

SIEMENS



SIMATIC

S7-1500

数字量输出模块 DQ 16x24VDC/0.5A ST (6ES7522-1BH00-0AB0)

手册

版本

07/2014

Answers for industry.

SIEMENS

SIMATIC

S7-1500/ET 200MP
DQ 16x24VDC/0.5A ST
数字量输出模块
(6ES7522-1BH00-0AB0)




设备手册

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法律资讯

警告提示系统

为了您的人身安全以及避免财产损失，必须注意本手册中的提示。人身安全的提示用一个警告三角表示，仅与财产损失有关的提示不带警告三角。警告提示根据危险等级由高到低如下表示。

 危险
表示如果不采取相应的小心措施， 将会 导致死亡或者严重的人身伤害。
 警告
表示如果不采取相应的小心措施， 可能 导致死亡或者严重的人身伤害。
 小心
表示如果不采取相应的小心措施，可能导致轻微的人身伤害。
注意
表示如果不采取相应的小心措施，可能导致财产损失。


当出现多个危险等级的情况下，每次总是使用最高等级的警告提示。如果在某个警告提示中带有警告可能导致人身伤害的警告三角，则可能在该警告提示中另外还附带有可能导致财产损失的警告。

合格的专业人员

本文件所属的产品/系统只允许由符合各项工作要求的**合格人员**进行操作。其操作必须遵照各自附带的文件说明，特别是其中的安全及警告提示。
由于具备相关培训及经验，合格人员可以察觉本产品/系统的风险，并避免可能的危险。

按规定使用Siemens 产品

请注意下列说明：

 警告
Siemens 产品只允许用于目录和相关技术文件中规定的使用情况。如果要使用其他公司的产品和组件，必须得到 Siemens 推荐和允许。正确的运输、储存、组装、装配、安装、调试、操作和维护是产品安全、正常运行的前提。必须保证允许的环境条件。必须注意相关文件中的提示。

商标

所有带有标记符号 ® 的都是西门子股份有限公司的注册商标。本印刷品中的其他符号可能是一些其他商标。
若第三方出于自身目的使用这些商标，将侵害其所有者的权利。

责任免除

我们已对印刷品中所述内容与硬件和软件的一致性作过检查。然而不排除存在偏差的可能性，因此我们不保证印刷品中所述内容与硬件和软件完全一致。印刷品中的数据都按规定经过检测，必要的修正值包含在下一版本中。

前言

本文档的用途

本手册是对以下系统手册的补充：

- S7-1500 自动化系统
- ET 200MP 分布式 I/O 系统

在这些系统手册中，介绍了与这些系统相关的各种功能。

本手册和系统/功能手册中介绍的信息将为您进行系统调试提供技术支持。

相对于先前版本的变更

本手册中介绍了相对于先前版本的变更：

- 硬件目录 STEP 7 (TIA Portal) V13 Update 3
或更高版本中集成了具有以下功能的模块：
 - 模块内部共享输出 (MSO)，适用于 Shared Device
 - 可组态子模块，如适用于 Shared Device
- 已修订的附录 Open Source Software

约定

本手册中使用的术语“CPU”既可指代 S7-1500 自动化系统的 CPU，也可指代 ET 200MP 分布式 I/O 系统的接口模块。

请注意下列注意事项：

说明

注释信息中包含本文档中所介绍产品及其操作的重要信息，或者本文档中应特别注意的部分。

安全信息

西门子为其产品及解决方案提供工业安全功能，以支持工厂、解决方案、机器、设备和/或网络的安全运行。这些功能是整个工业安全机制的重要组成部分。

有鉴于此，西门子不断对产品和解决方案进行开发和完善。

西门子强烈建议您定期检查产品的更新和升级信息。

要确保西门子产品和解决方案的安全操作，还须采取适当的预防措施（例如：设备单元保护机制），并将每个组件纳入全面且先进的工业安全保护机制中。

此外，还需考虑到可能使用的所有第三方产品。更多有关工业安全的信息，请访问 Internet (<http://www.siemens.com/industrialsecurity>)。

