

SIMATIC ET 200SP, digital output module, DQ 4x 24...230V AC/2A
Standard suitable for BU type B1, Color code CC41, Module
diagnostics



General information	
Product type designation	DQ 4x24 ... 230 V AC/2 A ST
HW functional status	From FS05
Firmware version	V1.0
• FW update possible	Yes
usable BaseUnits	BU type B1
Color code for module-specific color identification plate	CC41
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 / V13
• STEP 7 configurable/integrated from version	V5.5 SP3 / -
• PROFIBUS from GSD version/GSD revision	GSD Revision 5
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes

- DQ with energy-saving function
- PWM
- Oversampling
- MSO

No
No
No
No

Supply voltage

Rated value (AC)	230 V
permissible range, lower limit (AC)	20.4 V
permissible range, upper limit (AC)	264 V

Input current

Current consumption (rated value)	11.5 mA
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Output voltage

Rated value (AC)	230 V; 24V AC to 230V AC
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Power loss

Power loss, typ.	9 W; Active power, load voltage 230 V, all outputs loaded with 2 A, 50 Hz
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Address area

Address space per module	
• Address space per module, max.	1 byte; + 1 byte for QI information
• Inputs	1 byte; With QI
• Outputs	1 byte

Digital outputs

Type of digital output	Triac with zero point detection
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	No
Short-circuit protection	No; When using BU type B1, a miniature, quick-response fuse with 10 A tripping current must be provided
Controlling a digital input	Yes
Size of motor starters according to NEMA, max.	5

Switching capacity of the outputs

• with resistive load, max.	2 A
• on lamp load, max.	100 W

Output voltage

• for signal "1", min.	20.4 V
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Output current

• for signal "1" rated value	2 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	2 A
• for signal "0" residual current, max.	460 µA

Output delay with resistive load	
• "0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
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; Higher frequencies are possible, see Equipment Manual / Product Information
• on lamp load, max.	1 Hz
Total current of the outputs	
• Current per channel, max.	2 A
• Current per module, max.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	No
Diagnoses	
• Monitoring the supply voltage	No
• 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	2 545 V DC/2 s (routine test)
Standards, approvals, certificates	
Suitable for safety functions	No
Ambient conditions	
Ambient temperature during operation	
• horizontal installation, min.	-30 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C
• vertical installation, max.	60 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	2 000 m; On request: Installation altitudes greater than 2 000 m
Dimensions	
Width	20 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	50 g
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