

SIMATIC ET 200SP, DIGITAL OUTPUT MODULE, DQ  
 16X24VDC/0.5A STANDARD, FITS TO BU-TYPE A0, COLOR  
 CODE CC00, MODULE DIAGNOSIS



General information	
Product type designation	ET 200SP, DQ 16x 24 V DC/0.5 A ST, PU 1
Firmware version	V1.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC00
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V11 SP2 / V13
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PCS 7 configurable/integrated as of version</li> </ul>	V8.1 SP1
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	GSD Revision 5
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>DQ</li> </ul>	Yes
<ul style="list-style-type: none"> <li>DQ with energy-saving function</li> </ul>	No

• PWM	No
• Oversampling	No
• MSO	No

#### Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes

#### Input current

Current consumption, max.	60 mA; without load
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#### Output voltage

Rated value (DC)	24 V
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#### Power loss

Power loss, typ.	1 W
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#### Address area

Address space per module	
• Address space per module, max.	2 byte

#### Digital outputs

Number of digital outputs	16
Current-sinking	No
Current-sourcing	Yes
Short-circuit protection	Yes
• Response threshold, typ.	0.7 to 1.3 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes

#### Switching capacity of the outputs

• with resistive load, max.	0.5 A
• on lamp load, max.	5 W

#### Load resistance range

• lower limit	48 $\Omega$
• upper limit	12 k $\Omega$

#### Output current

• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	0.1 mA

#### Output delay with resistive load

• "0" to "1", typ.	50 $\mu$ s
• "1" to "0", typ.	100 $\mu$ s

#### 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.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 30 °C, max.	8 A
— 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
— up to 60 °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
Diagnostic messages	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; Module-wise
• Short-circuit	Yes; Module-wise
• 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
- between the channels and backplane bus

No  
Yes

#### Permissible potential difference

between different circuits 75 V DC/60 V AC (base isolation)

#### Isolation

Isolation tested with 707 V DC (type test)

#### Dimensions

Width 15 mm

Height 73 mm

Depth 58 mm

#### Weights

Weight, approx. 28 g

**last modified:** 03/07/2017 