要及时了解有关产品的更新和升级信息，请订阅相关产品的实事信息。

更多相关信息，请访问 Internet (<http://support.automation.siemens.com>)。

开源软件

在所述产品的固件中采用了开源软件 (Open Source Software)。“开源软件”免费提供。

我们根据适用于产品的规定对所述产品及包含在内的开源软件负责。Siemens

不对开源软件的非预期用途或因修改开源软件引起的任何故障承担任何责任。

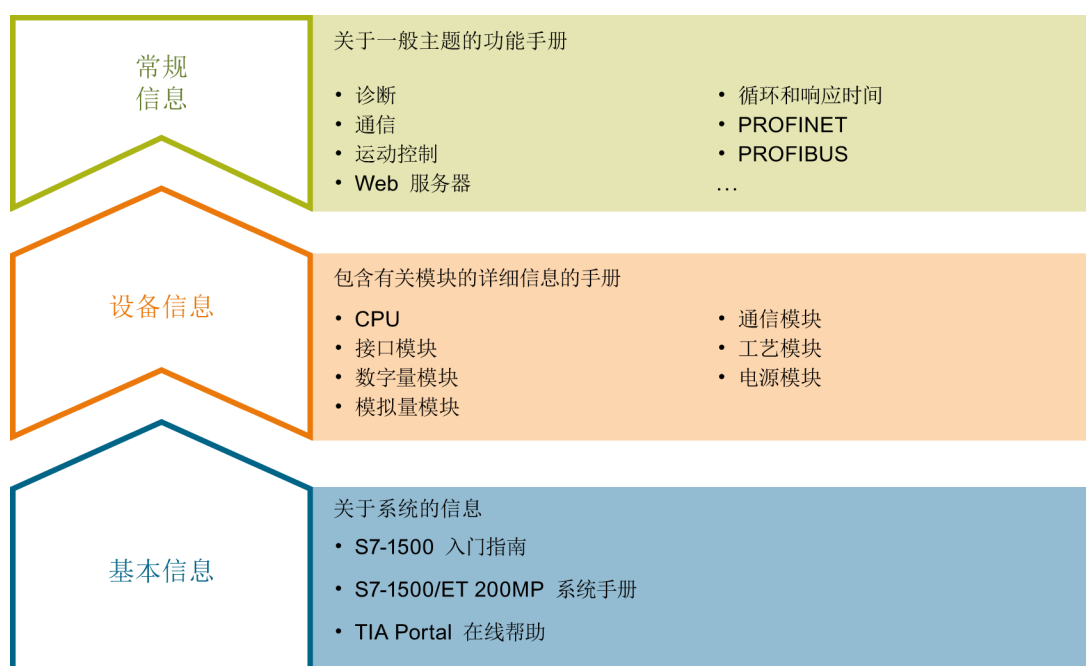
出于法律上的原因，我们有责任原文公布许可条件和版权提示。相关信息请参见附录。

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SIMATIC S7-1500 自动化系统和 SIMATIC ET 200MP 分布式 I/O 系统的文档分为 3 个部分。

这样用户可方便访问自己所需的特定内容。



基本信息

系统手册和入门指南中详细描述了 SIMATIC S7-1500 和 ET 200MP 系统的组态、安装、接线和调试。STEP 7 在线帮助用户提供了组态和编程方面的支持。

设备信息

手册中包含模块特定信息的简洁描述，如属性、端子图、功能特性、技术规范。

常规信息

功能手册中包含有关 SIMATIC S7-1500 和 ET 200MP 系统的常规主题的详细描述，如诊断、通信、运动控制、Web 服务器。

可以从 Internet (<http://www.automation.siemens.com/mcms/industrial-automation-systems-simatic/en/manual-overview/tech-doc-controllers/Pages/Default.aspx>) 上免费下载文档。

产品信息中记录了对这些手册的更改和补充。

手册集 S7-1500 / ET 200MP

手册集中包含 SIMATIC S7-1500 自动化系统和 ET 200MP 分布式 I/O 系统的完整文档，这些文档都收集在一个文件中。

可以在 Internet (<http://support.automation.siemens.com/WW/view/zh/86140384>) 上找到手册集。

我的文档管理器

“我的文档管理器”用于将完整手册或部分手册组合成用户自己的手册。用户可以将该手册导出为 PDF 文件或可供稍后进行编辑的格式。

可以在 Internet (<http://support.automation.siemens.com/CN/view/zh/38715968>) 上找到“我的文档管理器”。

应用程序和工具

“应用程序和工具”提供使用各种工具的支持和用于解决自动化任务的各种示例。自动化系统中的多个组件完美协作，从而组合成不同的解决方案，而用户则无需关注各个单独的产品。

可以在 Internet (<http://support.automation.siemens.com/WW/view/zh/20208582>) 上找到“应用程序和工具”。

CAX 下载管理器

CAX 下载管理器用于访问 CAX 或 CAe 系统的最新产品数据。

仅需几次单击用户即可组态自己的下载包。

用户可选择：

- 产品图片、2 维图、3 维模型、内部电路图、EPLAN 宏文件
- 手册、功能特性、操作手册、证书
- 产品主数据

可以在 Internet (<https://support.automation.siemens.com/CN/view/zh/42455541>) 上找到 CAX 下载管理器。

产品总览

2.1 特性

产品编号

6ES7522-1BH00-0AB0

模块视图

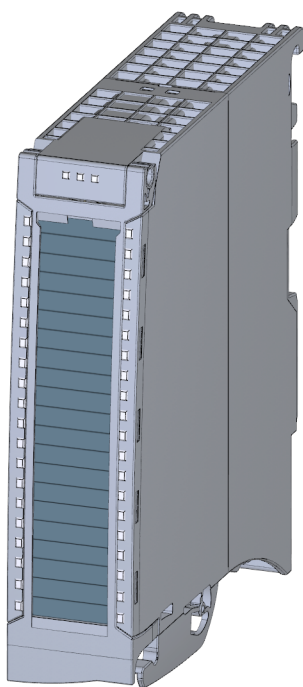


图 2-1 DQ 16x24VDC/0.5A ST 模块的视图

2.1 特性

特性

该模块具有下列技术特性：

- 16 DO；每组 8 个电气隔离
- 额定输出电压 24 V DC
- 每个通道的额定输出电流 0.5 A
- 可分配替换值（每个通道）
- 可分配诊断（每个通道组）
- 适用于电磁阀、直流接触器和指示灯

模块支持以下功能：

表格 2-1 模块功能与版本的相关性

功能	模块的固件版本	组态软件	
		STEP 7 (TIA Portal)	STEP 7 (TIA Portal) V12 及更高版本或 STEP 7 V5.5 SP3 及更高版本中的 GSD 文件
固件更新	V1.0.0 或更高版本	V12 或更高版本	√
标识数据 I&M0 到 I&M3	V1.0.0 或更高版本	V12 或更高版本	√
RUN 模式下的参数分配	V1.0.0 或更高版本	V12 或更高版本	√
等时同步模式	V1.0.0 或更高版本	V12 或更高版本	---
模块内部 Shared Output (MSO)	V2.0.0 或更高版本	V13 Update 3 或更高版本 (仅限 PROFINET IO)	√ (仅限 PROFINET IO)
可组态子模块/ Shared Device 子模块	V2.0.0 或更高版本	V13 Update 3 或更高版本 (仅限 PROFINET IO)	√ (仅限 PROFINET IO)
可在接口模块 IM 155-5 DP ST 后组态	V2.0.0 或更高版本	V13 或更高版本	√

