

FAQ-4993

Question:

Siprotec 4 Profibus DP 通讯配置注意事项

Answer:

1) 保护装置siprotec 4侧的工作:

1.1 提供GSD文件给profibus DP主站, GSD文件可在此链接

http://www.energy.siemens.com/ecc_pool/SIPROTEC4/ba149820-7f13-42cf-9446-14dc631a9a79/Profibus_DP_GSD_V03.00.zip 下载, 解压缩后共4个GSD文件, 分别对应

Si1_80a1.gsd适用的装置: 通讯模块硬件版本号4且接口类型为RS485

Si1_80bc.gsd适用的装置: 通讯模块硬件版本号4且接口类型为光纤

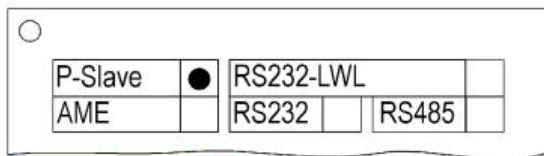
Siem80a1.gsd适用的装置: 通讯模块硬件版本号3及以下且接口类型为RS485

Siem80bc.gsd适用的装置: 通讯模块硬件版本号3及以下且接口类型为光纤

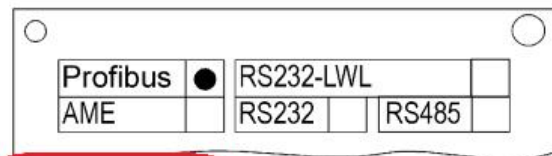
硬件版本可通过模块上打印的文字进行识别, 请参考文件

http://www.energy.siemens.com/ecc_pool/SIPROTEC4/4ddaf25c-5f5f-4f86-8368-35ae30689ed4/Info_Communication_modules_HWRRev4_en.pdf

Profibus RS485 (PSE module)

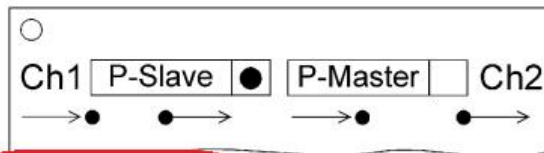


up to HW revision 3

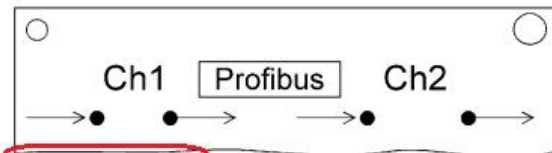


from HW revision 4

Profibus fibre-optical, double loop (PSO2 module)

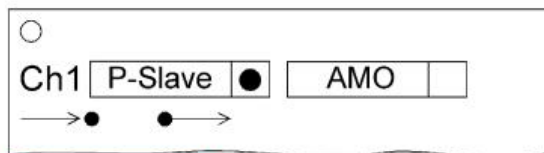


up to HW revision 3

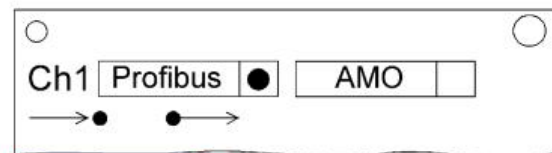


from HW revision 4

Profibus fibre-optical, single loop (PSO1 module)



up to HW revision 3



from HW revision 4

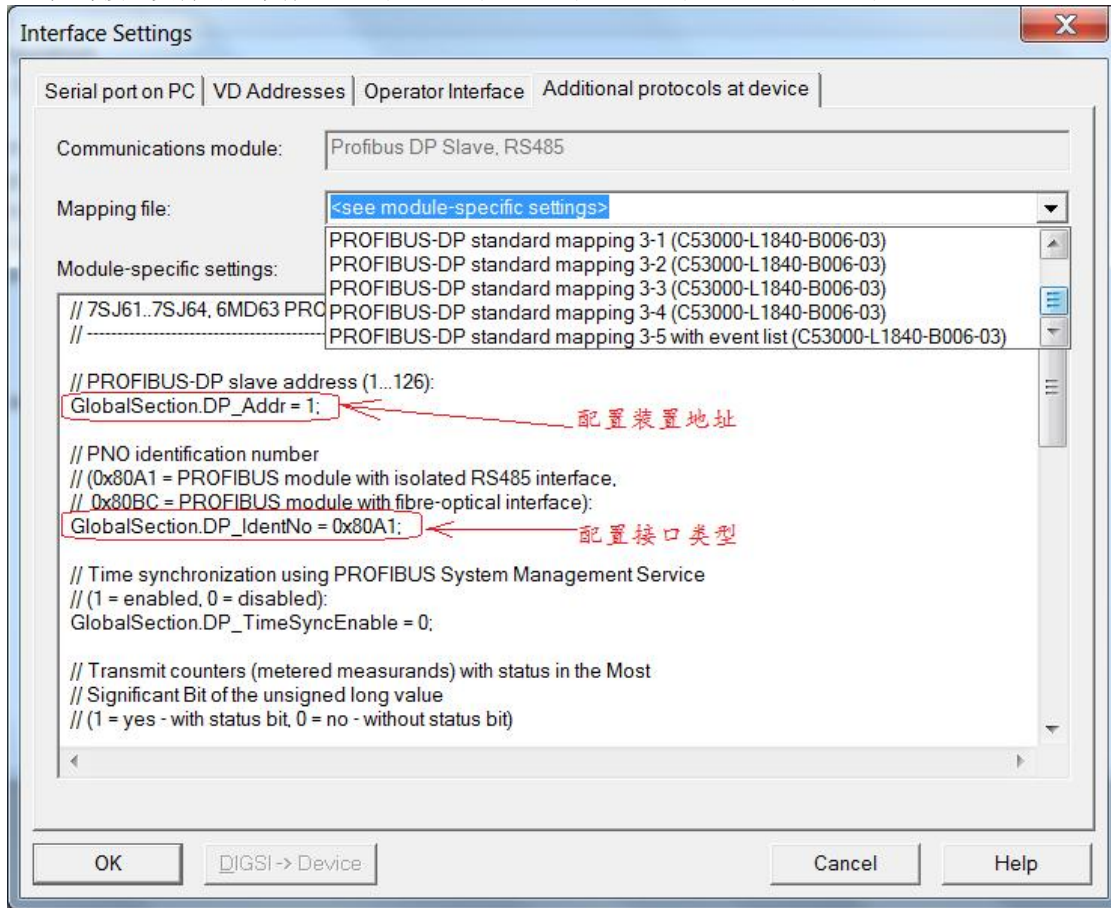
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1.2 参数文件的配置

