
2577 PROFIBUS DP SLAVE MODULE QUICKSTART INSTALLATION MANUAL



This document describes how to properly unpack, install and configure a CTI 2577 DP Slave module. The CTI 2577 Profibus Slave Module enables a Siemens® S7 (or any controller that supports Profibus DP) to access SIMATIC® 505 PLC memory as standard analog I/O. Using the 2577 module, the SIMATIC® 505 PLC appears as a standard I/O drop on the Profibus network. Additional literature for this product, including the *Installation and Operation Guide*, is available on both the CTI *Catalog and Technical Library* CDROM and on the CTI web site (<http://www.controltechnology.com>).

Unpacking the Module

Open the shipping carton and remove the special anti-static bag that contains the module. After discharging any static build-up, remove the module from the static bag. Do not discard the static bag. Always use this bag for protection against static damage when the module is not inserted into the I/O base.

CAUTION:

The components on the module can be damaged by static electricity discharge. To prevent this damage, the module is shipped in a special anti-static bag. Static control precautions should be followed when removing the module from the bag and when handling the printed circuit card during configuration.

Setting the Profibus Slave Address

Switchblock 1 on the module is used to set the slave address. See Figure 1 for location of SW1. The switches on SW1 are weighted as follows:

Switch	1	2	3	4	5	6	7	8
Weight	N/A	64	32	16	8	4	2	1

To set the address, set the appropriate switches on SW1 to the closed position so that the weighted total equals the address. For example, to set Profibus address 26, set switches 4, 5, and 7 to the closed position ($16+8+2 = 26$). See the Profibus Address Table on page 3.

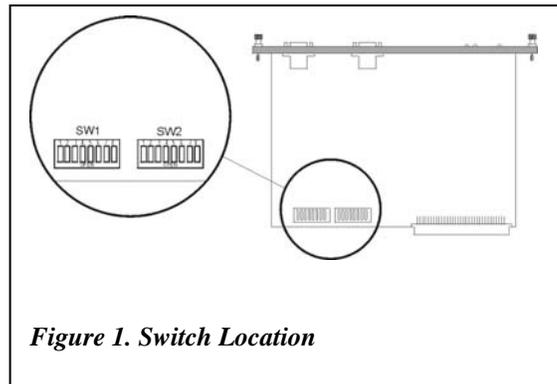


Figure 1. Switch Location

Installation Steps

Inserting the Module into the I/O Base

Ensure that power to the base is off. Hold the top and bottom of the bezel and slide the module carefully into the slot, pushing it all the way into the base. If you have inserted the module correctly, you will feel a slight increase in resistance as the module mates with the base backplane connector. Once the module is fully seated in the slot, tighten the captive screws at the top and bottom to hold the module in place. To remove the module from the I/O base, remove power from the base, loosen the captive screws, and extract the module. Take care not to damage the connector at the back of the module when inserting or removing the module.

Attaching Profibus Cabling

Connect your Profibus network cable connector to module Profibus connector and secure by tightening the retaining screws. Ensure that the termination switch in the network cable connector is set to the proper termination position.

Power Up

After you apply power to the base, the ACTIVE indicator will flash. The ACTIVE indicator will remain flashing until the module is online with the Profibus master. The Profibus XMT and RCV indicators will illuminate when the module is communicating with the Profibus master. Once the module is online, the ACTIVE indicator will be on solid.

If you are replacing an existing module, this completes the installation process.

Additional Installation Steps – First Time Installation

If you are installing a module for the first time, you will need to configure the 505 I/O to include the module. You will also need to define the module to the Profibus controller using the appropriate configuration tool, such as Step 7 or COM Profibus.

Configuring the 505 PLC I/O

The 2577 logs in as a Special Function module with 2 WX and 6 WY words. To view the PLC I/O configuration chart, refer to your SIMATIC® 505 programming software manual. For the particular slot that contains the module, ensure that the slot entry indicates 2 WX and 6 WY and that Special Function = Yes. Set the module address to match your specific 505 PLC requirements.

