

SIMATIC ET 200SP, Digital output module, DQ 8x 24V DC/0,5A Basic, Source output (PNP,P-switching) Packing unit: 1 piece, fits to BU-type A0, Colour Code CC02, substitute value output, module diagnostics for: supply voltage



General information	
Product type designation	DQ 8x 24 V DC/0.5 A BA, PU 1
HW functional status	From FS02
Firmware version	V0.0
• FW update possible	No
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
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	V5.5 SP3
• 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

• PWM	No
• Oversampling	No
• MSO	No
<b>Redundancy</b>	
• Redundancy capability	Yes
<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.	45 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>	
<b>Address space per module</b>	
• Address space per module, max.	1 byte
<b>Hardware configuration</b>	
Automatic encoding	Yes
• Mechanical coding element	Yes
<b>Selection of BaseUnit for connection variants</b>	
• 1-wire connection	BU type A0
• 2-wire connection	BU type A0
• 3-wire connection	BU type A0 with AUX terminals or potential distributor module
• 4-wire connection	BU type A0 + Potential isolation 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
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 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 $\Omega$
• upper limit	100 k $\Omega$
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	10 $\mu$ A
Output delay with resistive load	
• "0" to "1", max.	100 $\mu$ s; at rated load
• "1" to "0", max.	150 $\mu$ 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.	4 A
Total current of the outputs (per module)	
horizontal installation	
— up to 30 °C, max.	4 A
— up to 40 °C, max.	4 A
— up to 50 °C, max.	4 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	4 A
— up to 40 °C, max.	4 A
— up to 50 °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	

<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>	
<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>• between the channels</li> <li>• between the channels and backplane bus</li> <li>• between the channels and the power supply of the electronics</li> </ul>	No Yes No
<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	Yes; From FS01
<b>Highest safety class achievable in safety mode</b>	
<ul style="list-style-type: none"> <li>• Performance level according to ISO 13849-1</li> <li>• SIL acc. to IEC 61508</li> </ul>	PL d SIL 2
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<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
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> </ul>	2 000 m; On request: Installation altitudes greater than 2 000 m
<b>Dimensions</b>	
Width	15 mm
Height	73 mm
Depth	58 mm
<b>Weights</b>	
Weight, approx.	30 g
<b>last modified:</b>	12/14/2019