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EQUIPMENT MANUAL

SIMATIC

S7-1500/ET 200MP

Digital output module DQ 16x230VAC/1A ST Triac
(6ES7522-5FH00-0AB0)

support.industry.siemens.com

SIMATIC

S7-1500/ET 200MP Digital output module DQ 16x230VAC/1A ST Triac (6ES7522-5FH00-0AB0)

Equipment Manual

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Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

DANGER

indicates that death or severe personal injury **will** result if proper precautions are not taken.

WARNING

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indicates that minor personal injury can result if proper precautions are not taken.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Preface

Purpose of the documentation

This manual supplements the system manual S7-1500/ET 200MP (<https://support.industry.siemens.com/cs/ww/en/view/59191792>).

Functions that relate in general to the systems are described in this system manual.

The information provided in this manual and in the system/function manuals supports you in commissioning the systems.

Changes compared to previous version

Compared to the previous version, this manual contains the following change:

The module features a switching cycle counter as of firmware version V1.2.0.

Conventions

CPU: The term "CPU" is used in this manual both for the CPUs of the S7-1500 automation system and for interface modules of the ET 200MP distributed I/O system.

STEP 7: In this documentation, "STEP 7" is used as a synonym for all versions of the configuration and programming software "STEP 7 (TIA Portal)".

Please also observe notes marked as follows:

Note

A note contains important information on the product described in the documentation, on the handling of the product or on the section of the documentation to which particular attention should be paid.

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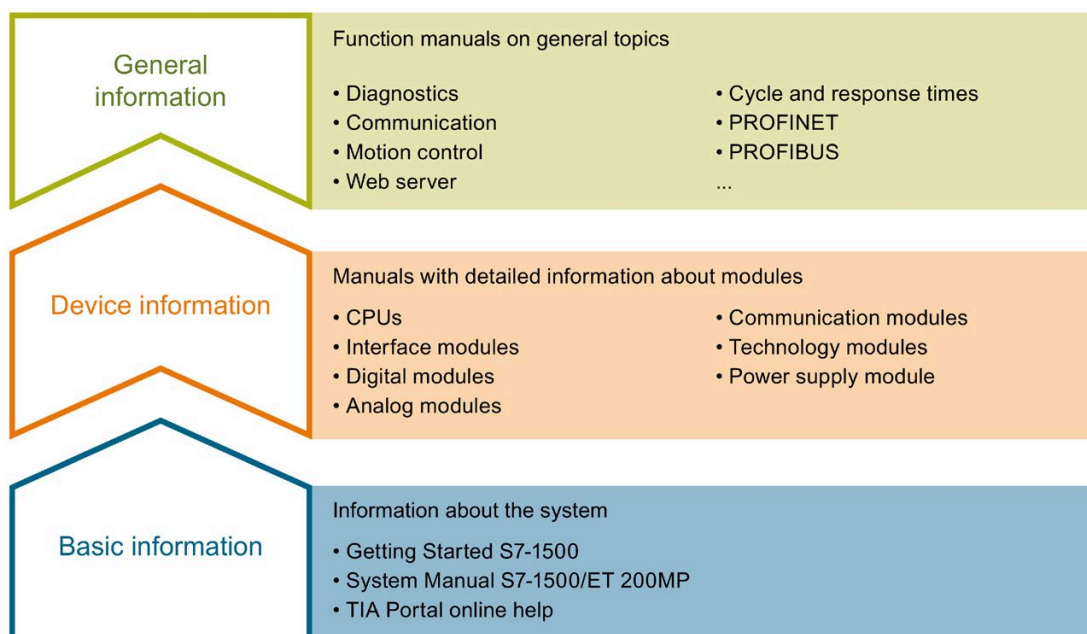
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Documentation guide

The documentation for the SIMATIC S7-1500 automation system and the SIMATIC ET 200MP distributed I/O system is arranged into three areas. This arrangement enables you to access the specific content you require.



Basic information

The System Manual and Getting Started describe in detail the configuration, installation, wiring and commissioning of the SIMATIC S7-1500 and ET 200MP systems. The STEP 7 online help supports you in the configuration and programming.

Device information

Product manuals contain a compact description of the module-specific information, such as properties, wiring diagrams, characteristics and technical specifications.

General information

The function manuals contain detailed descriptions on general topics regarding the SIMATIC S7-1500 and ET 200MP systems, e.g. diagnostics, communication, motion control, Web server, OPC UA.

You can download the documentation free of charge from the Internet (<https://support.industry.siemens.com/cs/ww/en/view/109742691>).

Changes and supplements to the manuals are documented in a Product Information.

You can download the product information free of charge from the Internet (<https://support.industry.siemens.com/cs/us/en/view/68052815>).

Manual Collection S7-1500/ET 200MP

The Manual Collection contains the complete documentation on the SIMATIC S7-1500 automation system and the ET 200MP distributed I/O system gathered together in one file.

You can find the Manual Collection on the Internet
(<https://support.industry.siemens.com/cs/ww/en/view/86140384>).

SIMATIC S7-1500 comparison list for programming languages

The comparison list contains an overview of which instructions and functions you can use for which controller families.

You can find the comparison list on the Internet
(<https://support.industry.siemens.com/cs/ww/en/view/86630375>).

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Application examples

The application examples support you with various tools and examples for solving your automation tasks. Solutions are shown in interplay with multiple components in the system - separated from the focus on individual products.

You will find the application examples on the Internet
(<https://support.industry.siemens.com/cs/ww/en/ps/ae>).

