



SIMATIC ET 200SP, digital output module, DQ 4x 24VDC/2A Standard, suitable for BU type A0, Color code CC02, Module diagnostics

General information	
Product type designation	DQ 4x24 V DC/2 A ST
HW functional status	From FS08
Firmware version	V1.1
<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	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>	V11 SP2 / V13
<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>PCS 7 configurable/integrated from version</li> </ul>	V8.1 SP1
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	GSD Revision 5
<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.	60 mA; without load
Output voltage	
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; + 1 byte for QI information

Hardware configuration	
Automatic encoding	
<ul style="list-style-type: none"> <li>• Mechanical coding element</li> <li>• Type of mechanical coding element</li> </ul>	Yes Type A
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 BU type A0 with AUX terminals or potential distributor module BU type A0 + Potential distributor module
Digital outputs	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	4
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	Typ. L+ (-50 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>	2 A 10 W
Load resistance range	
<ul style="list-style-type: none"> <li>• lower limit</li> <li>• upper limit</li> </ul>	12 Ω 3 400 Ω
Output current	
<ul style="list-style-type: none"> <li>• for signal "1" rated value</li> <li>• for signal "0" residual current, max.</li> </ul>	2 A 0.1 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>• "0" to "1", typ.</li> <li>• "0" to "1", max.</li> <li>• "1" to "0", typ.</li> <li>• "1" to "0", max.</li> </ul>	50 μs 50 μs 100 μs 100 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> <li>• for uprating</li> <li>• for redundant control of a load</li> </ul>	No Yes
Switching frequency	
<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
Total current of the outputs	
<ul style="list-style-type: none"> <li>• Current per channel, max.</li> <li>• Current per module, max.</li> </ul>	2 A 8 A
Total current of the outputs (per module)	
horizontal installation	
<ul style="list-style-type: none"> <li>— up to 40 °C, max.</li> <li>— up to 50 °C, max.</li> <li>— up to 60 °C, max.</li> </ul>	8 A 6 A 4 A
vertical installation	
<ul style="list-style-type: none"> <li>— up to 30 °C, max.</li> <li>— up to 40 °C, max.</li> <li>— up to 50 °C, max.</li> <li>— up to 60 °C, max.</li> </ul>	8 A 6 A 4 A 4 A
Cable length	
<ul style="list-style-type: none"> <li>• shielded, max.</li> <li>• unshielded, max.</li> </ul>	1 000 m 600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes

Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• 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	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	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; From FS03
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 FS08
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; < 0 °C as of FS08
• 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
<b>last modified:</b>	1/16/2021 