可通过 STEP 7 (TIA Portal) 和 GSD 文件组态模块。

附件

以下附件既可以随模块一起提供，也可以作为备件单独订购：

- 标签条
- U 型连接器
- 通用前盖

其它组件

以下组件必须单独订购：

前连接器，包括电位跳线和扎带

有关附件的详细信息，请参见“S7-1500 自动化系统

(<http://support.automation.siemens.com/WW/view/zh/59191792>)”系统手册和“ET 200MP 分布式 I/O 系统

(<http://support.automation.siemens.com/WW/view/zh/59193214>)”系统手册。

接线

下面介绍了模块的方框图以及各种连接方式。

有关前连接器接线和连接电缆屏蔽层等的更多信息，请参见“S7-1500 自动化系统 (<http://support.automation.siemens.com/WW/view/zh/59191792>)”和“ET 200MP 分布式 I/O 系统 (<http://support.automation.siemens.com/WW/view/zh/59193214>)”系统手册中的“接线”部分。

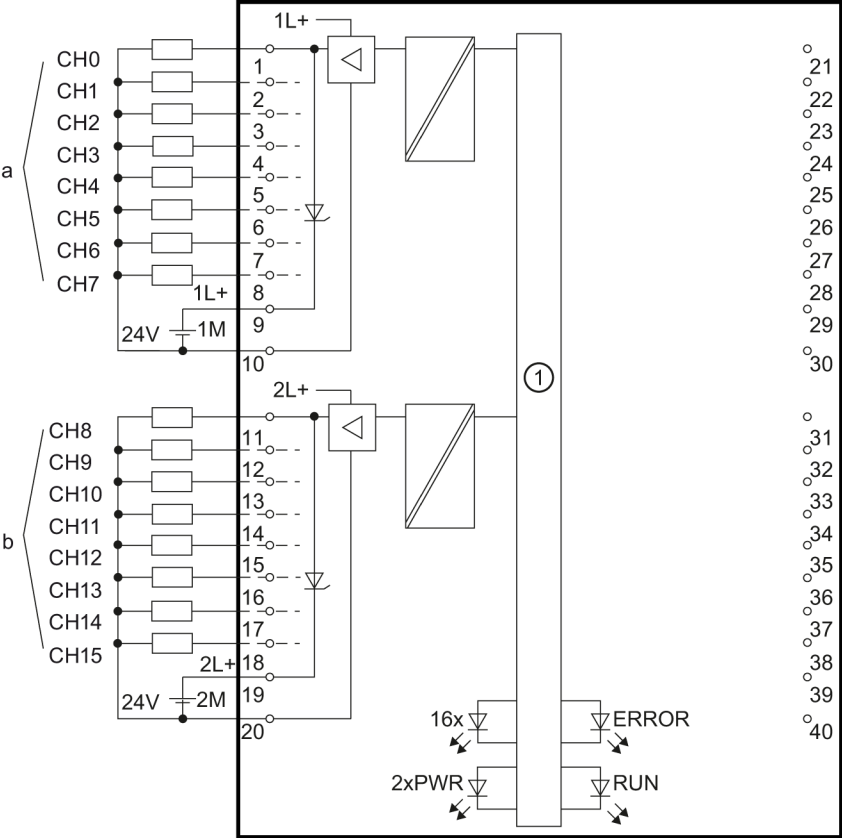
使用的缩写

下图中所用缩写的含义：

xL+	电源电压连接
xM	接地连接
CHx	通道或通道状态指示灯
PWRx	电源电压 (POWER) 指示灯

方框图和端子分配

下图举例说明了端子分配和通道寻址（输出字节 **a** 和输出字节 **b**）。



① 背板总线接口

图 3-1 方框图和端子分配

说明

在激活 24 V 电源电压时，模块输出端“1”信号的时间约 50 μ s。

提示： 使用电位跳线

如果要为两个负载组提供相同的电位（非隔离），则可使用前端连接器附带的电位跳线。这样可以防止将两根线接到同一个端子上。

请按以下步骤操作：

1. 将 24 V DC 电源连接到端子 19 和 20 上。
2. 在端子之间插入电位跳线。
 - 9 和 29 (L+)
 - 10 和 30 (M)
 - 19 和 39 (L+)
 - 20 和 40 (M)
3. 在端子 29 和 39 之间、30 和 40 之间插入跳线。
4. 使用端子 19 和 20 将电位传导到下一个模块。

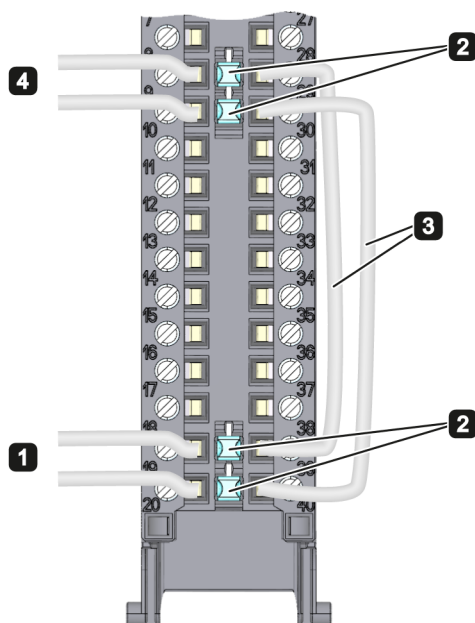


图 3-2 使用电位跳线

说明

请确保每个电位跳线上的最大电流负载不超过 8 A。

参数/地址空间

4.1 参数

DQ 16x24VDC/0.5 ST 参数

在 STEP 7

中指定模块参数时，可使用不同的参数来设置模块属性。下表列出了可组态的参数。可组态参数的有效范围取决于组态的类型。可进行以下组态：

- 使用 S7-1500 CPU 进行统一操作
- 在 ET 200MP 系统中 PROFINET IO 上进行分布式操作
- 在 ET 200MP 系统中的 PROFIBUS DP 上进行分布式操作