Product overview

2.1 Properties

Article number

6ES7522-5FH00-0AB0

View of the module

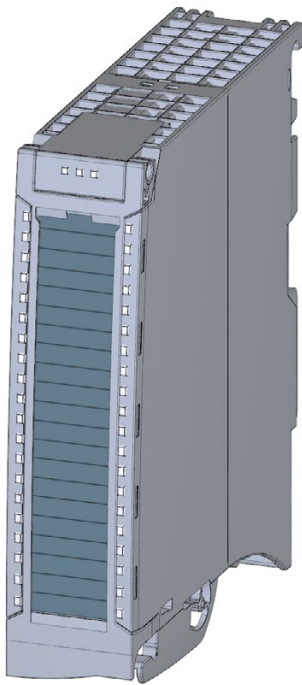


Figure 2-1 View of the DQ 16x230VAC/1A ST module

Properties

The module has the following technical properties:

- 16 digital outputs (Triac)
- Rated output voltage 120 V/230 V AC
- Rated output current 1A (per channel)
- Configurable substitute values (per channel)
- Suitable for solenoid valves, DC contactors, indicator lights and smaller single phase drives
- Switching cycle counter for connected actuators, e.g. solenoid valves

The module supports the following functions:

Table 2- 1 Version dependencies of the module functions

Function	Firmware version of the module	Configuration software	
		STEP 7 as of V13 SP1 with HSP 0119	GSD file in STEP 7, V12 or higher STEP 7 V5.5 SP3 or higher
Firmware update	V1.0.0 or higher	X	--- / X
Identification data I&M0 to I&M3	V1.0.0 or higher	X	--- / X
Parameter assignment in RUN	V1.0.0 or higher	X	X
Module-internal Shared Output (MSO)	V1.0.0 or higher	X (PROFINET IO only)	X (PROFINET IO only)
Configurable submodules/submodules for shared device	V1.0.0 or higher	X (PROFINET IO only)	X (PROFINET IO only)
Switching cycle counter	V1.2.0 or higher	V16, Update 4 or higher with HSP 0343 or V17 or higher with HSP 0343 (PROFINET IO only, central operation with a S7-1500 CPU is supported)	X (PROFINET IO only)

You can configure the module with STEP 7 (TIA Portal) and with a GSD file.

Accessories

The following components are supplied with the module and can also be ordered separately as spare parts:

- Labeling strips
- U connector
- Universal front door

Other components

The following component can be ordered separately:

Front connectors, including potential jumpers and cable ties

For more information on accessories, refer to the S7-1500, ET 200MP system manual (<https://support.industry.siemens.com/cs/ww/en/view/59191792>).

2.2 Functions

2.2.1 Switching cycle counter

The function records the number of switching cycles of the output and thus the switching cycles of a connected actuator, such as those of solenoid valves. When the specified number of switching cycles is reached, the "Limit value warning" maintenance interrupt is triggered, provided it is configured and enabled. When replacing the actuator, you can reset the switching cycle counter from the user program.

When replacing modules, you have the option of pre-initializing the switching cycle counter from the user program.

Typical areas of application:

- Recording the number of switching cycles of the connected devices, e.g. solenoid valves or load contactors
- Predictive maintenance

Advantages

- You configure this function instead of programming.
- "Monitoring" of each individual channel is possible. You can select which outputs are "monitored".
- You can adapt the plant configuration flexibly and individually.
- Easy to service and maintain. You can enable and disable the switching cycle counter via the user program.
- Increase in plant availability. You can schedule actuator replacement in advance for the next maintenance cycle.

Requirement

Firmware version as of V1.2.0 of the module.

Configuration

You configure the switching cycle counter with the following parameters:

- Switching cycle counter enabled/disabled
- Trigger maintenance interrupt when the limit is reached
- Set limit for maintenance alarm

Principle of operation

The module counts the switching cycles by evaluating the rising edges of an output signal. If the module detects a rising edge, the switching cycle counter (24-bit) for the respective channel is incremented. After an overflow of the switching cycle counter, it starts again with 0.

If you activate the "Maintenance switching cycles" parameter, the "Limit warning" of the maintenance interrupt is triggered when the limit is exceeded. Alternatively, activate the maintenance alarm in the parameter data records starting at DS 64.

The current counter states are stored on the module cyclically (approx. every 20 seconds) and retentively. The switching cycle counters are reset each time the module is restarted (power off/on).

You activate the function with the "Switching cycle counter" parameter or in the parameter data sets starting at DS 64.

You can read the current counter states with data set DS 129. Data set DS 129 contains the counter status for each channel in UDINT format.

You can read the limits for each channel in UDINT format with data set DS 130.

Data set DS 131 enables you to overwrite the current counter value for each switching cycle counter.

You can set a limit for each switching cycle counter with the "Switching cycle limit" parameter or with data set DS 131.

This section contains the block diagram of the module and outlines various wiring options. You can find information on wiring the front connector, creating a cable shield, etc. in the Wiring section of the S7-1500, ET 200MP system manual (<https://support.industry.siemens.com/cs/ww/en/view/59191792>).

Note

Do not insert the potential jumpers included with the front connector!

Wiring and block diagram

The example in the following figure shows the terminal assignment and the assignment of the channels. The individual channels are connected with a TRIAC (Triode for Alternating Current).

