



SIMATIC ET 200SP, digital output module DQ 4x24 V DC/2 A standard, source output (PNP,sourcing output) packing unit: 1 unit, 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	STEP 7 V19 or higher with HSP0425 / 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	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 / header	
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	
<ul style="list-style-type: none"> • 1-wire connection • 2-wire connection • 3-wire connection 	BU type A0 BU type A0 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
<ul style="list-style-type: none"> • 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	
<ul style="list-style-type: none"> • with resistive load, max. • with inductive load, max. • on lamp load, max. 	2 A 2 A 10 W
Load resistance range	
<ul style="list-style-type: none"> • lower limit • upper limit 	12 Ω 3 400 Ω
Output current	
<ul style="list-style-type: none"> • for signal "1" rated value • for signal "1" permissible range, max. • for signal "0" residual current, max. 	2 A 2 A 0.1 mA
Output delay with resistive load	
<ul style="list-style-type: none"> • "0" to "1", typ. • "1" to "0", typ. 	50 μs 100 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> • for uprating • for redundant control of a load 	No Yes
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. • with inductive load, max. • on lamp load, max. 	100 Hz 0.1 Hz; higher frequencies are possible, see Equipment Manual "Maximum permitted switching frequency of inductive loads" 10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> • Current per channel, max. • Current per module, max. 	2 A 8 A; see Equipment Manual "Derating curve"
Total current of the outputs (per module)	
horizontal installation	
<ul style="list-style-type: none"> — up to 30 °C, max. — up to 40 °C, max. — up to 50 °C, max. — up to 60 °C, max. 	8 A 8 A 6 A 4 A
vertical installation	
<ul style="list-style-type: none"> — up to 30 °C, max. — up to 40 °C, max. — up to 50 °C, max. 	8 A 6 A 4 A
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	1 000 m 600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> • 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	No
• for module diagnostics	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

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			
		Version	Classification
	eClass	14	27-24-26-04
	eClass	12	27-24-26-04
	eClass	9.1	27-24-26-04
	eClass	9	27-24-26-04
	eClass	8	27-24-26-04
	eClass	7.1	27-24-26-04
	eClass	6	27-24-26-04
	ETIM	9	EC001599
	ETIM	8	EC001599
	ETIM	7	EC001599

Approvals / Certificates	
General Product Approval	



[Manufacturer Declaration](#)

[KC](#)

[Miscellaneous](#)



General Product Approval	EMV	For use in hazardous locations
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[KC](#)



[FM](#)

[CCC-Ex](#)



For use in hazardous locations

Maritime application



[Miscellaneous](#)



Maritime application

Environment

[NK / Nippon Kaiji Kyokai](#)



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



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