

SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 16 X
24VDC/0.5A; 16 CHANNELS IN GROUPS OF 8, 4 A PER GROUP;
DIAGNOSIS; SUBSTITUTE VALUE



Figure similar

General information	
Product type designation	DQ 16x24VDC/0.5A ST
HW functional status	E01
Firmware version	V2.0.0
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"> 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 7 A per group
Input current	
Current consumption, max.	30 mA
Output voltage	
Rated value (DC)	24 V
Power	
Power available from the backplane bus	1.1 W
Power loss	
Power loss, typ.	2 W
Digital outputs	
Number of digital outputs	16
Current-sourcing	Yes
Short-circuit protection	Yes; Clocked electronically
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 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 Ω
• upper limit	12 k Ω
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 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 two outputs	
• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13
• on lamp load, max.	10 Hz
Total current of the outputs	

<ul style="list-style-type: none"> • Current per channel, max. • Current per group, max. • Current per module, max. 	0.5 A; see additional description in the manual 4 A; see additional description in the manual 8 A; see additional description in the manual
Cable length	
<ul style="list-style-type: none"> • shielded, max. • unshielded, max. 	1 000 m 600 m
Isochronous mode	
Isochronous operation (application synchronized up to terminal)	Yes
Execution and activation time (TCO), min.	70 µs
Bus cycle time (TDP), min.	250 µs
Interrupts/diagnostics/status information	
Diagnostics	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> • Diagnostic alarm 	Yes
Diagnostic messages	
<ul style="list-style-type: none"> • Monitoring the supply voltage • Wire-break • Short-circuit • Fuse blown 	Yes No Yes No
Diagnostics indication LED	
<ul style="list-style-type: none"> • RUN LED • ERROR LED • Monitoring of the supply voltage (PWR-LED) • Channel status display • for channel diagnostics • for module diagnostics 	Yes; Green LED Yes; Red LED Yes; Green LED Yes; Green LED No Yes; Red LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels • between the channels, in groups of • between the channels and backplane bus 	No 8 Yes
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation)
Isolation	
Isolation tested with	707 V DC (type test)
Decentralized operation	
Prioritized startup	Yes

Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.	230 g
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last modified: 22.02.2016