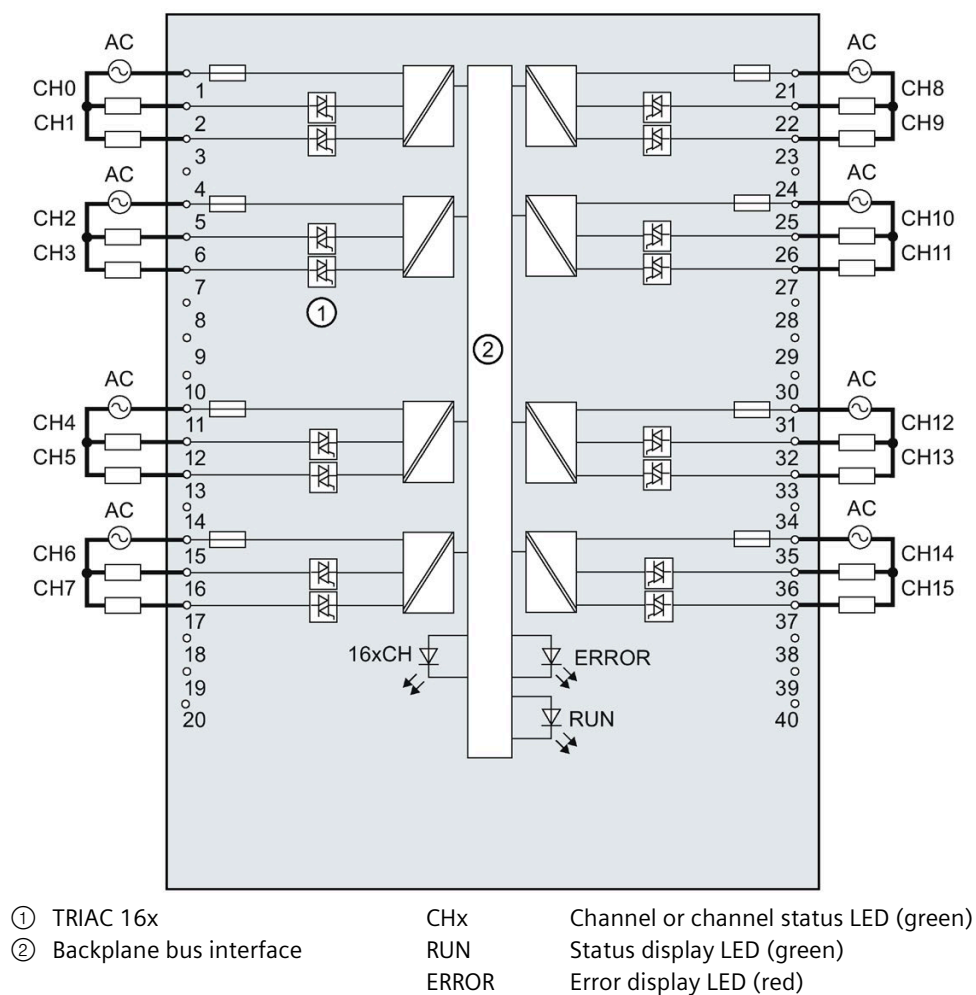


Figure 3-1 Block diagram and terminal assignment

Parameters/address space

4.1 Parameters

DQ 16x230VAC/1A ST parameters

When you assign the module parameters in STEP 7, you use various parameters to specify the module properties. The following table lists the configurable parameters. The effective range of the configurable parameters depends on the type of configuration. The following configurations are possible:

- Central operation with a S7-1500 CPU
- Distributed operation on PROFINET IO in an ET 200MP system
- Distributed operation on PROFIBUS DP in an ET 200MP system

For parameter assignment in the user program, the parameters are transferred to the module using the WRREC instruction (parameter reassignment in RUN) and data records; see chapter Parameter assignment and structure of the parameter data records (Page 29).

Table 4- 1 Configurable parameters and their defaults

Parameter	Range of values	Default	Parameter as- signment in RUN	Scope with configuration software, e.g., STEP 7 (TIA Portal)	
				Integrated in the hardware catalog STEP 7 or GSD file PROFINET IO	GSD file PROFIBUS DP
Diagnostics					
• Switching cycle counter maintenance	Yes/No	No	Yes	Channel (V16, Update 4 or higher)	---
Output parameters					
• Reaction to CPU STOP	• Turn off • Keep last value • Output substi- tute value 1	Turn off	Yes	Channel	Channel
• Switching cycle counter	Yes/No	No	Yes	Channel (V16, Update 4 or higher)	---
• Switching cycle counter limit	0 ... 16777214	0	Yes	Channel (V16, Update 4 or higher)	---

4.2 Declaration of parameters

Switching cycle counter maintenance

You use this parameter to enable the maintenance alarm "Limit value warning" when the switching cycle counter limit is violated.

You configure the limit with the parameter "Switching cycle limit" for each channel CHx.

Reaction to CPU STOP

Determines the reaction of the output to the CPU going into STOP state or when the connection to the CPU is interrupted.

Switching cycle counter

Channel-by-channel enable of switching cycle counter (Page 10).

Switching cycle counter limit

Defines the limit channel-by-channel. If this value is exceeded, the "Limit value warning" maintenance interrupt is signaled.

Enter an integer value between 0 and 16777214. Refer to the data sheet of the connected actuator. Recommendation: Instead of entering the maximum value, set the value, e.g., to 80% or 90% of the maximum value. You then have enough time to preventatively change the actuator.

4.3 Address space

The module can be configured differently in STEP 7; see following table. Depending on the configuration, additional/different addresses are assigned in the process image output/input.

Configuration options of DQ 16x230VAC/1A ST

You can configure the module with STEP 7 or with a GSD file.

When you configure the module by means of the GSD file, the configurations are available under different short designations/module names.

The following configurations are possible:

Table 4-2 Configuration options

Configuration	Short designation/module name in the GSD file	Configuration software, e.g., STEP 7	
		Integrated in hardware catalog STEP 7 V13, SP1 or higher with HSP 0119	GSD file in STEP 7 V12 or higher or STEP 7 V5.5 SP3 or higher
1 x 16-channel without value status	DQ 16x230VAC/1A ST	X	X
2 x 8-channel without value status	DQ 16x230VAC/1A ST S	X (PROFINET IO only)	X (PROFINET IO only)
1 x 16-channel with value status for module-internal Shared Output with up to 4 submodules	DQ 16x230VAC/1A ST MSO	X (PROFINET IO only)	X (PROFINET IO only)

Value status (Quality Information, QI)

The value status is always activated for the DQ 16x230VAC/1A ST MSO.

An additional bit is assigned to each channel for the value status. The bit for the value status indicates if the output value specified by the user program is actually pending at the module terminal (0 = value is incorrect).

Address space for configuration as 16-channel DQ 16x230VAC/1A ST

The figure below shows the address space allocation for the configuration as 16-channel module. You can freely assign the start address for the module. The addresses of the channels are derived from the start address.

The letters "a to b" are printed on the module; "QB a", for example, stands for module start address output byte a.

Assignment in the process image output (PIQ)

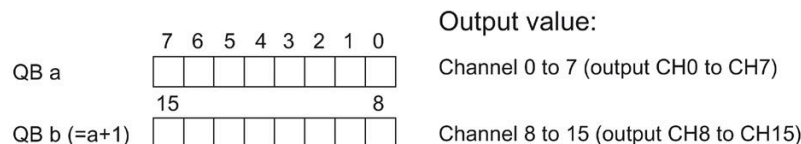


Figure 4-1 Address space for configuration as 16-channel DQ 16x230VAC/1A ST

Address space for configuration as 2 x 8-channel DQ 16x230VAC/1A ST S

For the configuration as a 2 x 8-channel module, the channels of the module are divided into two submodules. The submodules can be assigned to different IO controllers when the module is used in a shared device.

The number of I/O controllers depends on the interface module being used. Please observe the information in the manual for the particular interface module.

Unlike the 1 x 16-channel module configuration, each of the two submodules has a freely assignable start address.

Assignment in the process image output (PIQ)

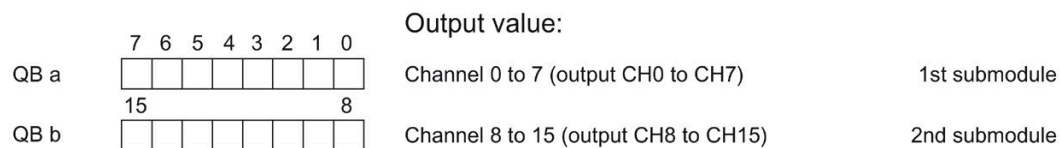


Figure 4-2 Address space for configuration as 2 x 8-channel DQ 16x230VAC/1A ST S

Note

Substitute value behavior in shared device operation with 2 x 8-channel configuration

If the system is in shared device mode and one of the associated IO controllers goes into STOP or fails due to, for example, a communication failure, all submodules of the output module follow the configured substitute value behavior (e.g. switch off).

