

AMIKON TECHNICAL DOCUMENTATION

Installation Instructions

Siemens 6ES7132-6BF01-0AA0

ET 200SP Basic Output Module

OUTPUTS	RATING	BASEUNIT	CLASS
8 PNP	24 V / 0.5 A	A0 / CC02	Basic

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 an A0 BaseUnit with the appropriate CC02 terminal assignment and AUX arrangement.
- Begin each load group with a light-colored BaseUnit and configure its potential group correctly.
- Check for output cross-circuits that can backfeed voltage to L+.
- Keep each channel within 0.5 A and the module within 4 A; do not parallel outputs for uprating.
- Validate channel activation, CPU-stop behavior and supply-voltage diagnostics before service.
- This is not a safety output; any safety-related shutdown arrangement requires the complete approved design.

02

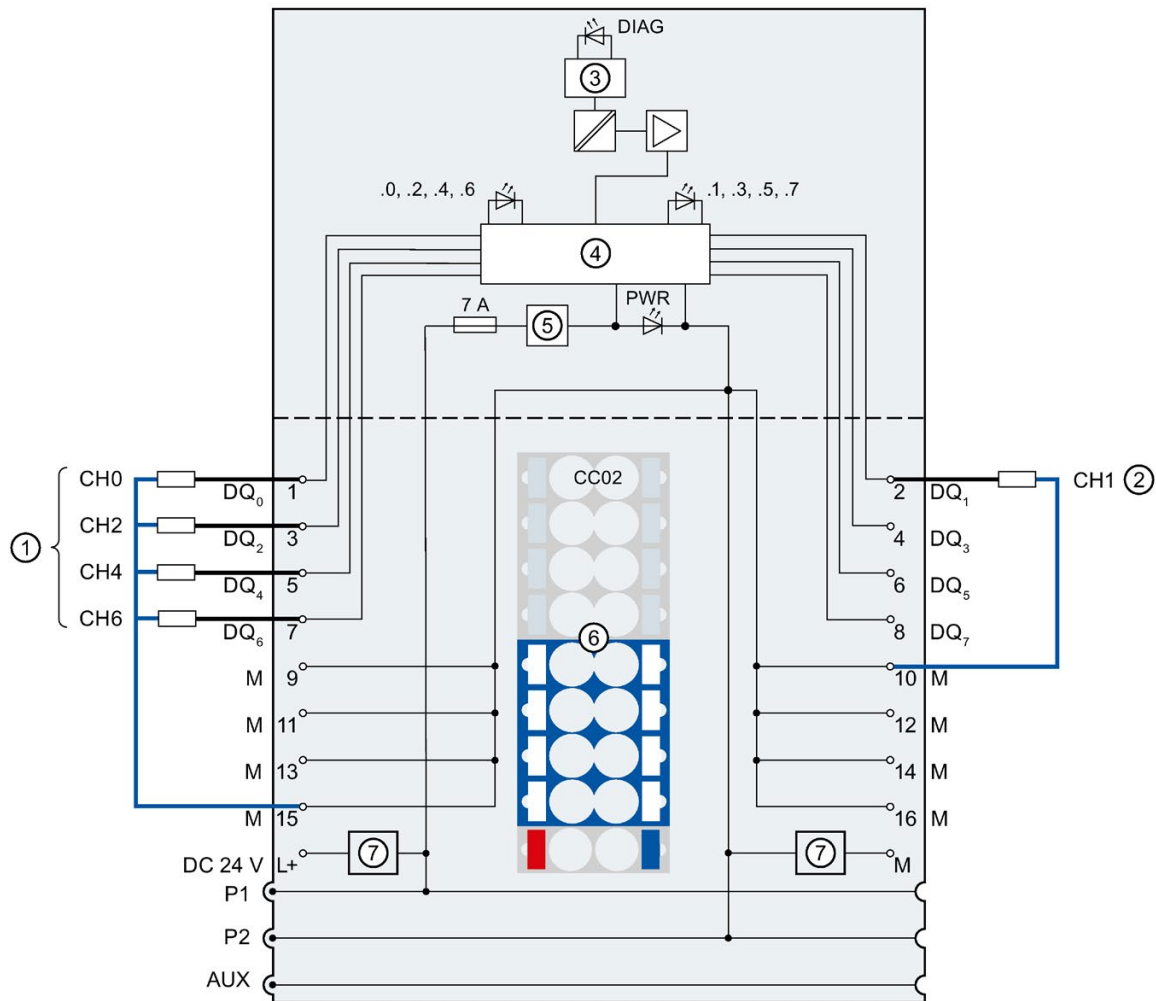
ORIGINAL WIRING REFERENCE

Original source PDF pages 12, 11, 13, 15, 16, 23, 24. The following pages retain the original Siemens drawings and printed page numbers.

[Siemens original documentation and product reference](#)

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 BA on the BaseUnit BU type A0 without AUX terminals (1- 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)

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

Wiring

3.1 Wiring and block diagram

This section includes the block diagram of the DQ 8x24VDC/0.5A BA 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 (<https://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.

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 BA on the BaseUnit BU type A0 with AUX terminals (3-wire connection).