打开装置参数文件，在interface中选择mapping file，并且在mapping file中配置装置地址和端口类型（见下图），通讯速率无需配置，保护装置会自动适应prifibus DP总线上的速率。

RS485接口支持的速率有：9600；19200；93750；187500；500000；1.5M；3M；6M。

光纤接口支持的速率有：9600；19200；93750；187500；500000；1.5M；



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2) Profibus DP主站侧的工作:

2.1 根据通讯模块的接口类型以及版本信息选取正确的装置



2.2 根据装置所配置的mapping file版本, 选取与装置数目/类型完全一致的input byte和output byte, 输入输出字节的数目/类型可在相应装置的mapping file说明文件中查找到, 同时注意input byte的地址必须是连续的。

下面以7SJ62选择mapping 3-1时的相关配置。

7SJ62 Mapping file中指出input byte和output byte的数目及类型

Standard mapping 3-1:

Standard mapping 3-1: 1FH 1FH 1FH 1FH 1FH 1FH 13H 28H
(100 bytes input-, 9 bytes output direction)

Standard mapping 3-2: 1FH 1FH 1FH 28H
(48 bytes input-, 9 bytes output direction)

Standard mapping 3-3: 1FH 1FH 1FH 1FH 1FH 27H
(80 bytes input-, 8 bytes output direction)

Standard mapping 3-4: 1FH 1BH 21H
(28 bytes input-, 2 bytes output direction)

Standard mapping 3-5: 1FH 1FH 1FH 1FH 13H DFH 27H
(100 bytes input-, 8 bytes output direction)

Module	Order number	Input address	Output address
0	Input - 16 Bytes	Adr_Ix	
1	Input - 16 Bytes	Adr_Ix + 16	
2	Input - 16 Bytes	Adr_Ix + 32	
3	Input - 16 Bytes	Adr_Ix + 48	
4	Input - 16 Bytes	Adr_Ix + 64	
5	Input - 16 Bytes	Adr_Ix + 80	
6	Input - 4 Bytes	Adr_Ix + 96	
7	Output - 9 Bytes		Adr_Ox

Profibus Master中配置与之相同的input byte和output byte的数目及类型

Slot	DP ID	Order Number / Design.	Address	Q Address	Comment
1	31	Input - 16 Bytes	1..16		
2	31	Input - 16 Bytes	17..32		
3	31	Input - 16 Bytes	33..48		
4	31	Input - 16 Bytes	49..64		input-byte的地址需连续
5	31	Input - 16 Bytes	65..80		
6	31	Input - 16 Bytes	81..96		
7	32DI	Input - 4 Bytes	97..100		
8	40	Output - 9 Bytes		0..8	

按照如上说明完成主站及从站的配置后, profibus DP 的通讯就可以建立起来了。

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另外，可在西门子网站（<http://www.energy.siemens.com/hq/en/automation/power-transmission-distribution/protection/siprotec/?dlsearch=1&fiProductFamily=SIPROTEC%204&fiProductName=-%20General%20Information>）下载相关的说明文件，如：

- 1) 关于保护的 profibus DP 协议描述 communication profile

http://www.energy.siemens.com/ecc_pool/SIPROTEC4/9f719cc4-302c-40a4-a263-fc0f536c5d08/com_profibus_profile_us.pdf

- 2) 各种类型装置的 mapping file 描述

7SJ6x 为例

http://www.energy.siemens.com/ecc_pool/SIPROTEC4/5891ef6b-66d6-4a1b-a5a5-5a7360347cad/com_profibus_7sj6x_6md63_us.pdf

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1 Warnings



WARNING

Dangerous voltages may occur in devices and modules during operation depending on the design and application. Incorrect use of these devices can therefore result in severe personal injury or substantial damage to property.

Only suitably qualified staff should work on this device.

Correct and safe operation of this device is dependent on proper handling, installation, operation and maintenance.

Should you require further information, or should particular problems occur which are not handled in sufficient depth in the Instructions, help can be requested through your local Siemens Office or representative.

QUALIFIED PERSON

A "qualified person" is one who is familiar with the installation, construction and operation of the device and who has the appropriate qualifications, e.g.

- is trained and authorized to operate and maintain devices/systems in accordance with established safety practices for devices with electrical circuits.
- is trained in the proper care and use of protective equipment in accordance with established safety practices.
- is trained in first aid.

Subject to change without prior notice !

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