This means that even when only one IO controller fails, the other IO controllers associated with the shared device no longer control the assigned submodule of the output module.

Address space for configuration as 1 x 16-channel DQ 16x230VAC/1A ST MSO

For the configuration as a 1 x 16-channel module (module-internal Shared Output, MSO), channels 0 to 15 of the module are copied to multiple submodules. Channels 0 to 15 are then available with identical values in various submodules. These submodules can be assigned to up to four IO controllers when the module is used in a shared device:

- The IO controller to which submodule 1 is assigned has write access to outputs 0 to 15.
- The IO controllers to which submodule 2, 3, or 4 is assigned have read access to outputs 0 to 15.

The number of IO controllers depends on the interface module being used. Please observe the information in the manual for the particular interface module.

Value status (Quality Information, QI)

The meaning of the value status depends on the submodule involved.

For the first submodule (=basic submodule), the value status 0 indicates that the value is incorrect or that the IO controller of the basic submodule is in STOP state.

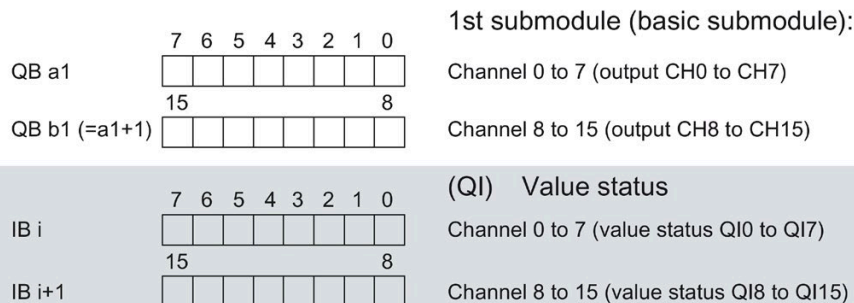
For the 2nd to 4th submodule (=MSO submodule), the value status 0 indicates that the value is incorrect or one of the following errors has occurred:

- The basic submodule is not yet configured (not ready).
- The connection between the IO controller and the basic submodule has been interrupted.
- The IO controller of the basic submodule is in STOP or POWER OFF state.

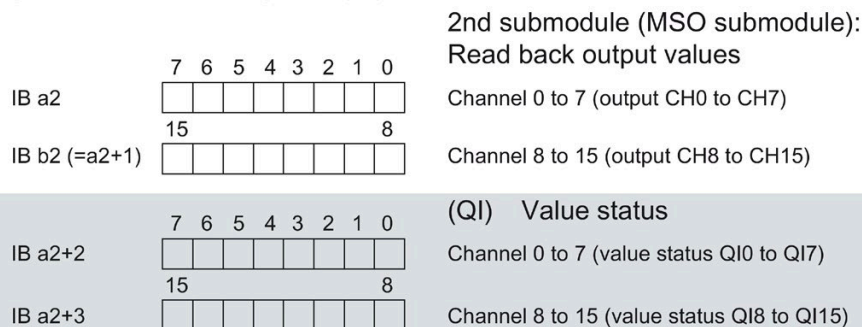
4.3 Address space

The following figure shows the assignment of the address space for submodules 1 and 2 and the value status.

Assignment in the process image output (PIQ) for 1st submodule



Assignment in the process image input (PII) for 2nd submodule

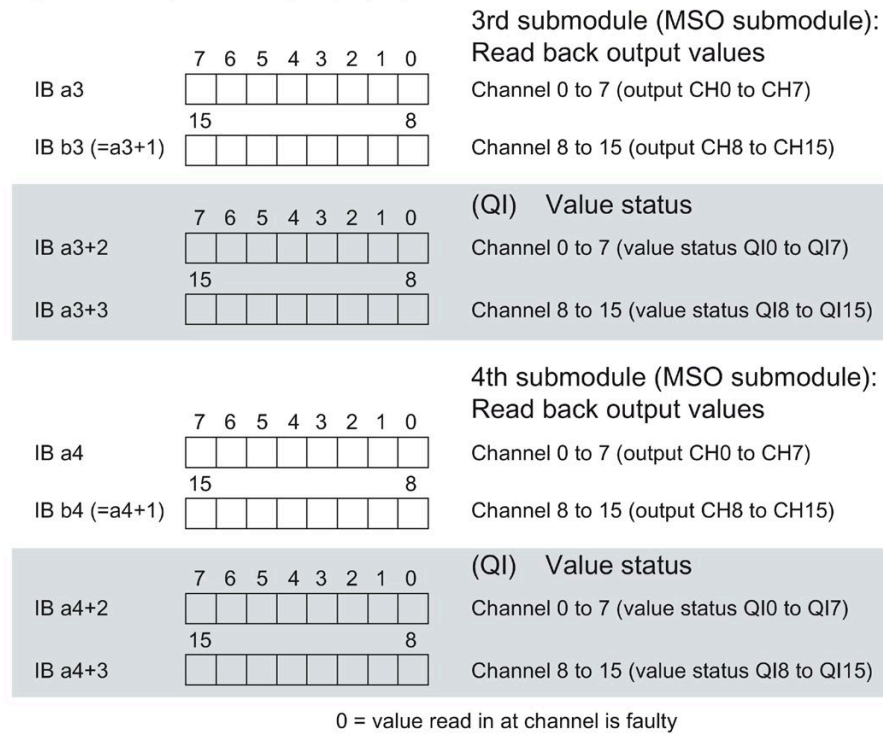


0 = value read in at channel is faulty

Figure 4-3 Address space for configuration as 1 x 16-channel DQ 16x230VAC/1A ST MSO with value status

The figure below shows the assignment of the address space for submodules 3 and 4 and the value status.

Assignment in the process image input (PII) for 3rd and 4th submodule



0 = value read in at channel is faulty

Figure 4-4 Address space for configuration as 1 x 16-channel DQ 16x230VAC/1A ST MSO with value status

Reference

You can find information on the module-internal shared input/shared output (MSI/MSO) function in the section Module-internal shared input/shared output (MSI/MSO) of the Function Manual PROFINET

(<https://support.industry.siemens.com/cs/ww/en/view/49948856>).

