



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
Product function	
I&M data	Yes ; IM0 to IM3
Engineering with	
STEP 7 TIA Portal can be configured/integrated as of version	V12.0 / V12.0
STEP 7 can be configured/integrated as of version	as of V5.5 SP3 / -
Supply voltage	
Rated voltage/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 losses	
Power loss, typ.	2 W
Digital outputs	
Number/binary outputs	16
Functionality/short-circuit strength	Yes ; Clocked electronically
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 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, DC13
on lamp load, max.	10 Hz
Aggregate 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 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	
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	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	No
between the channels, in groups of	8
between the channels and the backplane bus	Yes
Isolation	
Isolation checked with	707 V DC (type test)
Decentralized operation	
Supports fast startup	Yes ; 500 ms
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weight	
Weight, approx.	230 g
Status	Apr 5, 2013