在用户程序中进行参数分配时，可通过 WRREC 指令（RUN 模式下的参数分配）和数据记录将这些参数传送到模块中；请参见章节 参数分配和参数数据记录的结构 (页 32)。

表格 4-1 可组态的参数及其默认值

参数	取值范围	默认设置	RUN 模式下的参数分配	组态软件工具，例如 STEP 7 (TIA Portal)	
				PROFINET IO GSD 文件	PROFIBUS DP GSD 文件
诊断					
• 电源电压 L+ 缺失	√/-	-	√	通道组	通道组
• 对 M 短路	√/-	-	√	通道组	通道组
对 CPU STOP 模式的响应	<ul style="list-style-type: none"> • 停止 • 保留上一个值 • 输出替代值 1 	停止	√	通道	通道

4.2 地址空间

在 STEP 7 中，可采用不同方式对模块进行组态；请参见下表。

根据组态的不同，将在输出/输入的过程映像中另外指定地址或指定不同地址。

DQ 16x24VDC/0.5A ST 的组态选项

可通过 STEP 7 (TIA Portal) 或 GSD 文件组态模块。

使用 GSD 文件组态模块时，可使用不同的缩写/模块名来表示组态。

可进行以下组态：

表格 4-2 组态选项

组态	GSD 文件中的简短标识/模块名	组态软件，如 STEP 7 (TIA Portal)	
		集成在硬件目录 STEP 7 (TIA Portal) 中	STEP 7 (TIA Portal) V12 或更高版本/STEP 7 V5.5 SP3 或更高版本中的 GSD 文件
1 x 16 通道（不带值状态）	DQ 16x24VDC/0.5A ST	V12 或更高版本	√
1 x 16 通道（带值状态）	DQ 16x24VDC/0.5A ST QI	V12 或更高版本	√
2 x 8 通道（不带值状态）	DQ 16x24VDC/0.5A ST S	V13 Update 3 或更高版本 （仅限 PROFINET IO）	√ （仅限 PROFINET IO）
2 x 8 通道（带值状态）	DQ 16x24VDC/0.5A ST S QI	V13 Update 3 或更高版本 （仅限 PROFINET IO）	√ （仅限 PROFINET IO）
1 x 16 通道（带最多 4 个子模块中模块内部 Shared Output 的值状态）	DQ 16x24VDC/0.5A ST MSO	V13 Update 3 或更高版本 （仅限 PROFINET IO）	√ （仅限 PROFINET IO）

值状态 (Quality Information, QI)