Diagnostic alarms

5.1 Status and error displays

LED displays

The figure below shows the LED displays (status and error displays) of DQ 16x230VAC/1A ST.

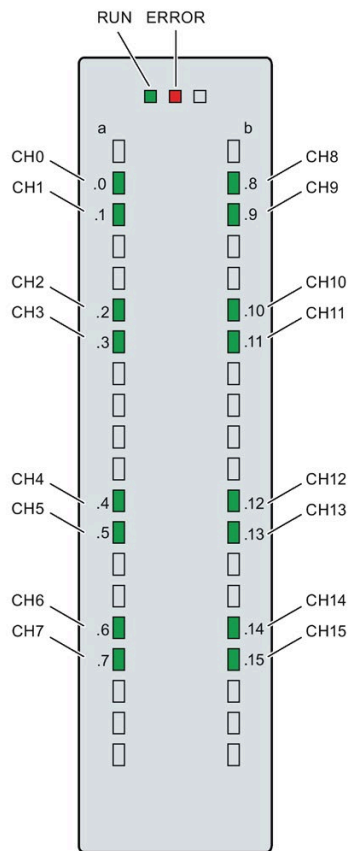


Figure 5-1 LED displays of the module DQ 16x230VAC/1A ST

Meaning of the LED displays

The following table explains the meaning of the status and error displays.

RUN and ERROR LED

Table 5- 1 RUN and ERROR status and error displays

LED		Meaning	Solution
RUN	ERROR		
 Off	 Off	Voltage missing or too low at backplane bus	- Switch on the CPU and/or the system power supply modules. - Verify that the U connectors are inserted. - Check whether too many modules are inserted.
 Flashes	 Off	The module starts and flashes until the valid parameter assignment is set.	---
 On	 Off	Module parameters assigned	
 Flashes	 Flashes	Hardware defective	Replace the module.

CHx LED

Table 5- 2 CHx status display

LED CHx	Meaning	Solution
 Off	0 = Status of the output signal	---
 On	1 = Status of the output signal	---

5.2 Diagnostics alarms

Diagnostics alarms

A diagnostics alarm is generated and the ERROR LED flashes on the module for each diagnostics event. The diagnostics alarms can be read out in the diagnostics buffer of the CPU, for example. You can evaluate the error codes with the user program.

Table 5- 3 Diagnostics alarms, their meaning and corrective measures

Diagnostics alarm	Error code	Meaning	Corrective measures
Limit value warning	17 _H	The configured limit for switching cycles has been exceeded.	• Replace actuator as a precautionary measure • Reset counter with DS131

Technical specifications

Technical specifications of the DQ 16x230VAC/1A ST

The following table shows the technical specifications as of 12/2021. You can find a data sheet including daily updated technical specifications on the Internet (<https://support.industry.siemens.com/cs/ww/en/pv/6ES7522-5FH00-0AB0/td?dl=en>).

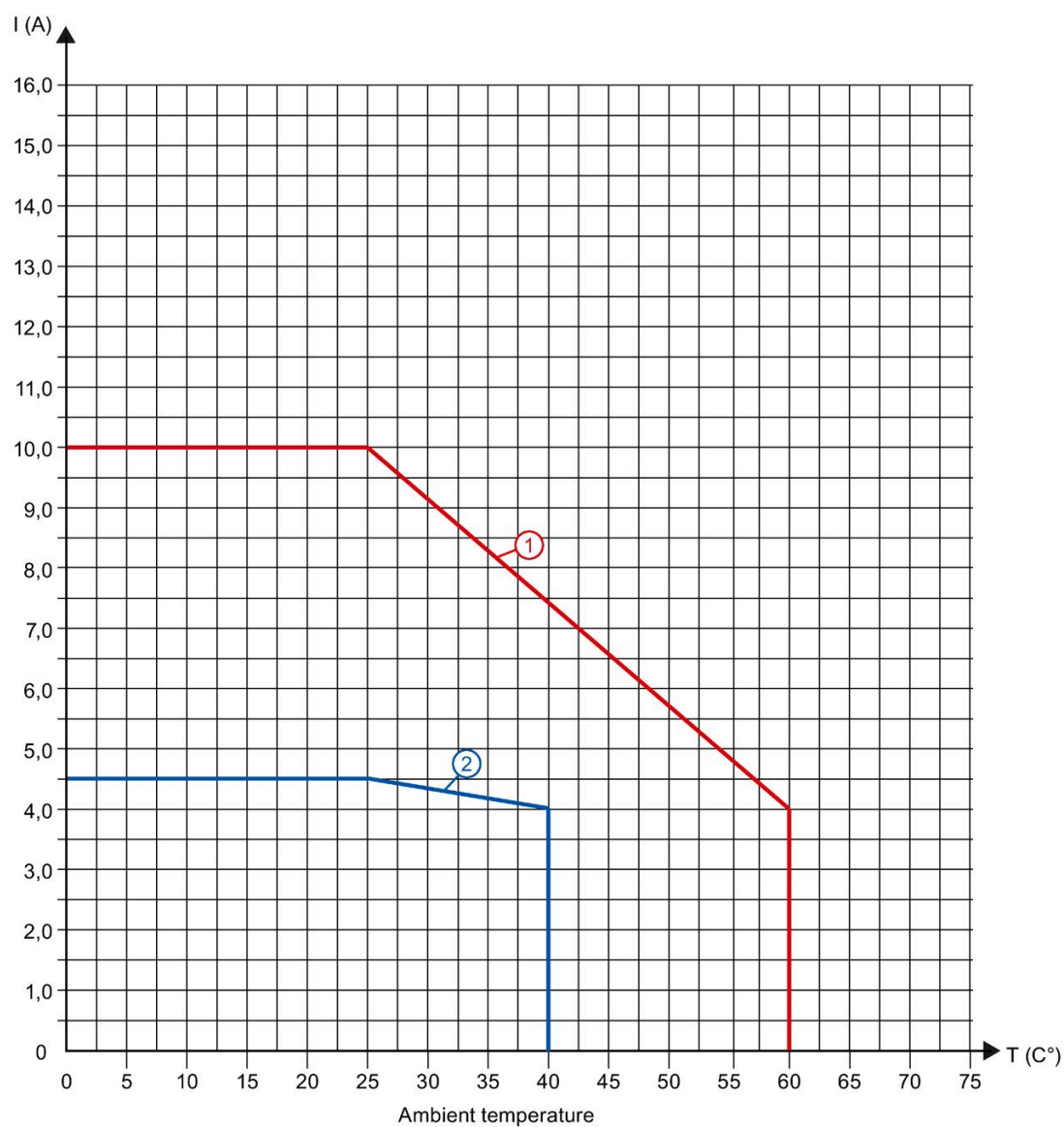
Article number	6ES7522-5FH00-0AB0
General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	From FS01
Firmware version	
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Prioritized startup	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
• STEP 7 configurable/integrated from version	V5.5 SP3 / -
• PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
• PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	Yes
• Integrated operating cycle counter	Yes
output voltage / header	
Rated value (AC)	230 V; 120/230 V AC, 50/60 Hz
Power	
Power available from the backplane bus	1.2 W
Power loss	
Power loss, typ.	11.1 W

