

SIMATIC S7-1500, Digital output module DQ 8xAC 230V/5A ST; relay; 8 channels in groups of 1; 5 A per group; diagnostics; substitute value: switching cycle counter for integrated relay, front connector (screw terminals or push-in) order separately



Figure similar

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
HW functional status	From FS02
Firmware version	V2.1.0
<ul style="list-style-type: none"> FW update possible 	Yes
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
<ul style="list-style-type: none"> Prioritized startup 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V12 / V12
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	V2.3 / -
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes

• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	Yes
• Integrated operating cycle counter	Yes; FW V2.1.0 or higher

Supply voltage

Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes

Input current

Current consumption, max.	80 mA
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Output voltage

Rated value (AC)	230 V; 24 V DC to 120 V DC / 24 V AC to 230 V AC
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Power

Power available from the backplane bus	0.8 W
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Power loss

Power loss, typ.	5 W
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Digital outputs

Type of digital output	Relays
Number of digital outputs	8
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
Controlling a digital input	possible
Size of motor starters according to NEMA, max.	5

Switching capacity of the outputs

• on lamp load, max.	1 500 W; 10 000 operating cycles
• Low energy/fluorescent lamps with electronic control gear	10x 58 W (25 000 operating cycles)
• Fluorescent tubes, conventionally compensated	1x 58 W (25 000 operating cycles)
• Fluorescent tubes, uncompensated	10x 58 W (25 000 operating cycles)

Output current

• for signal "1" rated value	5 A
• for signal "1" permissible range, min.	5 mA; 10 V
• for signal "1" permissible range, max.	8 A; thermal continuous current
• for signal "0" residual current, max.	0 A

Parallel switching of two outputs

• for logic links	Yes
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• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	2 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	2 Hz
Total current of the outputs	
• Current per channel, max.	8 A; see additional description in the manual
• Current per group, max.	8 A; see additional description in the manual
• Current per module, max.	64 A; see additional description in the manual
Relay outputs	
• Number of relay outputs	8
• Rated supply voltage of relay coil L+ (DC)	24 V
• Current consumption of relays (coil current of all relays), typ.	80 mA
• external protection for relay outputs	With miniature circuit breaker with characteristic B for: $\cos \varphi$ 1.0: 600 A $\cos \varphi$ 0.5 ... 0.7: 900 A with 8 A Diazed fuse: 1 000 A
• Contact connection (internal)	No
• Number of operating cycles, max.	4 000 000; see additional description in the manual
• Relay approved acc. to UL 508	Yes; 250 V AC/5 A g.p.; 120 V AC TV-4 tungsten; A300, R300
Switching capacity of contacts	
— with inductive load, max.	see additional description in the manual
— with resistive load, max.	see additional description in the manual
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
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED
• for channel diagnostics	No

- for module diagnostics

Yes; red LED

Potential separation

Potential separation channels

- between the channels
- between the channels, in groups of
- between the channels and backplane bus
- Between the channels and load voltage L+

Yes; Switching of different phases permitted

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Yes

Yes

Permissible potential difference

between different circuits

250 V AC between the channels and the supply voltage L+; 250 V AC between the channels and the backplane bus; 500 V AC between the channels

Isolation

Isolation tested with

Between channels: 3 100 V DC; between channels backplane bus: 3 100 V DC; between L+ and backplane bus: 707 V DC (type test)

Standards, approvals, certificates

Suitable for safety functions

No

Ambient conditions

Ambient temperature during operation

- horizontal installation, min.
- horizontal installation, max.
- vertical installation, min.
- vertical installation, max.

-30 °C; From FS03

60 °C

-30 °C; From FS03

40 °C

Dimensions

Width

35 mm

Height

147 mm

Depth

129 mm

Weights

Weight, approx.

350 g

last modified:

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