



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 8x24VDC/0.5A BA
HW functional status	From FS02
Firmware version	V0.0
• FW update possible	No
usable BaseUnits	BU type A0
Color code for module-specific color-coded label	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	V14
• STEP 7 configurable/integrated from version	V5.5 SP3
• PROFIBUS from GSD version/GSD revision	One GSD file each, Revision 3 and 5 and higher
• PROFINET from GSD version/GSD revision	GSDML V2.3
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.	45 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
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
• 4-wire connection	BU type A0 + 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
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
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	100 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.	10 μA
Output delay with resistive load	
• "0" to "1", max.	100 μs; at rated load
• "1" to "0", max.	150 μs; 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 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
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnoses	
• Monitoring the supply voltage	Yes
• Wire-break	No
• Short-circuit	No
• Group error	Yes

Diagnostics indication LED			
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) 	Yes; green PWR LED		
<ul style="list-style-type: none"> Channel status display 	Yes; green LED		
<ul style="list-style-type: none"> for channel diagnostics 	No		
<ul style="list-style-type: none"> for module diagnostics 	Yes; green/red DIAG LED		
Potential separation			
Potential separation channels			
<ul style="list-style-type: none"> between the channels 	No		
<ul style="list-style-type: none"> between the channels and backplane bus 	Yes		
<ul style="list-style-type: none"> between the channels and the power supply of the electronics 	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		
Ecological footprint			
<ul style="list-style-type: none"> environmental product declaration 	Yes		
Global warming potential			
— global warming potential, (total) [CO2 eq]	20.4 kg		
— global warming potential, (during production) [CO2 eq]	3.16 kg		
— global warming potential, (during operation) [CO2 eq]	17.5 kg		
— global warming potential, (after end of life cycle) [CO2 eq]	-0.221 kg		
Highest safety class achievable in safety mode			
<ul style="list-style-type: none"> Performance level according to ISO 13849-1 	PL d		
<ul style="list-style-type: none"> SIL acc. to IEC 61508 	SIL 2		
Ambient conditions			
Ambient temperature during operation			
<ul style="list-style-type: none"> horizontal installation, min. 	-30 °C; < 0 °C as of FS02		
<ul style="list-style-type: none"> horizontal installation, max. 	60 °C		
<ul style="list-style-type: none"> vertical installation, min. 	-30 °C; < 0 °C as of FS02		
<ul style="list-style-type: none"> vertical installation, max. 	50 °C		
Altitude during operation relating to sea level			
<ul style="list-style-type: none"> Installation altitude above sea level, max. 	5 000 m; Restrictions for installation altitudes > 2 000 m, see 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	10	EC001599
	ETIM	9	EC001599
	ETIM	8	EC001599
	ETIM	7	EC001599
	IDEA	4	3566

Approvals / Certificates

General Product Approval



[Miscellaneous](#)

[Manufacturer Declaration](#)

[China RoHS](#)



General Product Approval

For use in hazardous locations



[CCC-Ex](#)

[EM](#)



For use in hazardous locations

Maritime application



[Miscellaneous](#)

[Type Examination Certificate](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



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



Environment



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