



SIMATIC ET 200SP, digital output module, DQ 4x 24VDC/2A Standard, suitable for BU type A0, Color code CC02, Module diagnostics

General information	
Product type designation	DQ 4x24 V DC/2 A ST
HW functional status	From FS08
Firmware version	V1.1
<ul style="list-style-type: none"> FW update possible 	Yes
usable BaseUnits	BU type A0
Color code for module-specific color identification plate	CC02
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V11 SP2 / V13
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PCS 7 configurable/integrated from version 	V8.1 SP1
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	GSD Revision 5
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	GSDML V2.3
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	No
<ul style="list-style-type: none"> PWM 	No
<ul style="list-style-type: none"> Oversampling 	No
<ul style="list-style-type: none"> 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.	60 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power loss	
Power loss, typ.	1 W
Address area	
Address space per module	
<ul style="list-style-type: none"> Address space per module, max. 	1 byte; + 1 byte for QI information
Hardware configuration	
Automatic encoding	

<ul style="list-style-type: none"> • Mechanical coding element 	Yes
<ul style="list-style-type: none"> • Type of mechanical coding element 	Type A
Selection of BaseUnit for connection variants	
<ul style="list-style-type: none"> • 1-wire connection 	BU type A0
<ul style="list-style-type: none"> • 2-wire connection 	BU type A0
<ul style="list-style-type: none"> • 3-wire connection 	BU type A0 with AUX terminals or potential distributor module
<ul style="list-style-type: none"> • 4-wire connection 	BU type A0 + 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
Short-circuit protection	Yes
<ul style="list-style-type: none"> • Response threshold, typ. 	2.8 to 5.2 A
Limitation of inductive shutdown voltage to	Typ. L+ (-50 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> • with resistive load, max. 	2 A
<ul style="list-style-type: none"> • on lamp load, max. 	10 W
Load resistance range	
<ul style="list-style-type: none"> • lower limit 	12 Ω
<ul style="list-style-type: none"> • upper limit 	3 400 Ω
Output current	
<ul style="list-style-type: none"> • for signal "1" rated value 	2 A
<ul style="list-style-type: none"> • for signal "0" residual current, max. 	0.1 mA
Output delay with resistive load	
<ul style="list-style-type: none"> • "0" to "1", typ. 	50 μs
<ul style="list-style-type: none"> • "0" to "1", max. 	50 μs
<ul style="list-style-type: none"> • "1" to "0", typ. 	100 μs
<ul style="list-style-type: none"> • "1" to "0", max. 	100 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> • for uprating 	No
<ul style="list-style-type: none"> • for redundant control of a load 	Yes
Switching frequency	
<ul style="list-style-type: none"> • with resistive load, max. 	100 Hz
<ul style="list-style-type: none"> • with inductive load, max. 	2 Hz
<ul style="list-style-type: none"> • on lamp load, max. 	10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> • Current per channel, max. 	2 A
<ul style="list-style-type: none"> • Current per module, max. 	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 40 °C, max.	8 A
— up to 50 °C, max.	6 A
— up to 60 °C, max.	4 A
vertical installation	
— up to 30 °C, max.	8 A
— up to 40 °C, max.	6 A
— up to 50 °C, max.	4 A
— up to 60 °C, max.	4 A
Cable length	
<ul style="list-style-type: none"> • shielded, max. 	1 000 m
<ul style="list-style-type: none"> • unshielded, max. 	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 Wire-break Short-circuit Group error 	<p>Yes</p> <p>Yes; Module-wise</p> <p>Yes; Module-wise</p> <p>Yes</p>
Diagnostics indication LED	
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics 	<p>Yes; green PWR LED</p> <p>Yes; green LED</p> <p>No</p> <p>Yes; green/red DIAG LED</p>
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels between the channels and backplane bus between the channels and the power supply of the electronics 	<p>No</p> <p>Yes</p> <p>No</p>
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 in safety mode	
<ul style="list-style-type: none"> Performance level according to ISO 13849-1 SIL acc. to IEC 61508 	<p>PL d</p> <p>SIL 2</p>
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> horizontal installation, min. horizontal installation, max. vertical installation, min. vertical installation, max. 	<p>-30 °C; < 0 °C as of FS08</p> <p>60 °C</p> <p>-30 °C; < 0 °C as of FS08</p> <p>50 °C</p>
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
last modified:	9/27/2021 