



SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 8 X 24VDC,2A;
8 CHANNELS IN GROUPS OF 8, 8 A 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; through internal protection with 10 A per group
Input current	
Current consumption, max.	40 mA; 20 mA per group, no output is activated.
Output voltage	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	0.9 W
Power losses	
Power loss, typ.	5.6 W
Digital outputs	
Number of digital outputs	8
Current-sourcing	Yes
short-circuit protection	Yes; Clocked electronically
• Response threshold, typ.	3 A
Limitation of inductive shutdown voltage to	-17 V
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	2 A
• on lamp load, max.	10 W
Load resistance range	
• lower limit	12 Ω
• upper limit	4 k Ω
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	2 A
• for signal "1" permissible range, max.	2.4 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	100 μ s
• "1" to "0", max.	500 μ s
Parallel switching of 2 outputs	
• for logic links	Yes
• for increased power	No
• for redundant control of a load	Yes

Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz; to IEC 947-5-1, DC-13
• on lamp load, max.	10 Hz
Aggregate current of the outputs	
• Max. current per channel	2 A; see additional description in the manual
• Max. current per group	8 A; see additional description in the manual
• Max. current per module	16 A; 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	Yes
• Fuse blown	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	Yes; Red LED
• for module diagnostics	Yes; Red LED
Galvanic isolation	
Electrical isolation channels	
• between the channels	No
• between the channels, in groups of	4
• between the channels and the backplane bus	Yes

Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation checked with	707 V DC (type test)
Decentralized operation	
Prioritized startup	Yes
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	240 g
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