

AMIKON TECHNICAL DOCUMENTATION

Installation Instructions

Siemens 6ES7132-6BF01-0BA0

Eight Channel Standard Digital Output

OUTPUTS	LOAD	CHANNEL	BASEUNIT
8 DQ	24 V DC	0.5 A	A0 / CC02

For qualified personnel only. Isolate the equipment and follow the complete manufacturer and site safety procedures. This reference does not replace the approved project design or the full installation manual.

01

PREPARATION AND WIRING CHECKS

- Use a type A0 BaseUnit and the exact CC02 terminal assignment.
- Start the module's load group with a light-colored BaseUnit.
- Select the documented AUX or potential-distributor arrangement for three-wire connections.
- Account for possible L+ backfeed through a cross-circuit at an output.
- Keep each output at or below 0.5 A and the module total at or below 4 A.
- Apply the current hardware's inductive-load limits; the 2025 datasheet specifies 0.1 Hz unless its referenced newer manual supports a higher value.
- Check configured substitute values and CPU STOP behavior before commissioning.

02

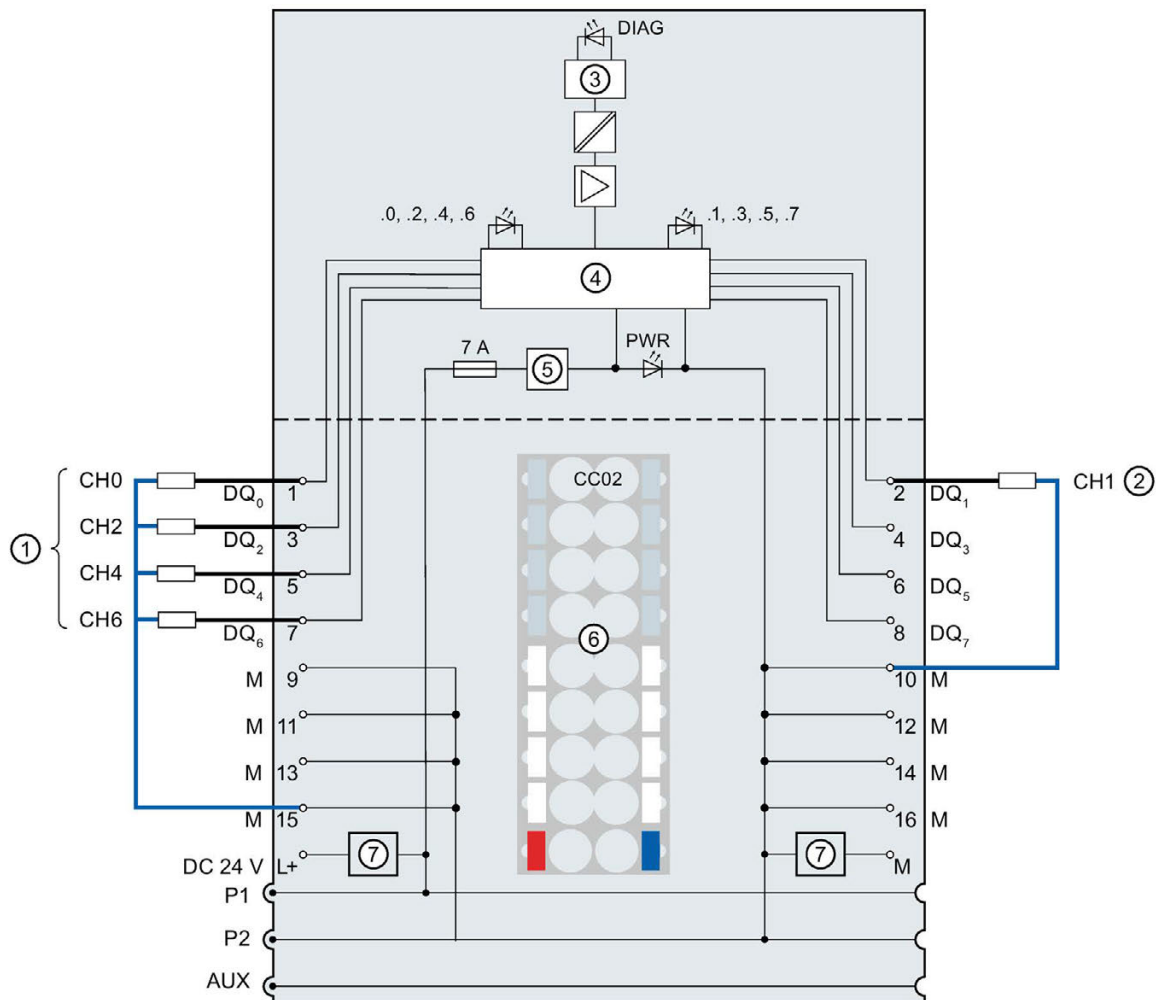
ORIGINAL WIRING REFERENCE

Original source PDF pages 14, 3, 13, 15, 16, 17. The following pages retain the original Siemens drawings and printed page numbers.

