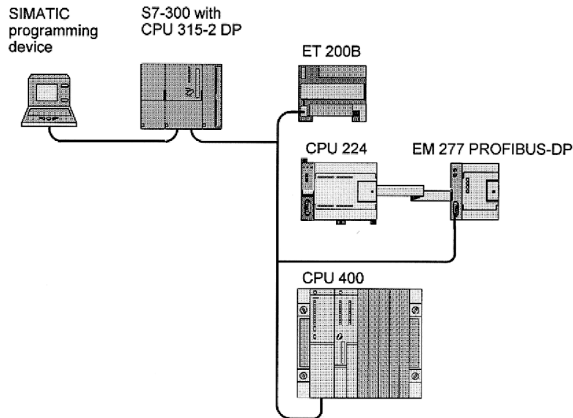


# SIMATIC S7 - 200 Micro PLC

## General

### EM 277 PROFIBUS - DP module

#### PROFIBUS-DP Slave Module



The PROFIBUS-DP module is an extremely versatile communications module. It can be used to connect:

- an S7-200 CPU (as a slave) to a PROFIBUS-DP network
- other peripherals capable of being an MPI master

Unlike many DP devices, the EM 277 module does not transfer only I/O data. The EM 277 moves data to and from a block of variable memory defined in the S7-200 CPU. This allows you to exchange any type of data with the master (inputs, counter values, timer values, data memory, etc.)

The EM 277 can also be used as a communication interface to other MPI masters, whether or not it is being used as a PROFIBUS-DP slave. Example connections are:

- S7-300/400 to the S7-200 using the XGET/XPUT
- STEP 7-Micro/WIN and a network card (such as the CP5511) for programming, monitoring, etc.
- TD200 or TP070 operator interface panels.

A maximum of six connections (devices) are allowed; one connection is reserved for a programming device and one is reserved for an operator panel. The other four connections can be used by any MPI master. In order for the module to communicate with multiple masters, all masters must be operating at the same baud rate. There are limitations including:

- cannot be used for communication between S7-200 PLCs using NETR/NETW.
- cannot be used for Freepoint communication

Description	EM 277 PROFIBUS-DP
<b>General specifications</b>	
Number of Ports	1 port
Electrical interface	RS-485
Isolation (external signal to PLC logic)	500 VAC (Galvanic)
PROFIBUS-DP/MPI baud rates (set automatically)	9.6, 19.2, 45.45, 93.75, 187.5, and 500K baud; 1, 1.5, 3, 6, and 12M baud
Protocols	PROFIBUS-DP slave and MPI slave
<b>Cable Length</b>	
Up to 93.75K baud	1200 m
187.5K baud	1000 m
500K baud	400 m
1 to 1.5M baud	200 m
3 to 12M baud	100 m
<b>Network Capabilities</b>	
Station address settings	0 - 99 (set by rotary switches)
Maximum stations per segment	32
Maximum stations per network	126, up to 99 EM277 stations
MPI Connections	6 total, 2 reserved (1 for PG and 1 for OP)
<b>Power requirements</b>	
<b>Power Consumption</b>	
+5 VDC (from I/O bus)	150 mA
<b>24 VDC Input Power Requirements</b>	
Voltage range	20.4 to 28.8 VDC (Class 2 or sensor power from PLC)
Maximum current	
Module only with port active	30 mA
Add 90 mA of 5V port load	60 mA
Add 120 mA of 24V port load	180 mA
Ripple noise (<10 MHz)	<1 V peak to peak (maximum)
Isolated (input power to module logic)	500 VAC for 1 minute
<b>5 VDC Power on Communication Port</b>	
Maximum current per port	90 mA
Transformer isolation from module logic and from 24 VDC input power	500 VAC for 1 minute
<b>24 VDC Power on Communication Port</b>	
Voltage range	20.4 to 28.8 VDC
Maximum current per port	120 mA
Current limit	0.7 to 2.4 A
Isolated	Not isolated, same circuit as input 24 VDC