



Figure similar

SIMATIC ET 200SP, digital output module, DQ 8x 24VDC/0.5A High Feature, source output PNP, source output, Packing unit: 1 unit, suitable for BU type A0, color code CC02, Channel diagnostics for: Short-circuit and wire break; supply voltage, channel fault LED

General information	
Product type designation	DQ 8x24 V DC/0.5 A HF
HW functional status	From FS07
Firmware version	Yes
• FW update possible	
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	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
• STEP 7 configurable/integrated from version	V5.5 / -
• 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	Yes
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
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.	8 byte; 2 channels per submodule + 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
- 2-wire connection
- 3-wire connection
- 4-wire connection

BU type A0  
 BU type A0  
 BU type A0 with AUX terminals or potential distributor module  
 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
• Response threshold, typ.	0.7 to 1.3 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  $\Omega$
- upper limit 12 k $\Omega$

## Output current

- for signal "1" rated value 0.5 A
- for signal "0" residual current, max. 0.1 mA

## Output delay with resistive load

- "0" to "1", typ. 50  $\mu$ s
- "1" to "0", typ. 100  $\mu$ 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. 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

## Isochronous mode

Execution and activation time (TCO), min.	48 $\mu$ s
Bus cycle time (TDP), min.	500 $\mu$ s

## Interrupts/diagnostics/status information

Diagnostics function	Yes
Substitute values connectable	Yes

## Alarms

- Diagnostic alarm Yes

## Diagnoses

- Monitoring the supply voltage Yes
- Wire-break Yes; channel by channel
- Short-circuit Yes; channel by channel
- 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 Yes; red LED
- 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 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	No; see FAQ Entry ID: 39198632
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; < 0 °C as of FS07
• horizontal installation, max.	60 °C
• vertical installation, min.	-30 °C; < 0 °C as of FS07
• 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 manual
Dimensions	
Width	15 mm
Height	73 mm
Depth	58 mm
Weights	
Weight, approx.	30 g
last modified:	10/1/2021 