Siemens original documentation and product reference
Rating reference: exact-model Siemens data sheet (source copy)

Wiring: 1 and 2-wire connection of actuators

The following figure shows an example of the terminal assignment of the digital output module DQ 8x24VDC/0.5A ST on the BaseUnit BU type A0 without AUX terminals (1-wire and 2-wire connection).



①	1-wire connection	24 V DC	Supply voltage L+ (infeed for light-colored BaseUnit only)
②	2-wire connection	M	Ground
③	Backplane bus interface	P1, P2, AUX	Internal self-assembling voltage buses Connection to left (dark-colored BaseUnit) Connection to left interrupted (light-colored BaseUnit)
④	Output electronics	DQ _n	Output signal, channel n
⑤	Polarity reversal protection	DIAG	Error or diagnostics LED (green, red)
⑥	Color-coded label with color code CC02 (optional)	.0 to .7	Channel status LED (green)
⑦	Filter connection supply voltage (only when light-colored BaseUnit is present)	PWR	Power LED (green)

Legal information

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

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

CAUTION

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

NOTICE

indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

WARNING

Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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Disclaimer of Liability

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.

Wiring up

3.1 Wiring and block diagram

This section includes the block diagram of the DQ 8x24VDC/0.5A ST module with the terminal assignments for a 1-wire, 2-wire and 3-wire connection.

You can use and combine the different wiring options for all channels.

You can find information on wiring the BaseUnit in the system manual Distributed I/O System ET 200SP (<http://support.automation.siemens.com/WW/view/en/58649293>).

Note

The load group of the module must begin with a light-colored BaseUnit. Keep this in mind also during the configuration.

Note**Cross circuit at output**

Be aware that voltage from a cross-circuit at the output can feed L+ to modules.

Figure 3-1 Block diagram and terminal assignment for 1- and 2-wire connection of actuators

Wiring: 3-wire connection of actuators

The following figure shows an example of the terminal assignment of the digital output module DQ 8x24VDC/0.5A ST on the BaseUnit BU type A0 with AUX terminals (3-wire connection).

