

SIMATIC ET 200SP, digital output module DQ 4x 24..230V AC/2A HF packaging unit: 1 piece, two alternative modes: DQ and power control, fits to BU-Type U0, color code CC20, channel diagnosis



General information	
Product type designation	DQ 4x24 ... 230 V AC/2 A HF, PU 1
Firmware version	V1.0
FW update possible	Yes
usable BaseUnits	BU type U0
Color code for module-specific color identification plate	CC20
Product function	
I&M data	Yes; I&M0 to I&M3
Engineering with	
STEP 7 TIA Portal configurable/integrated as of version	V14
STEP 7 configurable/integrated as of version	STEP 7 V5.5 or higher
PROFIBUS as of GSD version/GSD revision	GSD as of Revision 5
PROFINET as of GSD version/GSD revision	GSDML V2.3
Operating mode	
DQ	Yes
DQ with energy-saving function	Yes
PWM	No

• Oversampling	No
• MSO	No
• Phase control	Yes; Control area: 8.5 ... 100% of the phase angle
• Trailing-edge phase	No
• Half-wave	Yes
• Full-wave	Yes

Supply voltage

Rated value (AC)	230 V; 47 ... 63 Hz, max. rate of change of frequency 1 mHz/s
permissible range, lower limit (AC)	20.4 V
permissible range, upper limit (AC)	264 V

Input current

Current consumption (rated value)	8 mA; without load
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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	
• Inputs	+ 1 byte for QI information
• Outputs	8 byte

Hardware configuration

Automatic encoding	Yes
• Mechanical coding element	Yes
Selection of BaseUnit for connection variants	
• 1-wire connection	BU type U0
• 2-wire connection	BU type U0
• 3-wire connection	BU type U0 + Potential isolation module

Digital outputs

Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	No; external fusing necessary
Open-circuit detection	Yes; channel by channel
• Response threshold, typ.	1 mA; 40 V AC or more
Overload protection	No; A miniature fuse with 10 tripping current and tripping characteristic "quick response" must be provided in the module supply
Controlling a digital input	Yes
Switching capacity of the outputs	

• with resistive load, max. • with inductive load, max. • on lamp load, max.	2 A; Max. 4 A, see additional description in manual 2 A 100 W; Tungsten rating in accordance with UL; for thermistors with higher power ratings, see the notes in the manual
Output voltage	
• for signal "1", min.	20.4 V
Output current	
• for signal "1" rated value • for signal "1" permissible range, min. • for signal "1" permissible range, max. • for signal "0" residual current, max.	2 A 10 mA 4 A; Note derating data in the manual 3 mA
Output delay with resistive load	
• "0" to "1", max. • "1" to "0", max.	40 ms; 2 AC cycles 20 ms; 1 AC cycle
Parallel switching of two outputs	
• for logic links • for uprating • for redundant control of a load	No No Yes
Switching frequency	
• with resistive load, max. • with inductive load (acc. to IEC 60947-5-1, AC15), max. • on lamp load, max.	10 Hz; Applies to DQ mode; limited by line frequency in PC mode 10 Hz; Applies to DQ mode; limited by line frequency in PC mode 1 Hz; Applies to DQ mode; limited by line frequency in PC mode
Total current of the outputs	
• Current per channel, max. • Current per module, max.	2 A; Max. 4 A, see additional description in manual 8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 40 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
— up to 50 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
— up to 60 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
vertical installation	
— up to 30 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
— up to 40 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
— up to 50 °C, max.	8 A; Applicable for current channels up to 2 A. For current channels between 2 A and 4 A, note derating data in the manual
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

Diagnostic messages

- Diagnostic information readable
- Monitoring the supply voltage
- Wire-break
- Short-circuit
- Group error

Yes

Yes

Yes; channel by channel

No

Yes

Diagnostics indication LED

- Monitoring of the supply voltage (PWR-LED)
- Channel status display
- for channel diagnostics
- for module diagnostics

Yes; green PWR LED

Yes; Green LED

Yes; red Fn LED

Yes; green/red DIAG LED

Potential separation

Potential separation channels

- between the channels
- between the channels and backplane bus
- between the channels and the power supply of the electronics

No

Yes

No

Isolation

Isolation tested with

2 545 V DC/2 s (routine test)

Dimensions

Width

20 mm

Height

73 mm

Depth

58 mm

Weights

Weight, approx.

50 g

last modified:

10/24/2018