

SIMATIC ET 200SP, digital output module DQ 4x24 V DC/2 A standard, source output (PNP, sourcing output) packing unit: 10 units, suitable for BU type A0, color code CC02, substitute value output, module diagnostics for: short circuit to L+ and M, wire break, supply voltage

General information	
Product type designation	DQ 4x24VDC/2A ST
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	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	from STEP 7 V19 with HSP0425
• STEP 7 configurable/integrated from version	V5.5 SP3 or higher
• PCS 7 configurable/integrated from version	V8.1 SP1
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.3
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	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.	20 mA; without load
Output voltage	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
• Address space per module, max.	1 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	Yes
• Mechanical coding element	Yes
• Type of mechanical coding element	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
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
output type acc. to IEC 61131, type 2	Yes
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	2.8 to 5.2 A
Open-circuit detection	Yes
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes; supports input type 3 according to IEC 61131-2
Switching capacity of the outputs	
• with resistive load, max.	2 A
• with inductive load, max.	2 A
• on lamp load, max.	10 W
Load resistance range	
• lower limit	12 Ω
• upper limit	3 400 Ω
Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, max.	2 A
• for signal "0" residual current, max.	0.1 mA
Output delay with resistive load	
• "0" to "1", typ.	50 μ s
• "1" to "0", typ.	100 μ s
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.	2 A
• Current per module, max.	8 A; see Equipment Manual "Derating curve"
Total current of the outputs (per module)	
horizontal installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	8 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	8 A
— up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• Monitoring the supply voltage	Yes
— parameterizable	Yes
• Wire-break	Yes; Module-wise
• Short-circuit to M	Yes; Module-wise
• Short-circuit to L+	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 • for module diagnostics	No																																				
	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 load voltage L+	No																																				
Isolation																																					
Isolation tested with	707 V DC (type test)																																				
Standards, approvals, certificates																																					
Suitable for safety functions	No																																				
Ecological footprint																																					
• environmental product declaration	Yes																																				
Global warming potential																																					
— global warming potential, (total) [CO2 eq]	29.3 kg																																				
— global warming potential, (during production) [CO2 eq]	3.98 kg																																				
— global warming potential, (during operation) [CO2 eq]	25.6 kg																																				
— global warming potential, (after end of life cycle) [CO2 eq]	-0.245 kg																																				
Ambient conditions																																					
Ambient temperature during operation																																					
• horizontal installation, min.	-30 °C																																				
• horizontal installation, max.	60 °C																																				
• vertical installation, min.	-30 °C																																				
• 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 ET 200SP system manual																																				
Dimensions																																					
Width	15 mm																																				
Height	73 mm																																				
Depth	58 mm																																				
Weights																																					
Weight, approx.	30 g																																				
Classifications																																					
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Approvals / Certificates																																					
General Product Approval	Maritime application																																				



[Manufacturer Declaration](#)

[Miscellaneous](#)





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