Article number	6ES7522-5FH00-0AB0
Digital outputs	
Type of digital output	Triac
Number of digital outputs	16
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
• built-in fuse	6.3 A melting fuse, slow-blow
Size of motor starters according to NEMA, max.	4
Switching capacity of the outputs	
• with resistive load, max.	1 A
• on lamp load, max.	50 W
Output voltage	
• for signal "1", min.	L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current
Output current	
• for signal "1" rated value	1 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	15 A; max. 1 AC cycle
• for signal "0" residual current, max.	2 mA
Output delay with resistive load	
• "0" to "1", max.	1 AC cycle
• "1" to "0", max.	1 AC cycle
Parallel switching of two outputs	
• for logic links	No
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	1 Hz
Total current of the outputs	
• Current per channel, max.	1 A; see additional description in the manual
• Current per group, max.	2 A; see additional description in the manual
• Current per module, max.	10 A; see additional description in the manual
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m

Article number	6ES7522-5FH00-0AB0
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	No
• Maintenance interrupt	Yes
Diagnoses	
• Monitoring the supply voltage	No
• Wire-break	No
• Short-circuit	No
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• Monitoring of the supply voltage (PWR-LED)	No
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; red LED
Potential separation	
Potential separation channels	
• between the channels	No
• between the channels, in groups of	2
• between the channels and backplane bus	Yes
Permissible potential difference	
between different circuits	250 V AC between the channels and the backplane bus; 500 V AC between the channels
Isolation	
Isolation tested with	3 100 V DC
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	310 g

Power reduction (derating) to aggregate current of outputs (per module)

The following graphs show the loading capacity of the outputs in relation to the mounting position of the S71500 automation system/ET 200MP distributed I/O system and the ambient temperature.



- ① Horizontal mounting of the system
- ② Vertical mounting of the system

Figure 6-1 Details on aggregate current of outputs (per module)

Dimensional drawing

The dimension drawing of the module on the mounting rail, as well as a dimension drawing with open front cover, are provided in the appendix. Always observe the specified dimensions for installation in cabinets, control rooms, etc.

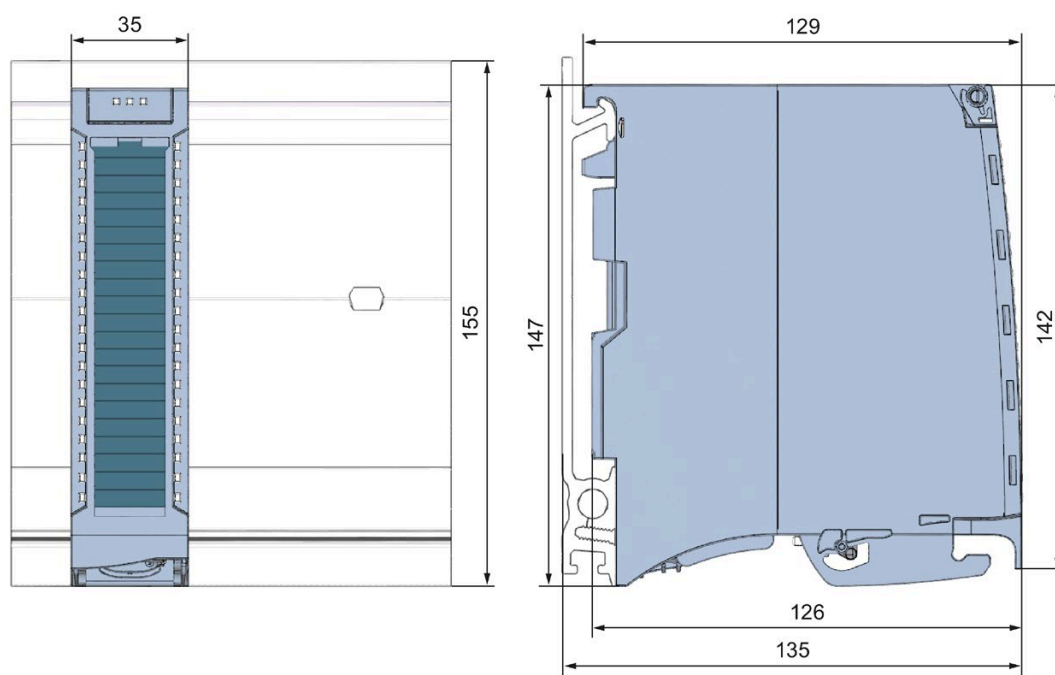


Figure A-1 Dimension drawing of the DQ 16x230VAC/1A ST module

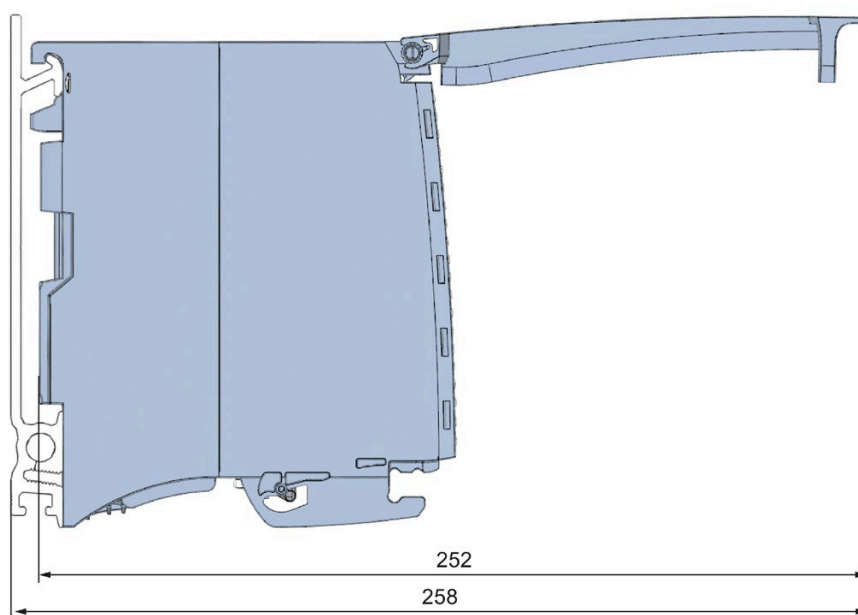


Figure A-2 Dimension drawing of the DQ 16x230VAC/1A ST module, side view with open front cover