Profibus Configuration

The module may be configured using standard Profibus configuration software such as COM Profibus or Step 7. Using the Profibus configuration software, you will need to perform the following steps:

- Install the GSD file in the software. The 2577 GSD file may be downloaded from the CTI web site <http://www.controltechnology.com/downloads505.htm>
- Add the 2577 module to the Profibus network configuration.
- Configure the 2577 module I/O word size by picking a module configuration that suits your application. Configurations supported include 1 in/1 out, 2 in/2 out, 4 in/4 out, 8 in/8 out, 16 in/16 out, 32 in/32 out, 64 in/64 out, and 110 in/110 out.
- Select the Profibus Address that will be used by the module.
- Select the module parameters
 - **Input Data Type:** Select V, WX, X, or C. (X and C are available for sizes 1, 2, 4, 8, or 16 only).
 - **Input Address:** Enter the address of the 505 PLC memory block that will be **read** by the Profibus controller.
 - **Output Data Type:** Select V or C (C is available for sizes 1, 2, 4, 8, or 16 only).
 - **Output Address:** Select the address of the 505 PLC memory block that will be **written** by the Profibus controller.
- Download the configuration to the Profibus master.

Note:

Make sure that the address you select is actually available on the SIMATIC® 505 PLC. If any address within the block is out of range, the module will set the Profibus error bit and the master will not read or write the SIMATIC® 505 PLC.

Caution:

The entire block of data words with the starting address and size you selected in I/O size will be written by the Profibus controller. Make sure that you are not inadvertently overwriting data used for other PLC functions.

If the module does not go online with the Profibus Master, you probably have an error in setting the Profibus Slave address or an error in configuring the module using the Profibus software (Step 7 or COM Profibus). See the 2577 *Profibus Slave Module Installation and Operation Guide* for troubleshooting tips. If you do not have a copy, you may download it from the CTI Web site <http://www.controltechnology.com/manuals505.htm>.

Profibus Address Table

Address	Switch							
	1	2	3	4	5	6	7	8
1								X
2							X	
3							X	X
4						X		
5						X		X
6						X	X	
7						X	X	X
8					X			
9					X			X
10					X		X	
11					X		X	X
12					X	X		
13					X	X		X
14					X	X	X	
15					X	X	X	X
16				X				
17				X				X
18				X			X	
19				X			X	X
20				X		X		
21				X		X		X
22				X		X	X	
23				X		X	X	X
24				X	X			
25				X	X			X
26				X	X		X	
27				X	X		X	X
28				X	X	X		
29				X	X	X		X
30				X	X	X	X	
31				X	X	X	X	X
32			X					
33			X					X
34			X				X	
35			X				X	X
36			X			X		
37			X			X		X
38			X			X	X	
39			X			X	X	X
40			X		X			
41			X		X			X
42			X		X		X	
43			X		X		X	X
44			X		X	X		
45			X		X	X		X
46			X		X	X	X	
47			X		X	X	X	X
48			X	X				
49			X	X				X
50			X	X			X	
51			X	X			X	X
52			X	X		X		
53			X	X		X		X
54			X	X		X	X	
55			X	X		X	X	X
56			X	X	X			
57			X	X	X			X
58			X	X	X		X	
59			X	X	X		X	X
60			X	X	X	X		
61			X	X	X	X		X
62			X	X	X	X	X	
63			X	X	X	X	X	X

Address	Switch							
	1	2	3	4	5	6	7	8
64		X						
65		X						X
66		X					X	
67		X					X	X
68		X				X		
69		X				X		X
70		X				X	X	
71		X				X	X	X
72		X			X			
73		X			X			X
74		X			X		X	
75		X			X		X	X
76		X			X	X		
77		X			X	X		X
78		X			X	X	X	
79		X			X	X	X	X
80		X	X					
81		X	X					X
82		X	X				X	
83		X	X				X	X
84		X	X		X			
85		X	X		X		X	
86		X	X		X	X	X	
87		X	X		X	X	X	
88		X	X	X				
89		X	X	X				X
90		X	X	X			X	
91		X	X	X			X	X
92		X	X	X	X			
93		X	X	X	X		X	
94		X	X	X	X	X	X	
95		X	X	X	X	X	X	X
96		X	X					
97		X	X					X
98		X	X				X	
99		X	X				X	X
100		X	X			X		
101		X	X			X		X
102		X	X			X	X	
103		X	X			X	X	X
104		X	X		X			
105		X	X		X			X
106		X	X		X		X	
107		X	X		X		X	X
108		X	X		X	X		
109		X	X		X	X		X
110		X	X		X	X	X	
111		X	X		X	X	X	X
112		X	X	X				
113		X	X	X				X
114		X	X	X			X	
115		X	X	X			X	X
116		X	X	X		X		
117		X	X	X		X		X
118		X	X	X		X	X	
119		X	X	X		X	X	X
120		X	X	X	X			
121		X	X	X	X			X
122		X	X	X	X		X	
123		X	X	X	X		X	X
124		X	X	X	X	X		
125		X	X	X	X	X	X	X
126		X	X	X	X	X	X	X
127		X	X	X	X	X	X	X

x = Closed Switch Position

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