



SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0,5A Basic, Source output (PNP,P-switching) Packing unit: 10 pieces, fits to BU-type A0, Colour Code CC02, substitute value output, module diagnostics for: supply voltage

General information	
Product type designation	DQ 8x24VDC/0.5A BA
HW functional status	From FS02
Firmware version	V0.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V14
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	One GSD file each, Revision 3 and 5 and higher
<ul style="list-style-type: none"> <li>PROFINET from 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
<ul style="list-style-type: none"> <li>PWM</li> </ul>	No
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSO</li> </ul>	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.	45 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
<ul style="list-style-type: none"> <li>Address space per module, max.</li> </ul>	1 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>Mechanical coding element</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Type of mechanical coding element</li> </ul>	Type A

<b>Selection of BaseUnit for connection variants</b>	
<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 BU type A0 with AUX terminals or potential distributor module BU type A0 + Potential distributor module
<b>Digital outputs</b>	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	8
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes; per channel, electronic
<ul style="list-style-type: none"> <li>• Response threshold, typ.</li> </ul>	1 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> <li>• on lamp load, max.</li> </ul>	0.5 A 5 W
<b>Load resistance range</b>	
<ul style="list-style-type: none"> <li>• lower limit</li> <li>• upper limit</li> </ul>	48 Ω 100 kΩ
<b>Output current</b>	
<ul style="list-style-type: none"> <li>• for signal "1" rated value</li> <li>• for signal "1" permissible range, max.</li> <li>• for signal "0" residual current, max.</li> </ul>	0.5 A 0.5 A 10 μA
<b>Output delay with resistive load</b>	
<ul style="list-style-type: none"> <li>• "0" to "1", max.</li> <li>• "1" to "0", max.</li> </ul>	100 μs; at rated load 150 μs; at rated load
<b>Parallel switching of two outputs</b>	
<ul style="list-style-type: none"> <li>• for uprating</li> <li>• for redundant control of a load</li> </ul>	No Yes
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> <li>• with inductive load, max.</li> <li>• on lamp load, max.</li> </ul>	100 Hz 2 Hz 10 Hz
<b>Total current of the outputs</b>	
<ul style="list-style-type: none"> <li>• Current per channel, max.</li> <li>• Current per module, max.</li> </ul>	0.5 A 4 A
<b>Total current of the outputs (per module)</b>	
horizontal installation	
— up to 60 °C, max.	4 A
vertical installation	
— up to 50 °C, max.	4 A
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	1 000 m 600 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> <li>• Wire-break</li> <li>• Short-circuit</li> <li>• Group error</li> </ul>	Yes No No Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> <li>• Channel status display</li> <li>• for channel diagnostics</li> <li>• for module diagnostics</li> </ul>	Yes; green PWR LED Yes; green LED No Yes; green/red DIAG LED
<b>Potential separation</b>	
Potential separation channels	
<ul style="list-style-type: none"> <li>• between the channels</li> </ul>	No

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

Yes  
No

#### 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 Yes; see FAQ Entry ID: 39198632

#### 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; < 0 °C as of FS02
- horizontal installation, max. 60 °C
- vertical installation, min. -30 °C; < 0 °C as of FS02
- vertical installation, max. 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:** 9/27/2021 