Data sheet



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 8x 24 V DC/0.5 A BA, PU 1
HW functional status	From FS02
Firmware version	V0.0
 FW update possible 	No
usable BaseUnits	BU type A0
Color code for module-specific color identification	CC02
plate	
Product function	
● I&M data	Yes; I&M0 to I&M3
Engineering with	
 STEP 7 TIA Portal configurable/integrated as of version 	V14
 STEP 7 configurable/integrated as of version 	V5.5 SP3
 PROFIBUS as of GSD version/GSD revision 	One GSD file each, Revision 3 and 5 and higher
 PROFINET as of GSD version/GSD revision 	GSDML V2.3
Operating mode	
• DQ	Yes
 DQ with energy-saving function 	No

PMM Oversampling No No Redundancy Reverse polarity protection Reverse polarity protection Pes Input current Current consumption, max. 45 mA; without load Output voltage Reade value (DC) 24 V Power loss Power loss, typ. 1 W Address space per module Address space per module, max. 1 byte Hardware configuration Automatic encoding Pes Nechanical coding element Pes Selection of BaseUnit for connection variants Purier connection Purier connection Redundance output (PNP, current-sourcing) Redundance of digital outputs Response threshold, typ. Number of digital outputs Response threshold, typ. Limitation of inductive shuldown voltage to Pyes Powith resistive load, max. Pye With resistive load, max. Vers Response threshold, max. Vers Response threshold max Response threshold max Response threshold max Response threshold max Resp		
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Redundancy Redundancy capability Yes Supply voltage Rated value (DC) Permissible range, upper limit (DC) Permissible range, upper limit (DC) Reverse polarity protection Yes Input current Current consumption, max. 45 mA; without load Output voltage Rated value (DC) Power loss, typ. 1 W Address area Address space per module Address space per module, max. 1 byte Hardware configuration Automatic encoding Mechanical coding element Selection of BaseUnit for connection variants 1 -1-wire connection 3-wire connection BU type A0 Potential isolation module Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs Response threshold, typ. Limitation of inductive shutdown voltage to Type. L+ (-50 V) Controlling a digital input Switching capacity of the outputs • with resistive load, max. • on lamp load, max. • on lamp load, max.	Oversampling	No
Redundancy capability Supply voltage Rated value (DC)	• MSO	No
Rated value (DC)	Redundancy	
Rated value (DC) permissible range, lower limit (DC) permissible range, lower limit (DC) permissible range, upper limit (DC) 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 • Address space per module, max. 1 byte Hardware configuration Automatic encoding • Mechanical coding element Selection of BaseUnit for connection variants • 1-wire connection • 2-wire connection • 2-wire connection • 3-wire connection • 4-wire connection • 4-wire connection BU type A0 BU type A0 PU type A0 + Potential isolation module Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs 8 Current-sourcing Yes Digital outputs, parameterizable Yes Short-circuit protection • Response threshold, typ. Limitation of inductive shutdown voltage to Controlling a digital input • with resistive load, max. • on lamp load, max. • on lamp load, max.	Redundancy capability	Yes
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Reverse polarity protection Input current		19.2 V
Input current Current consumption, max. 45 mA; without load Output voltage Rated value (DC) Power loss Power loss Power loss, typ. 1 W Address area Address space per module • Address space per module, max. 1 byte Hardware configuration Automatic encoding • Mechanical coding element Selection of BaseUnit for connection variants • 1-wire connection • 2-wire connection • 3-wire connection • 4-wire connection BU type A0 • 4-wire connection BU type A0 + Potential isolation module Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs Short-circuit protection • Response threshold, typ. Limitation of inductive shutdown voltage to Controlling a digital input Pes Switching capacity of the outputs • with resistive load, max. • on lamp load, max.	permissible range, upper limit (DC)	28.8 V
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● 4-wire connection BU type A0 + Potential isolation module Digital outputs Type of digital output Source output (PNP, current-sourcing) Number of digital outputs 8 Current-sourcing Yes Digital outputs, parameterizable Yes Short-circuit protection • 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. • on lamp load, max. 5 W	• 2-wire connection	BU type A0
Digital outputs Type of digital output Number of digital outputs 8 Current-sourcing Pes Digital outputs, parameterizable Short-circuit protection Response threshold, typ. Limitation of inductive shutdown voltage to Controlling a digital input Switching capacity of the outputs with resistive load, max. on lamp load, max. Source output (PNP, current-sourcing) 8 Current-sourcing) Yes Yes Yes Tyes Typ. L+ (-50 V) Yes Switching capacity of the outputs Switching capacity of the outputs on lamp load, max.	• 3-wire connection	BU type A0 with AUX terminals or potential distributor module
Type of digital output Number of digital outputs 8 Current-sourcing Yes Digital outputs, parameterizable Short-circuit protection Response threshold, typ. Limitation of inductive shutdown voltage to Typ. L+ (-50 V) Controlling a digital input Switching capacity of the outputs with resistive load, max. on lamp load, max. Source output (PNP, current-sourcing) 8 7 Yes Yes Typ. L+ (-50 V) Yes Switching capacity of the outputs 0.5 A 5 W	• 4-wire connection	BU type A0 + Potential isolation module
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Short-circuit protection • Response threshold, typ. Limitation of inductive shutdown voltage to Controlling a digital input Switching capacity of the outputs • with resistive load, max. • on lamp load, max. Yes; per channel, electronic 1 A Typ. L+ (-50 V) Yes Switching capacity of the outputs • with resistive load, max. 5 W	Current-sourcing	Yes
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Limitation of inductive shutdown voltage to Typ. L+ (-50 V) Controlling a digital input Yes Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	Short-circuit protection	Yes; per channel, electronic
Controlling a digital input Yes Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	• Response threshold, typ.	1 A
Switching capacity of the outputs • with resistive load, max. • on lamp load, max. 5 W	Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
 with resistive load, max. on lamp load, max. 5 W 	Controlling a digital input	Yes
• on lamp load, max. 5 W	Switching capacity of the outputs	
	with resistive load, max.	0.5 A
Load resistance range	• 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 μΑ
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 30 °C, max.	4 A
— up to 40 °C, max.	4 A
— up to 50 °C, max.	4 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	4 A
— up to 40 °C, max.	4 A
— up to 50 °C, max.	4 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up	No
to terminal)	
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
Diagnostic alarm	Yes
Diagnostic messages	

 Monitoring the supply voltage 	Yes
Wire-break	No
Short-circuit	No
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 the power supply of	No
the electronics	
Isolation	
Isolation tested with	707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard	Yes; From FS01
modules	
Highest safety class achievable in safety mode	
Performance level according to ISO 13849-1	PL d
• SIL acc. to IEC 61508	SIL 2
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.	2 000 m; On request: Installation altitudes greater than 2 000 m
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	30 g
last modified:	12/14/2019