具有以下名称的模块将始终激活值状态：

- DQ 16x24VDC/0.5A ST QI
- DQ 16x24VDC/0.5A ST S QI
- DQ 16x24VDC/0.5A ST MSO

对于值状态，系统将为每个通道指定一个附加位。

值状态位将指示用户程序中所指定的输出值在模块端是否未得到确认（0 = 值不正确）。

接地短路的特殊特征

如果通道短路，则对应值状态输入字节的所有位将设置为 0。模块将通知所有通道相关字节发生错误。

组态为 16 通道 DQ 16x24VDC/0.5A ST 的地址空间

下图显示了组态为带值状态的 16 通道模块的地址空间分配。

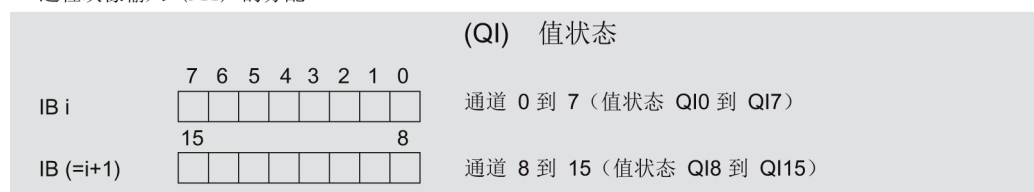
可任意指定模块的起始地址。通道的地址将从该起始地址开始。

在模块上将印刷字母“a 到 d”。例如，“AB a”是指模块起始地址输出字节 a。

过程映像输出 (PIQ) 的分配



过程映像输入 (PII) 的分配



0 = 通道上的读取值无效

图 4-1 组态为带值状态的 16 通道 DQ 16x24VDC/0.5A ST 的地址空间

组态为 2 x 8 通道 DQ 16x24VDC/0.5A ST S QI 的地址空间

组态为 2 x 8 通道模块时，模块的通道应分为多个子模块。
在共享设备中使用该模块时，可将子模块分配给不同的 IO 控制器。

可用的子模块数量取决于所使用的接口模块。
请遵循本手册中有关特定接口模块的信息。

与 1 x 16 通道模块组态不同，这 2 个子模块都可任意指定起始地址。
用户也可指定子模块中相关值状态的地址。

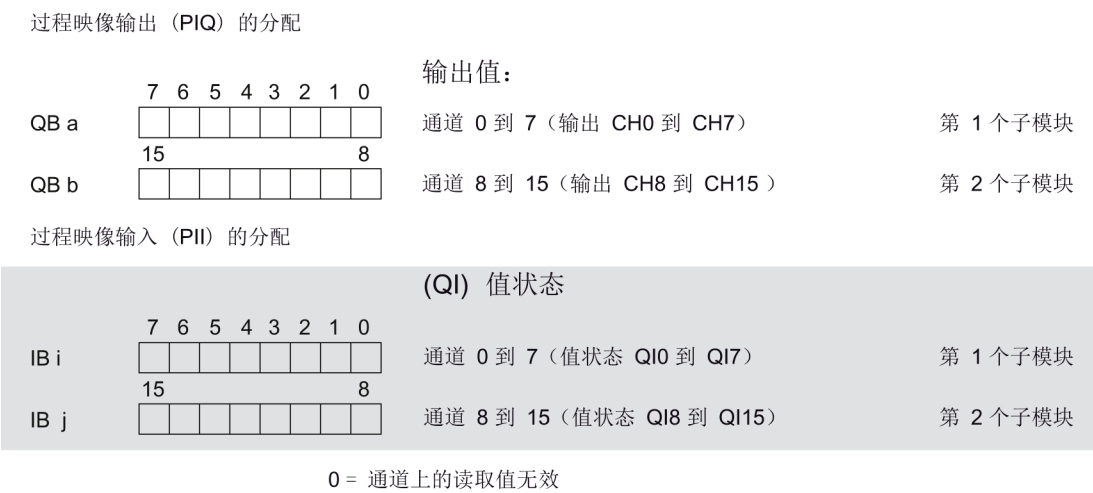


图 4-2 组态为带值状态的 2 x 8 通道 DQ 32x24VDC/0.5A ST S QI 的地址空间

组态为 1 x 16 通道 DQ 16x24VDC/0.5A ST MSO 的地址空间

组态为 1 x 16 通道模块（模块内部 shared output, MSO）时，系统将模块的通道 0 到 15 会复制到多个子模块中。之后，在各个子模块中通道 0 到 16 的值都将相同。

在共享设备中使用该模块时，可将这些子模块分配给最多 4 个 IO 控制器：

- 分配给子模块 1 的 IO 控制器对输出 0 到 15 具有写访问权限。
- 分配给子模块 2、3 或 4 的 IO 控制器则对输出 0 到 15 具有读访问权限。

可用的子模块数量取决于所使用的接口模块。
请遵循本手册中有关特定接口模块的信息。

值状态 (Quality Information, QI)

值状态的含义取决于所在的子模块。

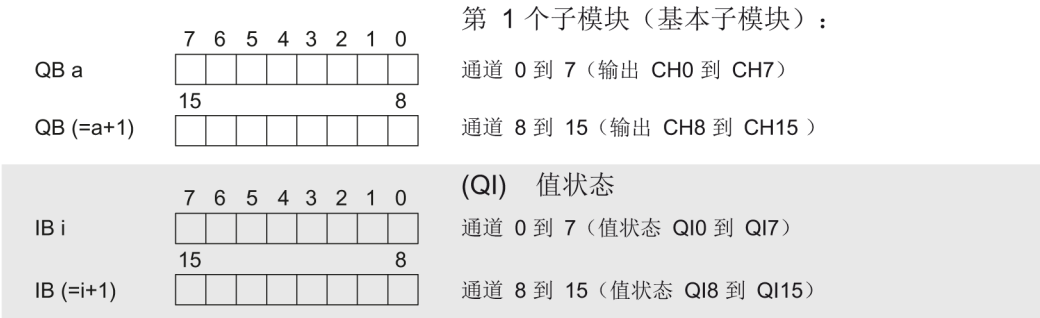
对于第一个子模块 (= 基本子模块)，值状态为 0 表示值不正确或基本子模块的 IO 控制器处于 STOP 状态。

