

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



Figure similar

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
HW functional status	FS01
Firmware version	V2.0.0
<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
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated as of version 	V12 / V12
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision 	V1.0 / V5.1
<ul style="list-style-type: none"> PROFINET as of GSD version/GSD revision 	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

- Oversampling
- MSO

No

Yes

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
Short-circuit protection	No
Controlling a digital input	possible

Switching capacity of the outputs

<ul style="list-style-type: none"> • on lamp load, max. 	1 500 W; 10 000 operating cycles
<ul style="list-style-type: none"> • Low energy/fluorescent lamps with electronic control gear 	10x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> • Fluorescent tubes, conventionally compensated 	1x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> • Fluorescent tubes, uncompensated 	10x 58 W (25 000 operating cycles)

Output current

<ul style="list-style-type: none"> • for signal "1" rated value 	5 A
<ul style="list-style-type: none"> • for signal "1" permissible range, min. 	5 mA; 10 V
<ul style="list-style-type: none"> • for signal "1" permissible range, max. 	8 A; thermal continuous current
<ul style="list-style-type: none"> • for signal "0" residual current, max. 	0 A

Parallel switching of two outputs

<ul style="list-style-type: none"> • for logic links 	Yes
<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. 	2 Hz
<ul style="list-style-type: none"> • 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: 1000 A
• Contact connection (internal)	No
• Size of motor starters according to NEMA, max.	5
• 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
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
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
Diagnostics indication LED	
• RUN LED	Yes; Green LED
• ERROR LED	Yes; Red 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	Yes; Switching of different phases permitted
• between the channels, in groups of	1
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	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
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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)
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Ambient conditions

Ambient temperature during operation

• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C

Decentralized operation

Prioritized startup	Yes
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Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.	350 g
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last modified: 03/16/2018