



SIMATIC ET 200SP, digital output module, DQ 8x24 V DC/0.5 A high feature, source output (PNP, sourcing 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 8x24VDC/0.5A HF
HW functional status	01
Firmware version	V1.0
• FW update possible	Yes
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
• Isochronous mode	Yes; 250 µs
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	as of TIA Portal V19 with HSP0428 / integrated as of TIA Portal V20
• STEP 7 configurable/integrated from version	as of STEP 7 V5.5 SP3 with HSP0230 V11.0 / integrated as of STEP 7 V5.7 SP3
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.43
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	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
Input current	
Current consumption, max.	20 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
• Address space per module, max.	8 byte; 2 channels per submodule + QI information
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	Type A

Submodules	
• Number of configurable submodules, max.	4
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
Digital outputs	
Type of digital output	Source output (PNP, current-sourcing)
Number of digital outputs	8
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
output type acc. to IEC 61131, type 0.5	Yes
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	0.7 to 1.3 A
Open-circuit detection	Yes
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
• with inductive 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 "1" permissible range, max.	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.	0.1 Hz; higher frequencies are possible, see Equipment Manual "Maximum permitted switching frequency of inductive loads"
• 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
Isochronous mode	
Execution and activation time (TCO), min.	48 μs
Bus cycle time (TDP), min.	500 μs
Jitter, max.	8 μs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	

- Monitoring the supply voltage — parameterizable - Wire-break - Short-circuit to M - Short-circuit to L+ - Group error	Yes Yes Yes; channel by channel Yes; channel by channel Yes; channel by channel Yes																																				
Diagnostics indication LED																																					
- Monitoring of the supply voltage (PWR-LED) - Channel status display - for channel diagnostics - for module diagnostics	Yes; green PWR LED Yes; green LED Yes; red LED Yes; green/red DIAG LED																																				
Potential separation																																					
Potential separation channels																																					
- between the channels - between the channels and backplane bus - Between the channels and load voltage L+	No 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 for safety-related tripping of standard modules																																					
- Performance level according to ISO 13849-1 - Category according to ISO 13849-1 - SIL acc. to IEC 62061 - remark on safety-oriented shutdown	PL d Cat. 3 SIL 2 https://support.industry.siemens.com/cs/de/en/view/39198632																																				
Ambient conditions																																					
Ambient temperature during operation																																					
- horizontal installation, min. - horizontal installation, max. - vertical installation, min. - vertical installation, max.	-30 °C 60 °C -30 °C 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 ET 200SP system manual																																				
Dimensions																																					
Width	15 mm																																				
Height	73 mm																																				
Depth	58 mm																																				
Weights																																					
Weight, approx.	30 g																																				
Classifications																																					
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General Product Approval																																					



[Manufacturer Declaration](#)

[KC](#)

[Miscellaneous](#)



General Product Approval

EMV

For use in hazardous locations



RCM

[KC](#)



UL

[FM](#)

[CCC-Ex](#)



ATEX

For use in hazardous locations

Maritime application



IECEX

[Miscellaneous](#)



ABS



BUREAU
VERITAS



DNV



LRS

Maritime application

Environment

[NK / Nippon Kaiji Kyokai](#)



RINA



RMRS

[CCS \(China Classification Society\)](#)



KR
KOREAN REGISTER



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