



SIMATIC S7-1500,
DIGITAL OUTPUT MODULE DQ 8 X 230VAC/5A,RELAY;
8 CHANNELS IN GROUPS OF 1,
5A 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
Input current	
Current consumption, max.	80 mA

Power	
Power available from the backplane bus	0.8 W
Power loss	
Power loss, typ.	5 W
Digital outputs	
Number of digital outputs	8
Current-sinking	Yes
Current-sourcing	Yes
Short-circuit protection	No
Controlling a digital input	possible
Switching capacity of the outputs	
on lamp load, max.	1500 W ; 10,000 operating cycles
Low energy/fluorescent lamps with electronic control gear	10 X 58 W (25,000 operating cycles)
Fluorescent tubes, conventionally compensated	1 X 58 W (25,000 operating cycles)
Fluorescent tubes, uncompensated	10 X 58 W (25,000 operating cycles)
Output current	
for signal "1" rated value	5 A
for signal "1" permissible range, min.	5 mA ; 10 V
for signal "1" permissible range, max.	8 A ; thermal continuous current
for signal "0" residual current, max.	0 A
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.	2 Hz
with inductive load, max.	0.5 Hz
on lamp load, max.	2 Hz
Total current of the outputs	
Max. current per channel	8 A ; see additional description in the manual
Max. current per group	8 A ; see additional description in the manual
Max. current per module	64 A ; see additional description in the manual
Relay outputs	
Number of relay outputs	8
Rated supply voltage of relay coil L+ (DC)	24 V
Current consumption of relays (coil current of all relays), max.	80 mA
external protection for relay outputs	With miniature circuit breaker with characteristic B for: $\cos \varphi$ 1.0: 600 A $\cos \varphi$ 0.5 ... 0.7: 900 A with 8 A Diazed fuse: 1000 A
Contact connection (internal)	No

Size of motor starters according to NEMA, max.	5
Number of operating cycles, max.	4000000 ; see additional description in the manual
Relay approved acc. to UL 508	Yes ; 250 V AC/5 A g.p.; 120 V AC TV-4 tungsten; A300, R300
Switching capacity of contacts	
with inductive load, max.	see additional description in the manual
with resistive load, max.	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)	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	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	Yes ; Switching of different phases permitted
between the channels, in groups of	1
between the channels and the backplane bus	Yes
between the channels and the load voltage L+	Yes
Permissible potential difference	
between different circuits	75 V DC/60 V AC (base isolation) between backplane bus and the supply voltage L+; 250 V AC between the channels and the supply voltage L+; 250 V AC between the channels and the backplane bus; 500 V AC between the channels
Isolation	

Isolation tested with	Between the channels: 2500 V DC; between the channels and backplane bus: 2500 V DC; between L+ backplane bus 707 V DC (type test)
Decentralized operation	
Prioritized startup	Yes
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	350 g
Status	Jul 14, 2014