



SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 8 X 230VAC/5A,RELAY; 8 CHANNELS IN GROUPS OF 1, 5A PER GROUP; DIAGNOSIS; SUBSTITUTE VALUE

General information	
Hardware product version	E01
Firmware version	V2.0.0
Product function	
• I&M data	Yes; I&M0 to I&M3
Engineering with	
• STEP 7 TIA Portal can be configured/integrated as of version	V12 / V12
• STEP 7 can be configured/integrated as of version	V5.5 SP3 / -
• PROFIBUS as of GSD version/GSD revision	V1.0 / V5.1
• PROFINET as of GSD version/GSD revision	V2.3 / -
Operating mode	
• MSO	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
Power	
Power available from the backplane bus	0.8 W
Power losses	
Power loss, typ.	5 W
Digital outputs	
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 	10 X 58 W (25,000 operating cycles)
<ul style="list-style-type: none"> Fluorescent tubes, conventionally compensated 	1 X 58 W (25,000 operating cycles)
<ul style="list-style-type: none"> Fluorescent tubes, uncompensated 	10 X 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 2 outputs	
<ul style="list-style-type: none"> for logic links 	Yes
<ul style="list-style-type: none"> for increased power 	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
<ul style="list-style-type: none"> on lamp load, max. 	2 Hz
Aggregate current of the outputs	
<ul style="list-style-type: none"> Max. current per channel 	8 A; see additional description in the manual
<ul style="list-style-type: none"> Max. current per group 	8 A; see additional description in the manual

• Max. current per module	64 A; see additional description in the manual
Relay outputs	
• Number of relay outputs	8
• Rated input voltage of relay coil L+ (DC)	24 V
• Current consumption of relays (coil current of all relays), max.	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	
• Cable length, shielded, max.	1 000 m
• Cable length unshielded, max.	600 m
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	No
Interrupts/diagnostics/status information	
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	Yes
Diagnostic messages	
• Diagnostics	Yes
• 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

Galvanic isolation

Electrical isolation channels

- | | |
|--|--|
| • between the channels | Yes; Switching of different phases permitted |
| • between the channels, in groups of | 1 |
| • between the channels and the backplane bus | Yes |
| • between the channels and the load voltage L+ | Yes |

Permissible potential difference

between different circuits

75 V DC/60 V AC (base isolation) between backplane bus and the supply voltage L+; 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 checked with

Between the channels: 2500 V DC; between the channels and backplane bus: 2500 V DC; between L+ backplane bus 707 V DC (type test)

Decentralized operation

Prioritized startup

Yes

Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.

350 g

last modified:

30.09.2014