

SIMATIC ET 200SP, digital output module, DQ 16x 24VDC/0.5A  
Basic, Pack quantity: 1 unit, suitable for BU type A0, Color code  
CC00, Module diagnostics



General information	
Product type designation	DQ 16x 24 V DC/0.5 A BA, PU 1
HW functional status	From FS03
Firmware version	V0.0
• FW update possible	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC00
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	One GSD file each, Revision 3 and 5 and higher
• PROFINET as of GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No

<ul style="list-style-type: none"> <li>• PWM</li> <li>• Oversampling</li> <li>• MSO</li> </ul>	No
	No
	No
<b>Supply voltage</b>	
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
<b>Input current</b>	
Current consumption, max.	55 mA; without load
<b>Output voltage</b>	
Rated value (DC)	24 V
<b>Power loss</b>	
Power loss, typ.	1 W
<b>Address area</b>	
Address space per module	
<ul style="list-style-type: none"> <li>• Outputs</li> </ul>	2 byte
<b>Hardware configuration</b>	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>• Mechanical coding element</li> </ul>	Yes
Selection of BaseUnit for connection variants	
<ul style="list-style-type: none"> <li>• 1-wire connection</li> <li>• 2-wire connection</li> <li>• 3-wire connection</li> <li>• 4-wire connection</li> </ul>	BU type A0 BU type A0 + Potential isolation module BU type A0 + Potential isolation module BU type A0 + Potential isolation module
<b>Digital outputs</b>	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	16
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
<ul style="list-style-type: none"> <li>• Response threshold, typ.</li> </ul>	1.4 A; 0.7 to 1.9 A
Open-circuit detection	No
Limitation of inductive shutdown voltage to	Typ. L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> <li>• on lamp load, max.</li> </ul>	0.5 A 5 W
Load resistance range	

• lower limit	48 $\Omega$
• upper limit	100 k $\Omega$
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	30 $\mu$ A
Output delay with resistive load	
• "0" to "1", typ.	80 $\mu$ s; at rated load
• "0" to "1", max.	150 $\mu$ s; at rated load
• "1" to "0", typ.	100 $\mu$ s; at rated load
• "1" to "0", max.	200 $\mu$ s; 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.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 60 °C, max.	8 A
vertical installation	
— up to 50 °C, max.	8 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
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
- for module diagnostics

No  
Yes; green/red DIAG LED

## Potential separation

### Potential separation channels

- between the channels
- between the channels and backplane bus

No  
Yes

## Isolation

### Isolation tested with

707 V DC (type test)

## Standards, approvals, certificates

### Suitable for safety functions

No

### Suitable for safety-related tripping of standard modules

No

## Ambient conditions

### Ambient temperature during operation

- horizontal installation, min.
- horizontal installation, max.
- vertical installation, min.
- vertical installation, max.

-30 °C  
60 °C  
-30 °C  
50 °C

### Altitude during operation relating to sea level

- Installation altitude above sea level, max.

5 000 m; Restrictions for installation altitudes > 2 000 m, see manual

## Dimensions

### Width

15 mm

### Height

73 mm

### Depth

58 mm

## Weights

### Weight, approx.

30 g

### last modified:

02/14/2020