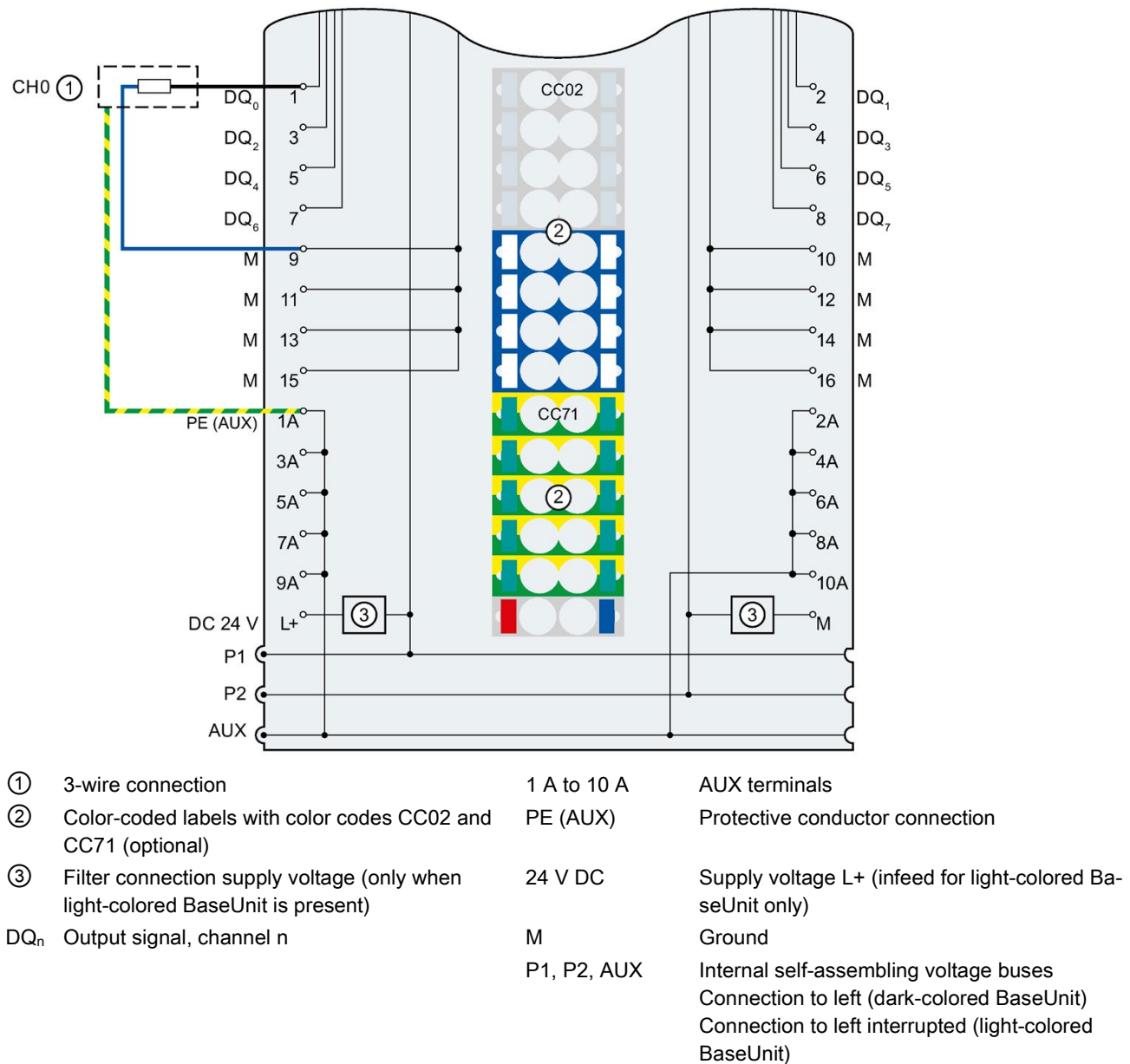


Figure 3-2 Terminal assignment for 3-wire connection of actuators

4.1 Parameters

The following parameter settings are possible:

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

Parameter	Value range	Default	Reconfiguration 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
Channel activated	• Disable • Enable	Enable	Yes	Channel	Channel
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 into 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 configuration options are restricted. The parameter length of the I/O module is 4 bytes with PROFIBUS GSD configuration. If necessary, however, you can set these parameters via data record 128, see appendix "Parameter data record".

4.2 Explanation of the parameters

Diagnostics: No supply voltage L+

Enabling of the diagnostics for no or insufficient supply voltage L+.

Channel activated

Determines whether a channel is activated or deactivated.

Reaction to CPU STOP

Determines the behavior of the module in the event of a CPU STOP.

Potential group

A potential group consists of a group of directly adjacent I/O modules within an ET 200SP station, which are supplied via a common supply voltage.

A potential group begins with a light-colored BaseUnit through which the required voltage is supplied for all modules of the potential group. The light-colored BaseUnit interrupts the three self-assembling voltage buses P1, P2 and AUX to the left neighbor.

All additional I/O modules of this potential group are plugged into dark-colored BaseUnits. You take the potential of the self-assembling voltage buses P1, P2 and AUX from the left neighbor.

