TECH NOTE :: MP85A(DP) and MP85A(DP)-S

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Short description

Example program for Ethernet-communication of HBM's MP85 process control module with a Siemens CPU317-2 DP.

Introduction

Please recursively unzip the example for communication with the MP85 via Ethernet from the ZIP archive (relative paths saved).

The program sends and receives data using the AG_send and AG_Recv functions (FC5 and FC6).
10 bytes are sent to the PLC and 14 bytes are to be received.
In this project, the Siemens CPU317-2 DP had the IP address 172.21.64.250.
The MP85's IP address was 172.21.64.253 (Port 4020).

Procedure

```
SIMATIC                                   MP85\                    07/12/2010 10:25:03 AM
                        317-2DP\CPU 317-2 DP\...\OB1 - <offline>
```

OB1 - <offline>

```
"CYCL_EXC"     Cycle Execution
Name:                          Family:
Author:                        Version: 0.1
                               Block version: 2
Time stamp Code:               03/04/2008 05:29:53 PM
           Interface:          02/15/1996 04:51:12 PM
Lengths (block/logic/data): 00440  00320  00038
```

Name	Data Type	Address	Comment
TEMP		0.0	
OB1_EV_CLASS	Byte	0.0	Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB1_SCAN_1	Byte	1.0	1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)
OB1_PRIORITY	Byte	2.0	Priority of OB Execution
OB1_OB_NUMBR	Byte	3.0	1 (Organization block 1, OB1)
OB1_RESERVED_1	Byte	4.0	Reserved for system
OB1_RESERVED_2	Byte	5.0	Reserved for system
OB1_PREV_CYCLE	Int	6.0	Cycle time of previous OB1 scan (milliseconds)
OB1_MIN_CYCLE	Int	8.0	Minimum cycle time of OB1 (milliseconds)
OB1_MAX_CYCLE	Int	10.0	Maximum cycle time of OB1 (milliseconds)
OB1_DATE_TIME	Date_And_Time	12.0	Date and time OB1 started

Block: OB1 "Main Program Sweep (Cycle)"

Network: 1

```
CALL  "AG_SEND"                 FC5              -- AG SEND
 ACT   :=M0.0
 ID    :=1
 LADDR :=W#16#100
 SEND  :=P#DB99.DBX0.0 BYTE 240
 LEN   :=10
 DONE  :="Done"                 M1.0
 ERROR :="Error"                M2.0
 STATUS:=MW3
```

```
Network: 2

      R     M      0.0
      SET
      A     "Done"                    M1.0

      JC    done

      SET
      A     "Error"                   M2.0
      JC    err
      BEU

done: S     M      0.0
      CALL  "AG_RECV"                 FC6                -- AG RECEIVE
       ID    :=I
       LADDR :=W#16#100
       RECV  :=P#DB98.DBX0.0 BYTE 240
       NDR   :=M4.0
       ERROR :=M4.1
       STATUS:=MW5
       LEN   :=MW6

      BEU

err:  NOP   1
      S     M      0.0
      BEU

Network: 3

      CALL  "AG_RECV"                 FC6                -- AG RECEIVE
       ID    :=I
       LADDR :=W#16#100
       RECV  :=P#DB98.DBX0.0 BYTE 14
       NDR   :=M4.0
       ERROR :=M4.1
       STATUS:=MW5
       LEN   :=MW6
```

For more information about S7 communication via Ethernet please browse for TCP/IP using the following link to Siemens:
http://support.automation.siemens.com/WW/llisapi.dll?query=S7&func=cslib.cssearch&content=skm%2Fmain.asp&lang=de&siteid=cseus&objaction=cssearch&searchinprim=0&nodeid0=4000024
Another link provides you with additional information:
http://www.energietechnik.fhdortmund.de/personen/spszentr/Internet_Based_Learning/IA_AG_Ethernet.htm

TIP

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Legal notice

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