对于第二到第四个子模块 (= MSO 子模块)，值状态为 0 表示值不正确或出现以下某种错误：

- 基本子模块尚未组态（未就绪）。
- IO 控制器与基本子模块间的连接已中断。
- 基本子模块的 IO 控制器处于 STOP 或 POWER OFF 状态。

下图显示了子模块 1 和 2 的地址空间分配和值状态。

第 1 个子模块上过程映像输出 (PIQ) 中的分配



第 2 个子模块上过程映像输入 (PII) 中的分配



0 = 通道上的读取值无效

图 4-3 组态为带值状态的 1 x 16 通道 DQ 16x24VDC/0.5A ST S MSO 的地址空间

下图显示了子模块 3 和 4 的地址空间分配和值状态。

第 3 和第 4 个子模块上过程映像输入（PII）中的分配



图 4-4 组态为带值状态的 1 x 16 通道 DQ 16x24VDC/0.5A ST S MSO 的地址空间

中断/诊断报警

5.1 状态和错误指示灯

LED 指示灯

下图显示了 DQ 16x24VDC/0.5A ST 的 LED 指示灯（状态和错误指示灯）。

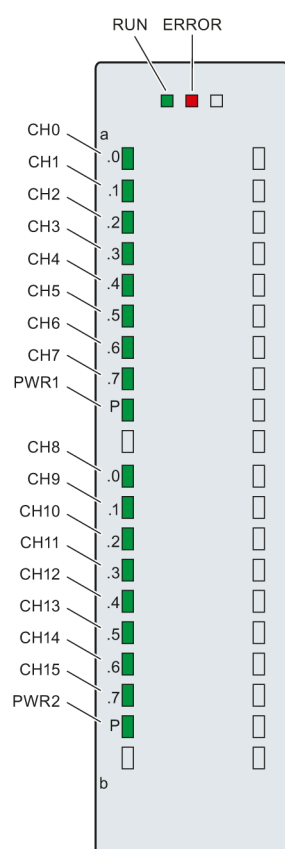


图 5-1 LED 模块的指示灯 DQ 16x24VDC/0.5A ST











5.1 状态和错误指示灯

LED 指示灯的含义

下表列出了状态和错误指示灯的含义。要了解诊断报警的补救措施，请参见“诊断报警 (页 24)”部分。



RUN 和 ERROR 指示灯

表格 5-1 状态和错误指示灯 RUN 和 ERROR

LED		含义	解决方法
RUN	ERROR		
 灭	 灭	背板总线上电压缺失或过低。	<ul style="list-style-type: none">• 接通 CPU 和/或系统电源模块。• 验证是否插入 U 型连接器。• 检查是否插入了过多的模块。
 闪烁	 灭	模块启动并在设置有效参数分配之前一直闪烁。	---
 亮	 灭	模块已组态。	
 亮	 闪烁	表示模块错误（至少一个通道上存在故障，例如，接地短路）。	判断诊断数据并消除该错误（例如，检查电缆）。
 闪烁	 闪烁	硬件故障。	更换模块。



PWR1 和 PWR2 指示灯

表格 5-2 PWR1 和 PWR2 的状态指示

LED PWRx	含义	解决方法
 灭	电源电压 L+ 过低或缺失	检查电源电压 L+。
 亮	有电源电压 L+ 且电压正常	---

CHx LED 指示灯

表格 5-3 CHx 状态指示灯

LED CHx	含义	解决方法
 灭	0 = 输出信号的状态	---
 亮	1 = 输出信号的状态	---

5.2 中断

数字量输出模块 DQ 16x24VDC/0.5A ST 支持诊断中断。

诊断中断

在发生以下情况时该模块将生成诊断中断：

- 电源电压 L+ 缺失
- 接地短路

有关错误事件的更多信息，请参见指令“RALRM”（读取额外的中断信息）的错误 OB 以及 STEP 7 在线帮助。

5.3 诊断报警

诊断报警

为每个诊断事件输出一个诊断报警，同时模块上的 **ERROR LED** 指示灯闪烁。例如，从 CPU 的诊断缓冲区中读取诊断报警。可通过用户程序评估错误代码。

如果在 ET 200MP 系统中通过 PROFIBUS DP 对模块进行分布式操作，则可使用指令 **RDREC** 或 **RD_REC** 通过数据记录 0 和 1 读取诊断数据。有关数据记录结构，请参见 Internet 上的“接口模块 IM 155-5 DP ST (6ES7155-5BA00-0AB0) 手册”。

表格 5- 4 诊断报警、含义以及更正措施

诊断报警	错误代码	含义	更正措施
对 M 短路	1 _H	通道断路或过载	检查接线/执行器。 检查环境温度。
负载电压缺失	11 _H	模块的电源电压 L+ 缺失	将电源电压 L+ 连接到模块/通道上

技术规范

DQ 16x24VDC/0.5A ST 的技术规范

	6ES7522-1BH00-0AB0
产品类型标识	DQ 16x24VDC/0.5A ST
常规信息	
硬件版本	E01
固件版本	V2.0.0
产品功能	
I&M 数据	√; IM0 到 IM3
工程组态方式	
TIA Portal 中 STEP 7	V12.0 / V12.0
可组态的版本/可集成的版本（或更高版本）	
STEP 7	V5.5 SP3 或更高版本 / -
可组态的版本/可集成的版本（或更高版本）	
运行方式	
MSO	√
电源电压	
电源电压类型	DC
直流额定电压	24 V
直流电压下限	20.4 V
直流电压上限	28.8 V
反极性保护	√; 每组 7 A 的内部保护
输入电流	
最大电流损耗	30 mA
输出电压	
直流额定电压	24 V

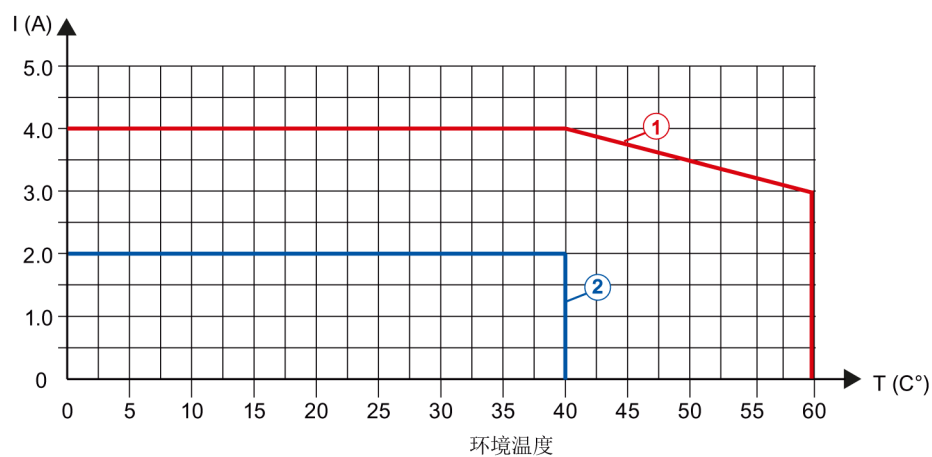
	6ES7522-1BH00-0AB0
功率	
背板总线上的功耗	1.1 W
功耗	
典型功耗	2 W
数字量输出	
数字量输出的类型	晶体管
输出数量	16
切换到 P 电位	√
数字量输出，可组态	√
短路保护	√；电子计时
• 典型响应阈值	1 A
电感关断电压的限值	L+ (-53 V)
数字量输入的控制	√
输出的转换能力	
最大阻性负载	0.5 A
最大灯负载	5 W
负载电阻范围	
下限	48 Ω
上限	12 kΩ
输出电压	
输出电压的类型	DC
信号为“1”时的最小电压	L+ (-0.8 V)
输出电流	
信号为“1”时的额定电流	0.5 A
信号为“1”时允许的最大电流范围	0.5 A
信号为“0”时残余电流的最大值	0.5 mA
输出延时，有阻性负载	
从“0”到“1”时的最长时间	100 μs
从“1”到“0”时的最长时间	500 μs

