



Figure similar

SIMATIC ET 200SP, digital output module, DQ 8x 24VDC/0.5A High Feature, source output PNP, source output, Packing unit: 1 unit, suitable for BU type A0, color code CC02, Channel diagnostics for: Short-circuit and wire break; supply voltage, channel fault LED

General information	
Product type designation	DQ 8x24 V DC/0.5 A HF
HW functional status	From FS07
Firmware version	
<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> <li>• Isochronous mode</li> </ul>	Yes; I&M0 to I&M3 Yes
Engineering with	
<ul style="list-style-type: none"> <li>• STEP 7 TIA Portal configurable/integrated from version</li> <li>• STEP 7 configurable/integrated from version</li> <li>• PCS 7 configurable/integrated from version</li> <li>• PROFIBUS from GSD version/GSD revision</li> <li>• PROFINET from GSD version/GSD revision</li> </ul>	V13 SP1 / - V5.5 / - V8.1 SP1 One GSD file each, Revision 3 and 5 and higher GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> <li>• DQ</li> <li>• DQ with energy-saving function</li> <li>• PWM</li> <li>• Oversampling</li> <li>• MSO</li> </ul>	Yes No No No Yes
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
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>	8 byte; 2 channels per submodule + QI information
Hardware configuration	
Automatic encoding	Yes
<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	

• 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 distributor module
<b>Digital outputs</b>	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	8
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
• Response threshold, typ.	0.7 to 1.3 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Load resistance range	
• lower limit	48 Ω
• upper limit	12 kΩ
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
• "0" to "1", typ.	50 µs
• "1" to "0", typ.	100 µs
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 60 °C, max.	4 A
vertical installation	
— up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Isochronous mode</b>	
Execution and activation time (TCO), min.	48 µs
Bus cycle time (TDP), min.	500 µs
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• Monitoring the supply voltage	Yes
• Wire-break	Yes; channel by channel
• Short-circuit	Yes; channel by channel
• 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	Yes; red LED
• for module diagnostics	Yes; green/red DIAG LED
<b>Potential separation</b>	

<b>Potential separation channels</b>	
• between the channels	No
• between the channels and backplane bus	Yes
• between the channels and the power supply of the electronics	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	No; see FAQ Entry ID: 39198632
<b>Highest safety class achievable in safety mode</b>	
• Performance level according to ISO 13849-1	PL d
• SIL acc. to IEC 61508	SIL 2
<b>Ambient conditions</b>	
Ambient temperature during operation	
• horizontal installation, min.	-30 °C; < 0 °C as of FS07
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; < 0 °C as of FS07
• 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
<b>Dimensions</b>	
Width	15 mm
Height	73 mm
Depth	58 mm
<b>Weights</b>	
Weight, approx.	30 g
<b>last modified:</b>	10/1/2021 