Parameter data records

B.1 Parameter assignment and structure of the parameter data records

The data records of the module have an identical structure, regardless of whether you configure the module with PROFIBUS DP or PROFINET IO.

Dependencies for configuration with GSD file

When a GSD file is used to configure a module, dependencies can arise when "assigning the parameters".

There are no dependencies for this module. You can assign the individual parameters in any combination.

Parameter assignment in the user program

You have the option to reconfigure the module in RUN (e.g. the response of selected channels to the CPU STOP state can be changed in RUN without having an effect on the other channels).

Changing parameters in RUN

The WRREC instruction is used to transfer the parameters to the module using data records 64 to 79. The parameters set in STEP 7 are not changed in the CPU, which means the parameters set in STEP 7 are valid again after a restart.

The parameters are only checked for plausibility by the module after the transfer.

STATUS output parameter

The module ignores errors that occurred during the transfer of parameters with the WRREC instruction and continues operation with the previous parameter assignment. However, a corresponding error code is written to the STATUS output parameter.

The description of the WRREC instruction and the error codes is available in the STEP 7 online help.

Operation of the module behind a PROFIBUS DP interface module

If the module is operated behind a PROFIBUS DP interface module, the parameter data records 0 and 1 are not read back. You obtain the diagnostics data records 0 and 1 with the read back parameter data records 0 and 1. You can find more information in the Interrupts section of the manual for the PROFIBUS DP interface module in the Internet (<http://support.automation.siemens.com/WW/view/en/78324181>).

Assignment of data record and channel

For the configuration as a 1 x 16-channel module, the parameters are located in data records 64 to 79 and are assigned as follows:

- Data record 64 for channel 0
- Data record 65 for channel 1
- ...
- Data record 78 for channel 14
- Data record 79 for channel 15

For the configuration as a 2 x 8-channel module, the module has 2 submodules with eight channels each. The parameters for the channels are located in data records 64 to 71 and are assigned as follows:

- Data records 64 to 71 for channels 0 to 7 (submodule 1)
- Data records 64 to 71 for channels 8 to 15 (submodule 2)

Address the respective submodule for data record transfer.

Assignment of data records for the switching cycle counter

The parameters for the switching cycle counter are located in the data records 129 to 131 and are assigned as follows:

- Data record 129 for channels 0 to 15 to read the counter values
- Data record 130 for channels 0 to 15 to read the limit values
- Data record 131 for channels 0 to 15 to specify the limit values for the counters and to overwrite the current counter values

Structure of data sets 64 to 79

The figure below shows the structure of data set 64 for channel 0 as an example. The structure is identical for channels 1 to 15. The values in byte 0 and byte 1 are fixed and may not be changed.

Enable a parameter by setting the corresponding bit to "1".

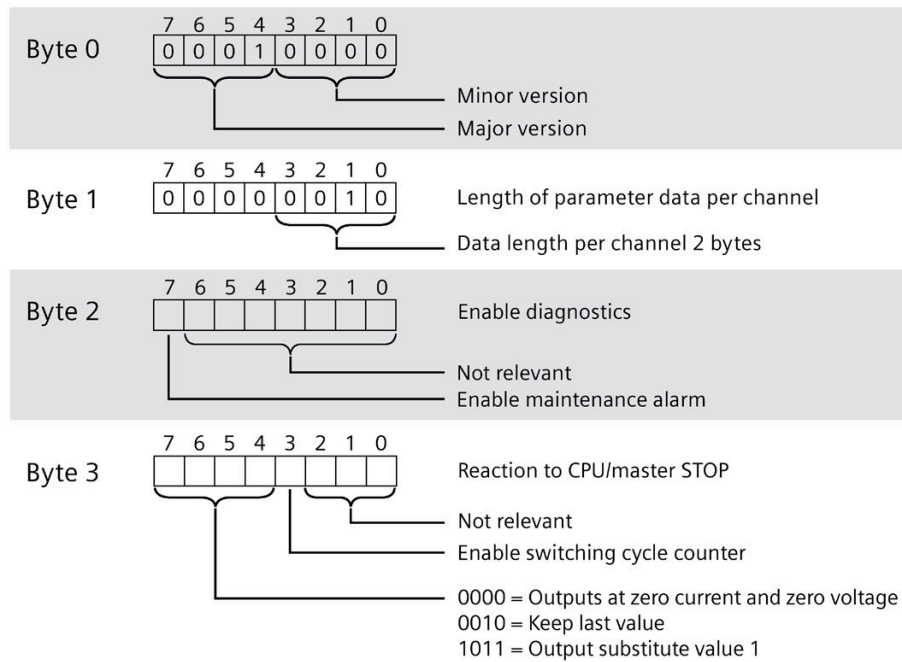


Figure B-1 Structure of data record 64: Bytes 0 to 3

Structure of data set 129

You can read the current states of the switching cycle counters with data set 129. The counter status is supplied for each channel in UDINT format.

The following figure shows you the structure of data set 129.