	6ES7522-1BH00-0AB0
2 个输出的并联开关	
逻辑运算	√
提高性能	-
对于负载的冗余控制	√
切换频率	
最大阻性负载	100 Hz
最大感性负载	0.5 Hz; 符合 IEC 947-5-1, DC13
最大灯负载	10 Hz
输出的总电流	
每个通道的最大电流	0.5 A; (请参见手册中的更多说明)
每个组的最大电流	4 A; (请参见手册中的更多说明)
每个模块的最大电流	8 A; (请参见手册中的更多说明)
电缆长度	
屏蔽电缆的最大长度	1000 m
未屏蔽电缆的最大长度	600 m
等时同步模式	
等时同步模式 (应用程序最多同步到终端)	√
最短执行和激活时间 (TCO)	70 μs
最短总线循环时间 (TDP)	250 μs
中断/诊断/状态信息	
可应用替换值	√
中断	
诊断中断	√
诊断报警	
诊断	√
电源电压监视	√
断路	-
短路	√
熔断器熔断	-

	6ES7522-1BH00-0AB0
诊断指示器 LED 指示灯	
RUN LED 指示灯	√; 绿色 LED 指示灯
ERROR LED 指示灯	√; 红色 LED 指示灯
电源电压监视	√; 绿色 LED 指示灯
通道状态显示	√; 绿色 LED 指示灯
通道诊断	-
模块诊断	√; 红色 LED 指示灯
电气隔离	
通道的电气隔离	
通道之间	-
通道之间, 每组个数	8
通道和背板总线之间	√
允许的电位差	
不同电路之间	75 V DC/60 V AC (基本绝缘)
绝缘	
绝缘测试	707 V DC (型式试验)
分布式模式	
优先化启动	√
尺寸	
宽	35 mm
高	147 mm
深	129 mm
重量	
约重	230 g

