



Figure similar

SIMATIC S7-1500, digital output module DQ 8xAC 230V/5A ST; relay; 8 channels in groups of 1; 5 A per group; diagnostics; substitute value: switching cycle counter for integrated relay, the module supports the safety-oriented shutdown of load groups up to SIL1 according to EN IEC 62061:2021 and Category 2 / PL c according to EN ISO 13849-1:2015. front connector (screw terminals or push-in) to be ordered separately

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
HW functional status	From FS02
Firmware version	V2.1.0
<ul style="list-style-type: none"> FW update possible 	Yes
Product function	
<ul style="list-style-type: none"> I&M data 	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> Isochronous mode 	No
<ul style="list-style-type: none"> Prioritized startup 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V12 / V12
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	V1.0 / V5.1
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	V2.3 / -
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	No
<ul style="list-style-type: none"> PWM 	No
<ul style="list-style-type: none"> Oversampling 	No
<ul style="list-style-type: none"> MSO 	Yes
<ul style="list-style-type: none"> Integrated operating cycle counter 	Yes; FW V2.1.0 or higher
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, max.	80 mA
output voltage / header	
Rated value (AC)	230 V; 24 V DC to 120 V DC / 24 V AC to 230 V AC
Power	
Power available from the backplane bus	0.8 W
Power loss	
Power loss, typ.	5 W
Digital outputs	
Type of digital output	Relays
Number of digital outputs	8

Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
Controlling a digital input	Yes; possible
Size of motor starters according to NEMA, max.	5
Switching capacity of the outputs	
<ul style="list-style-type: none"> on lamp load, max. 	1 500 W; 10 000 operating cycles
<ul style="list-style-type: none"> Low energy/fluorescent lamps with electronic control gear 	10x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> Fluorescent tubes, conventionally compensated 	1x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> Fluorescent tubes, uncompensated 	10x 58 W (25 000 operating cycles)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	5 A
<ul style="list-style-type: none"> for signal "1" permissible range, min. 	5 mA; 10 V
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	8 A; thermal continuous current
<ul style="list-style-type: none"> for signal "0" residual current, max. 	0 A
Parallel switching of two outputs	
<ul style="list-style-type: none"> for logic links 	Yes
<ul style="list-style-type: none"> for uprating 	No
<ul style="list-style-type: none"> for redundant control of a load 	Yes
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. 	2 Hz
<ul style="list-style-type: none"> with inductive load, max. 	0.5 Hz
<ul style="list-style-type: none"> on lamp load, max. 	2 Hz
Total current of the outputs	
<ul style="list-style-type: none"> Current per channel, max. 	8 A; see additional description in the manual
<ul style="list-style-type: none"> Current per group, max. 	8 A; see additional description in the manual
<ul style="list-style-type: none"> Current per module, max. 	64 A; see additional description in the manual
Relay outputs	
<ul style="list-style-type: none"> Number of relay outputs 	8
<ul style="list-style-type: none"> Rated supply voltage of relay coil L+ (DC) 	24 V
<ul style="list-style-type: none"> Current consumption of relays (coil current of all relays), typ. 	80 mA
<ul style="list-style-type: none"> 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: 1 000 A
<ul style="list-style-type: none"> Contact connection (internal) 	No
<ul style="list-style-type: none"> Number of operating cycles, max. 	4 000 000; see additional description in the manual
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> with inductive load, max. 	see additional description in the manual
<ul style="list-style-type: none"> with resistive load, max. 	see additional description in the manual
Cable length	
<ul style="list-style-type: none"> shielded, max. 	1 000 m
<ul style="list-style-type: none"> unshielded, max. 	600 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	Yes
Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage 	Yes
<ul style="list-style-type: none"> Wire-break 	No
<ul style="list-style-type: none"> Short-circuit 	No
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED 	Yes; green LED
<ul style="list-style-type: none"> ERROR LED 	Yes; red LED
<ul style="list-style-type: none"> MAINT LED 	Yes; Yellow LED
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) 	Yes; green LED
<ul style="list-style-type: none"> Channel status display 	Yes; green LED
<ul style="list-style-type: none"> for channel diagnostics 	No

<ul style="list-style-type: none"> • for module diagnostics 	Yes; red LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> • between the channels 	Yes; Switching of different phases permitted
<ul style="list-style-type: none"> • between the channels, in groups of 	1
<ul style="list-style-type: none"> • between the channels and backplane bus 	Yes
<ul style="list-style-type: none"> • Between the channels and load voltage L+ 	Yes
Permissible potential difference	
between different circuits	250 V AC between the channels and the supply voltage L+, 250 V AC between the channels and the backplane bus; 250 V AC between the channels (500 V AC when connecting different phases; basic insulation)
Isolation	
Isolation tested with	between the channels: 3 100 V DC; between the channels and the backplane bus: 3 100 V DC; between the channels and the supply voltage L+: 3 100 V DC; between the L+ and the backplane bus: 707 V DC (type test)
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS03
Highest safety class achievable for safety-related tripping of standard modules	
<ul style="list-style-type: none"> • Performance level according to ISO 13849-1 	PL c
<ul style="list-style-type: none"> • Category according to ISO 13849-1 	Cat. 2
Ambient conditions	
Ambient temperature during operation	
<ul style="list-style-type: none"> • horizontal installation, min. 	-30 °C; From FS03
<ul style="list-style-type: none"> • horizontal installation, max. 	60 °C
<ul style="list-style-type: none"> • vertical installation, min. 	-30 °C; From FS03
<ul style="list-style-type: none"> • vertical installation, max. 	40 °C
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	350 g
last modified:	7/28/2021 