



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

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 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
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 2 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 ; to IEC 947-5-1, DC-13
on lamp load, max.	10 Hz
Total current of the outputs	
Max. current per channel	0.5 A ; see additional description in the manual

Max. current per group	4 A ; see additional description in the manual
Max. current per module	8 A ; see additional description in the manual
Cable length	
Cable length, shielded, max.	1000 m
Cable length unshielded, max.	600 m
Isochronous mode	
Isochronous mode (application synchronized up to terminal)	Yes
Execution and activation time (TCO), min.	70 μ s
Bus cycle time (TDP), min.	250 μ s
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 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	
Galvanic isolation channels	
between the channels	No
between the channels, in groups of	8
between the channels and the backplane bus	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
Status	Aug 20, 2014