每组输出总电流功耗降低的额定值

下图显示了不同安装位置和环境温度下输出的负载情况。



- ① 水平安装位置
- ② 垂直安装位置

图 6-1 每组输出总电流的详细信息

尺寸图

A

在附录中提供模块在安装轨道上的尺寸图，以及带前盖的尺寸图。
应始终遵守在机柜、控制室等空间内安装时的指定尺寸。

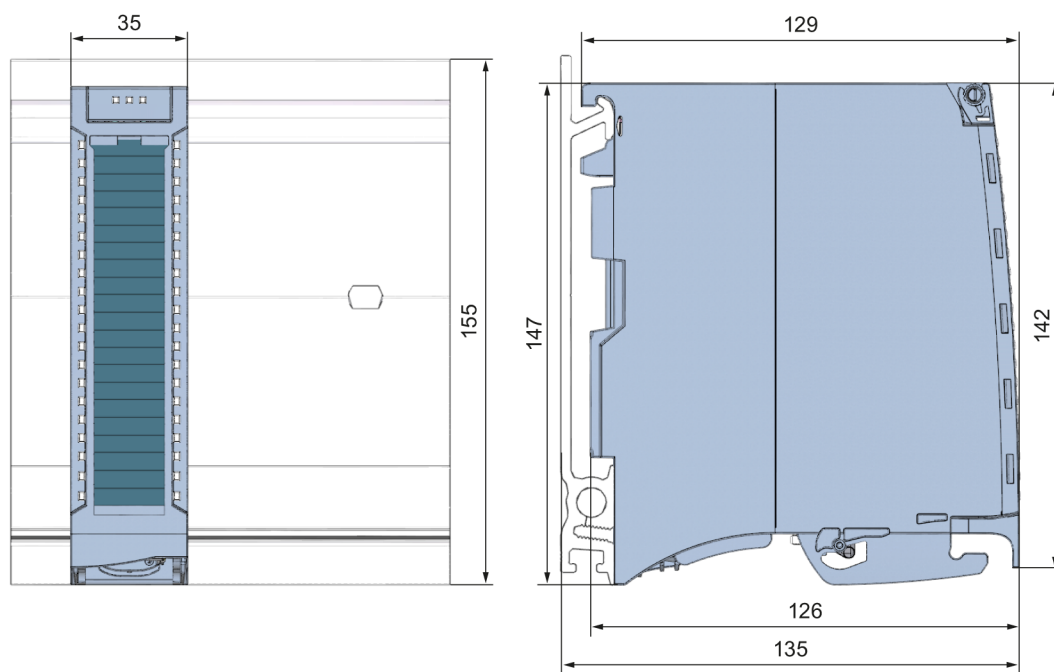


图 A-1 DQ 16x24VDC/0.5A ST 模块的尺寸图

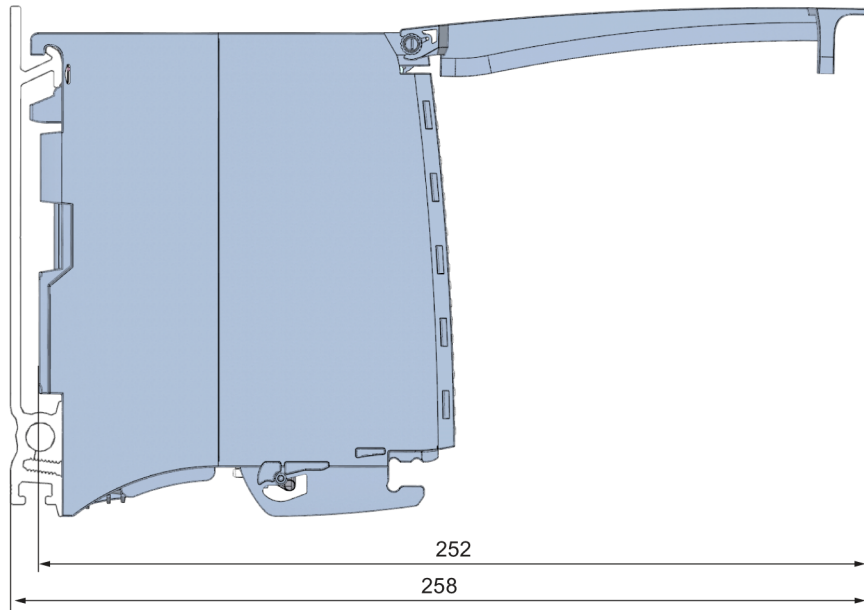


图 A-2 DQ 16x24VDC/0.5A ST 模块的尺寸图，带开放式前盖的侧视图

参数数据记录

B.1 参数分配和参数数据记录的结构

模块数据记录的结构相同，而与是否通过 PROFIBUS DP 或 PROFINET IO 组态模块无关。

GSD 文件与组态的相关性

使用 GSD 文件组态模块时，在进行“分配参数”时将采用 GSD 文件中数据。

但与该模块没有相关性。可按不同的组合形式进行参数分配。

用户程序中的参数分配

您可以选择在 RUN 模式下重新组态模块（例如，可以在 RUN 模式下更改所选通道对 CPU-STOP 状态的响应，而不影响其它通道）

RUN 模式下的参数分配

使用 WRREC 指令可通过数据记录 64 到 78 将参数传送到模块。在 CPU 中不会更改 STEP 7 中设置的参数。即，STEP 7 中设置的参数在重新启动后仍然有效。

在传送后，模块仅对参数进行真实性检查。

输出参数 STATUS

模块将忽略在 WRREC 指令传输参数期间发生的错误，并继续使用之前的参数分配进行操作。但会将相应的错误代码写入 STATUS 输出参数中。

有关 WRREC 指令的说明和错误代码，请参见 STEP 7 在线帮助。

在 PROFIBUS DP 接口模块后面操作模块

如果在 PROFIBUS DP 接口模块后面操作模块，将不回读参数数据记录 0 和 1。对于回读参数数据记录 0 和 1，可以获取诊断数据记录 0 和

1。有关详细信息，请参见 Internet

(<http://support.automation.siemens.com/WW/view/zh/78324181>) 上 PROFIBUS DP 接口模块设备手册的“中断”部分。

分配数据记录和通道

组态为 1 x 16 通道模块时，参数将位于数据记录 64 到 79 中，并进行如下分配：

- 数据记录 64 对应通道 0
- 数据记录 65 对应通道 1
- ...
- 数据记录 78 对应通道 14
- 数据记录 79 对应通道 15

组态为 2 x 8 通道模块时，该模块带有 2 个子模块而且每一个子模块带有 8 个通道。通道参数将位于数据记录 64 到 71 中，具体分配如下所示：

- 数据记录 64 到 71 对应通道 0 到 7（子模块 1）
- 数据记录 64 到 71 对应通道 8 到 15（子模块 2）

进行数据记录传输时，将寻址相应的子模块。

B.1 参数分配和参数数据记录的结构

数据记录结构

下图举例说明了数据记录 64 对应通道 0 的结构。通道 1 到 15 的结构相同。字节 0 和字节 1 中的值为固定值，不可更改。

通过将相应位设置为“1”，启用参数。

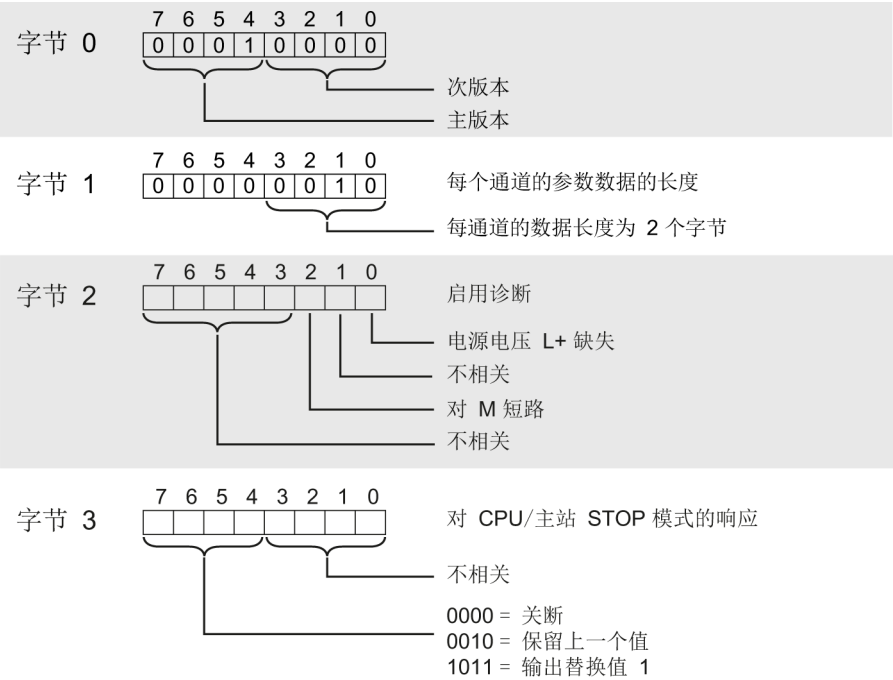


图 B-1 数据记录 64 的结构： 字节 0 到 3

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