



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 16x24VDC/0.5A BA
HW functional status	From FS03
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	CC00
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>	STEP 7 V5.5 or higher
<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.	55 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>Outputs</li> </ul>	2 byte
Hardware configuration	
Automatic encoding	Yes
<ul style="list-style-type: none"> <li>Mechanical coding element</li> </ul>	Yes

• Type of mechanical coding element	Type A
<b>Selection of BaseUnit for connection variants</b>	
• 1-wire connection	BU type A0
• 2-wire connection	BU type A0 + Potential distributor module
• 3-wire connection	BU type A0 + Potential distributor module
• 4-wire connection	BU type A0 + Potential distributor 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
• Response threshold, typ.	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
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• lower limit	48 Ω
• upper limit	100 kΩ
<b>Output current</b>	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	30 μA
<b>Output delay with resistive load</b>	
• "0" to "1", typ.	80 μs; at rated load
• "0" to "1", max.	150 μs; at rated load
• "1" to "0", typ.	100 μs; at rated load
• "1" to "0", max.	200 μs; at rated load
<b>Parallel switching of two outputs</b>	
• for uprating	No
• for redundant control of a load	Yes
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	2 Hz
• on lamp load, max.	10 Hz
<b>Total current of the outputs</b>	
• Current per channel, max.	0.5 A
• Current per module, max.	8 A
<b>Total current of the outputs (per module)</b>	
horizontal installation	
— up to 60 °C, max.	8 A
vertical installation	
— up to 50 °C, max.	8 A
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire-break	No
• Short-circuit	No
• Group error	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> <li>between the channels and backplane bus</li> </ul>	No Yes
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	No
<b>Ambient conditions</b>	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>horizontal installation, min.</li> <li>horizontal installation, max.</li> <li>vertical installation, min.</li> <li>vertical installation, max.</li> </ul>	-30 °C 60 °C -30 °C 50 °C
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>Installation altitude above sea level, max.</li> </ul>	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
<b>Dimensions</b>	
Width	15 mm
Height	73 mm
Depth	58 mm
<b>Weights</b>	
Weight, approx.	30 g
<b>last modified:</b>	12/28/2021 