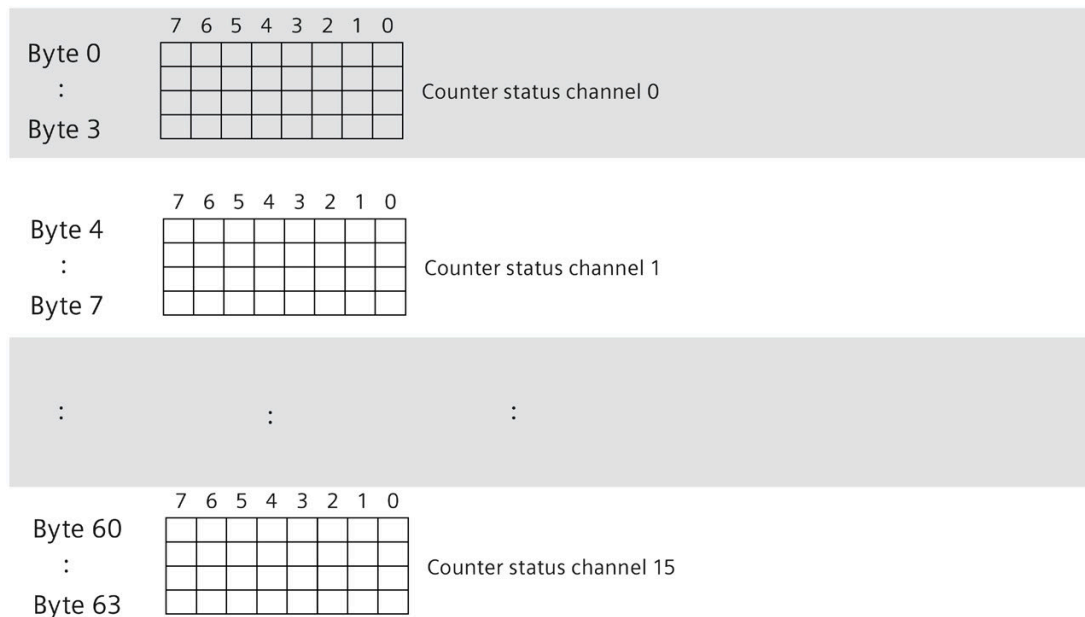


Figure B-2 Structure of data set 129: Byte 0 to 63

Structure of data set 130

The limits of the switching cycle counters are read out with data set 130. The set value is supplied for each channel in UDINT format.

The following figure shows you the structure of data set 130.

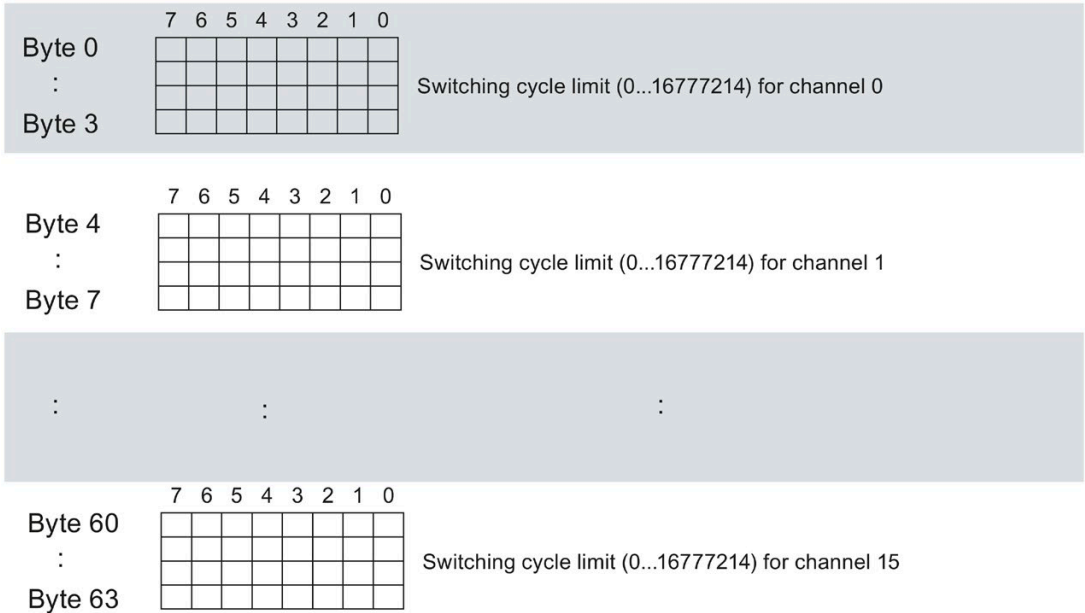


Figure B-3 Structure of data set 130: Byte 0 to 63

Structure of data set 131

The following figure shows you the structure of data set 131.

Enable a parameter by setting the corresponding bit to "1".

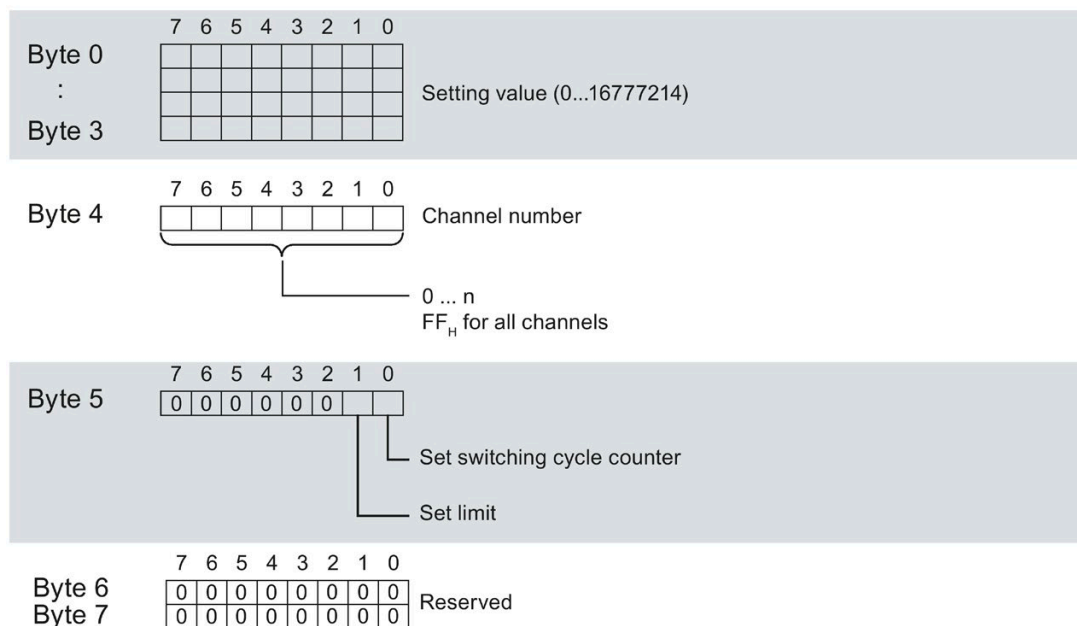


Figure B-4 Structure of data set 131: Bytes 0 to 7