A potential group ends with the dark-colored BaseUnit, which follows a light-colored BaseUnit or server module in the station configuration.

See also

ET 200SP distributed I/O system

(<https://support.automation.siemens.com/WW/view/en/58649293>)

6.1 Technical specifications

Article number	6ES7132-6BF01-0AA0
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 µA
Output delay with resistive load	
• "0" to "1", max.	100 µs; at rated load
• "1" to "0", max.	150 µs; at rated load
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
Total current of the outputs	
• Current per channel, max.	0.5 A
• Current per module, max.	4 A
Total current of the outputs (per module)	
horizontal installation	
– up to 30 °C, max.	4 A
– up to 40 °C, max.	4 A
– up to 50 °C, max.	4 A
– up to 60 °C, max.	4 A
vertical installation	
– up to 30 °C, max.	4 A
– up to 40 °C, max.	4 A
– up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes

Article number	6ES7132-6BF01-0AA0
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	No
• Short-circuit	No
• Group error	Yes
Diagnostics indication LED	
• Monitoring of the supply voltage (PWR-LED)	Yes; green PWR LED
• Channel status display	Yes; Green LED
• for channel diagnostics	No
• for module diagnostics	Yes; green/red DIAG LED
Potential separation	
Potential separation channels	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	No
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety-related tripping of standard modules	Yes; From FS01
Highest safety class achievable in safety mode	
• Performance level according to ISO 13849-1	PL d
• SIL acc. to IEC 61508	SIL 2
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	50 °C
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	30 g