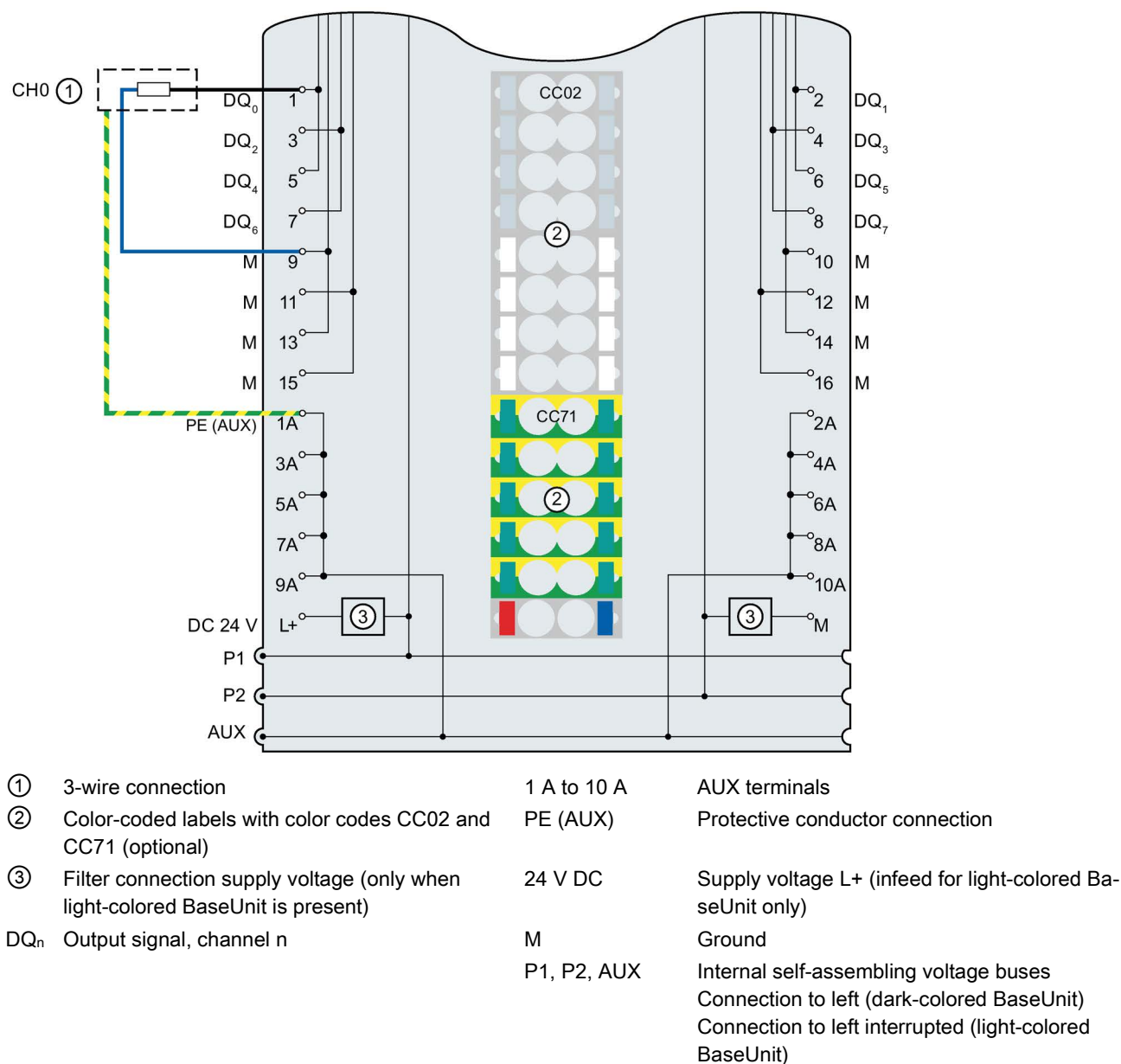


Figure 3-2 Terminal assignment for 3-wire connection of actuators

Parameters/address space

4.1 Parameters

Parameters for DQ 8x24VDC/0.5A ST

Specify the module properties with the various parameters in the course of your STEP 7 configuration. The following table lists the configurable parameters. The effective range of the parameters depends on the type of configuration.

The following configurations are possible:

- Central operation with an ET 200SP CPU
- Distributed operation on PROFINET IO in an ET 200SP system
- Distributed operation with PROFIBUS DP in an ET 200SP system

When assigning parameters in the user program, use the "WRREC" instruction to transfer the parameters to the module by means of data records, see section Parameter assignment and structure of parameter data record (Page 28).

The following parameter settings are possible:

Table 4- 1 Settable parameters and their defaults (GSD file)

Parameters	Value range	Default	Configura- tion in RUN	Scope with configuration software, e.g. STEP 7 (TIA Portal)	
				GSD file PROFINET IO	GSD file PROFIBUS DP ¹
Diagnostics No supply voltage L+	• Disable • Enable	Disable	yes	Module	Module
Diagnostics Short-circuit to ground	• Disable • Enable	Disable	yes	Module	Module
Diagnostics Short-circuit to L+	• Disable • Enable	Disable	yes	Module	Module
Diagnostics Wire break	• Disable • Enable	Disable	yes	Module	Module
Channel activated	• Disable • Enable	Enable	yes	Channel	Channel

4.1 Parameters

Parameters	Value range	Default	Configura- tion in RUN	Scope with configuration software, e.g. STEP 7 (TIA Portal)	
				GSD file PROFINET IO	GSD file PROFIBUS DP ¹
Reaction to CPU STOP	- Turn off - Keep last value - Output substitute value 1	Turn off	yes	Channel	Module
Potential group	- Use potential group of the left module (module plugged into a dark-colored BaseUnit) - Enable new potential group (module plugged in- to light-colored BaseUnit)	Use potential group of the left module	no	Module	Module

¹ Due to the limited number of parameters of a maximum of 244 bytes per ET 200SP station with a PROFIBUS GSD configuration, the parameter assignment options are restricted. The parameter length of the I/O module is 4 bytes with PROFIBUS GSD configuration. If necessary, you can set this parameter by using the data record 128, see the appendix "Parameter data record".

Note

If both parameters "Diagnostics: short-circuit to L+" and "Diagnostics: wire break" are enabled and one of these diagnostic events occurs, the affected channel is switched off to avoid triggering an undefined load and the corresponding diagnostic alarm.

If both parameters "Diagnostics: short-circuit to L+" and "Diagnostics: wire break" are enabled and one of these diagnostic events occurs, the affected channel is switched off to avoid triggering an undefined load and the corresponding diagnostic alarm.

If the parameter "Diagnostics: short-circuit to L+" is enabled and "Diagnostics: wire break" is disabled, the signal status is retained at the affected channel when "Diagnostics: short-circuit to L+" occurs. A diagnostic alarm is triggered only for 0 signal.