus.

Different transmission rates (MPI with 187.5 and MPI with 1.5 MB) can be applied to a handheld unit (HHU) connected to a SINUMERIK 840D sl.

This transmission rate has to be set by parameterizing the DP/MPI interface in the PLC hardware configuration and the HHU. Both devices must use the same transmission rate.

Further information on the HHU components is provided in the Operator Components manual.

Communication with the SINUMERIK 840D sl can only be established using global data (GD). Enclosed please find a sample project for which the global data block SDB210 has already been defined.

This SDB210 is stored in the system data folder.

We have assumed the HHU default setting for parameterizing the global data.

To transfer the preconfigured global data block SDB210 to your project, copy the system data folder from the project attached into your project thus overwriting the current system data.

Then open the HW Config in your project again and perform the function Store/Compile to update the system data.

The system data (global data) are not transferred into the PLC when transferring data from the HW Config and have to be transferred manually.

For this, mark the system data folder and load this separately into the controller.

Communication with the HHU can be established quickly and conveniently by setting parameters via the PLC basic program (FB1).

The relevant parameterizations of the FB1 in OB100 are listed in the following (the addresses can be freely selected).

(FB1):

```
MCPSDB210 : = TRUE           // Parameterization via SDB210
MPCPCopyDB77 := TRUE        // that means, the DB77 is created upon control system
                             power up
BHG : = 1                   // Parameterization (MPI)
BHGIn : = P#E 0.0          // Address of input data
BHGOut : = P#A 0.0         // Address of output data
BHGStatSend := P#A 20.0    // Adr. of the Send status data (4Byte)
BHGStatRec : = P#A 24.0    // Adr. of the Receive status data (4Byte)
BHGMPPI : = TRUE           // i.e. communication is only established via MPI (on
                             SINUMERIK 840D sl)
```

### Notice

BIT7 in the first output byte (parameter: BHGOut; in the example A 0.7), has to be permanently set to 1.

The DB77 is created by the system and may not be used by the operator.

Failures on the HHU are monitored using the monitoring times preset on the FB1. If the HHU fails, the following error message is output on the HMI.

- 400262: HHU failure

An HHU failure is only detected after a restart when data have been exchanged before with the HHU. The first data exchange with the HHU activates the monitoring function.

The SIEMENS standard does not support changeover resp. shutdown of the handheld unit (HHU).

If the relevant BHGStop parameters have been set, alarm 400262 is suppressed resp. deleted.

The SIEMENS standard does not support changeover among several HHUs (has to be programmed by the manufacturer).

The handwheel signals are connected either via the PROFIBUS / Ethernet machine control panel or via the handwheel connection module.

A handwheel connecting cable is required to connect the handwheel.

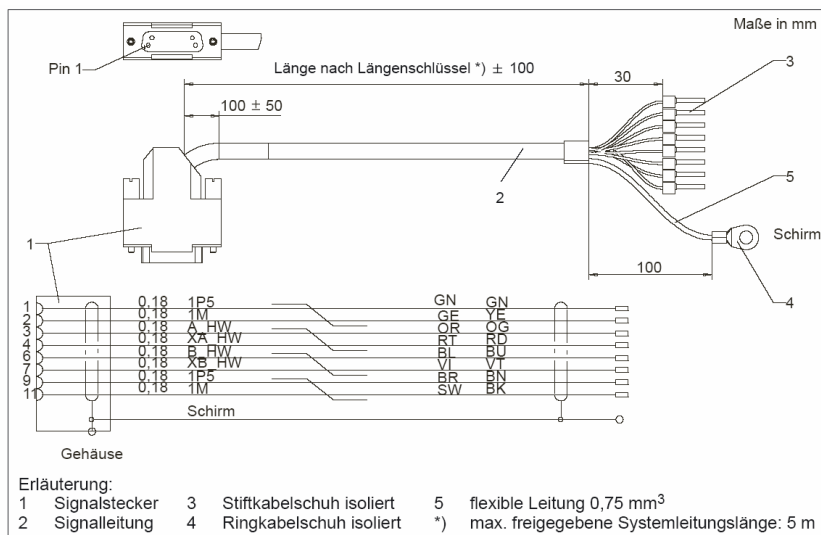


Bild 21-6 Anschlusskabel für Handrad  
Best.-Nr. 6FX8002-4AA21-1xx0 (xx ist der Längenschlüssel: A = 0, B = 1, usw.)

**Legend:**  
 Maße ... = Dimensions in mm  
 Länge ... = Length acc. to length code  
 Schirm = Shield  
 Gehäuse = Housing

**Erläuterung = Explanation:**  
 1 signal connector      3 pin terminal end      5 0.75 mm<sup>3</sup> flexible cable  
 2 signal cable          4 ring terminal end      \*) max. system cable length released: 5m

Figure 21-8 Handwheel connecting cable  
Order no. ... (xx is the length code: ... etc.)

The connection of the machine control panel of the handwheel connection module is described in the Operator Component manual.

The handwheel parameter setting via PROFIBUS is described in ProdIS update 21832637.