



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
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## Engineering with

STEP 7 TIA Portal configurable/integrated as of version	V12 / V12
STEP 7 configurable/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
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## 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.
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<b>Output voltage</b>	
Rated value (DC)	24 V
<b>Power</b>	
Power available from the backplane bus	0.9 W
<b>Power loss</b>	
Power loss, typ.	5.6 W
<b>Digital outputs</b>	
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
<b>Switching capacity of the outputs</b>	
with resistive load, max.	2 A
on lamp load, max.	10 W
<b>Load resistance range</b>	
lower limit	12 $\Omega$
upper limit	4 k $\Omega$
<b>Output voltage</b>	
for signal "1", min.	L+ (-0.8 V)
<b>Output current</b>	
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
<b>Output delay with resistive load</b>	
"0" to "1", max.	100 $\mu$ s
"1" to "0", max.	500 $\mu$ s
<b>Parallel switching of 2 outputs</b>	
for logic links	Yes
for uprating	No
for redundant control of a load	Yes
<b>Switching frequency</b>	
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
<b>Total current of the outputs</b>	
Max. current per channel	2 A ; see additional description in the manual

<b>Max. current per group</b>	8 A ; see additional description in the manual
<b>Max. current per module</b>	16 A ; see additional description in the manual
<b>Cable length</b>	
<b>Cable length, shielded, max.</b>	1000 m
<b>Cable length unshielded, max.</b>	600 m
<b>Isochronous mode</b>	
<b>Isochronous mode (application synchronized up to terminal)</b>	No
<b>Interrupts/diagnostics/status information</b>	
<b>Substitute values connectable</b>	Yes
<b>Alarms</b>	
<b>Diagnostic alarm</b>	Yes
<b>Diagnostic messages</b>	
<b>Diagnostics</b>	Yes
<b>Monitoring the supply voltage</b>	Yes
<b>Wire-break</b>	No
<b>Short-circuit</b>	Yes
<b>Fuse blown</b>	No
<b>Diagnostics indication LED</b>	
<b>RUN LED</b>	Yes ; Green LED
<b>ERROR LED</b>	Yes ; Red LED
<b>Monitoring the supply voltage (PWR-LED)</b>	Yes ; Green LED
<b>Channel status display</b>	Yes ; Green LED
<b>for channel diagnostics</b>	Yes ; Red LED
<b>for module diagnostics</b>	Yes ; Red LED
<b>Galvanic isolation</b>	
<b>Galvanic isolation channels</b>	
<b>between the channels</b>	No
<b>between the channels, in groups of</b>	4
<b>between the channels and the backplane bus</b>	Yes
<b>Permissible potential difference</b>	
<b>between different circuits</b>	75 V DC/60 V AC (base isolation)
<b>Isolation</b>	
<b>Isolation tested with</b>	707 V DC (type test)
<b>Decentralized operation</b>	
<b>Prioritized startup</b>	Yes
<b>Dimensions</b>	
<b>Width</b>	35 mm
<b>Height</b>	147 mm

<b>Depth</b>	129 mm
<b>Weights</b>	
<b>Weight, approx.</b>	240 g
Status	Jul 28, 2014