

Siemens
EcoTech



Figure similar

SIMATIC S7-1500, digital output module DQ 16x230 V AC/1 A ST; TRIAC; 16 channels in groups of 2; 2 A per group; Substitute value: Front connector (screw terminals or push-in) to be ordered separately

General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	from FS01
Firmware version	V1.3.0
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Prioritized startup	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V13 SP1 / -
• STEP 7 configurable/integrated from version	V5.5 SP3 / -
• PROFIBUS from GSD version/GSD revision	V1.0 / V5.1
• PROFINET from GSD version/GSD revision	V2.3 / -
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Cam control (switching at comparison values)	No
• Oversampling	No
• MSO	Yes
• Integrated operating cycle counter	Yes; FW V1.3.0 or higher
Output voltage	
Rated value (AC)	230 V; 120/230 V AC, 50/60 Hz
Power	
Power consumption from the backplane bus	1.2 W
Power loss	
Power loss, typ.	11.1 W
Address area	
Address space per module	
• Inputs	0 byte; typical, maximum 14 bytes, see manual for details
• Outputs	2 byte
Digital outputs	
Type of digital output	Triac
Number of digital outputs	16

Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
• built-in fuse	6.3 A melting fuse, slow-blow
Size of motor starters according to NEMA, max.	4
Digital output functions, parameterizable	
• Switching tripped by comparison values	No
• Freely usable digital output	No
• PWM output	No
• Digital output with oversampling	No
Switching capacity of the outputs	
• with resistive load, max.	1 A
• on lamp load, max.	50 W
Output voltage	
• for signal "1", min.	L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current
Output current	
• for signal "1" rated value	1 A
• for signal "1" permissible range, min.	10 mA
• for signal "1" permissible range, max.	15 A; max. 1 AC cycle
• for signal "0" residual current, max.	2 mA
Output delay with resistive load	
• "0" to "1", max.	1 AC cycle
• "1" to "0", max.	1 AC cycle
Parallel switching of two outputs	
• for logic links	No
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz
• on lamp load, max.	1 Hz
Total current of the outputs	
• Current per channel, max.	1 A; see additional description in the manual
• Current per group, max.	2 A; see additional description in the manual
• Current per module, max.	10 A; see additional description in the manual
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	Yes
Alarms	
• Diagnostic alarm	No
• Maintenance interrupt	Yes; maintenance alarm for switching cycle counter
Diagnoses	
• Monitoring the supply voltage	No
• Wire break	No
• Short-circuit	No
• Group error	No
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	No
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; red LED
Potential separation	

Potential separation channels			
<ul style="list-style-type: none">• between the channels	No		
<ul style="list-style-type: none">• between the channels, in groups of	2		
<ul style="list-style-type: none">• between the channels and backplane bus	Yes		
Permissible potential difference			
between different circuits	250 V AC between the channels and the backplane bus; 500 V AC between the channels		
Isolation			
Isolation tested with	3 100 V DC		
Standards, approvals, certificates			
Siemens Eco Profile (SEP)	Siemens EcoTech		
Suitable for safety functions	No		
Suitable for safety-related tripping of standard modules	No		
Ecological footprint			
<ul style="list-style-type: none">• environmental product declaration	Yes		
Global warming potential			
<ul style="list-style-type: none">— global warming potential, (total) [CO2 eq]	43.8 kg		
<ul style="list-style-type: none">— global warming potential, (during production) [CO2 eq]	9.5 kg		
<ul style="list-style-type: none">— global warming potential, (during operation) [CO2 eq]	34.5 kg		
<ul style="list-style-type: none">— global warming potential, (after end of life cycle) [CO2 eq]	-0.231 kg		
Security			
signed firmware update	Yes; Firmware V3.0.0 or higher		
safely removing data	No		
data integrity	Yes; Firmware V3.0.0 or higher		
Ambient conditions			
Ambient temperature during operation			
<ul style="list-style-type: none">• horizontal installation, min.	-25 °C; from FS04		
<ul style="list-style-type: none">• horizontal installation, max.	60 °C		
<ul style="list-style-type: none">• vertical installation, min.	-25 °C; from FS04		
<ul style="list-style-type: none">• vertical installation, max.	40 °C		
Altitude during operation relating to sea level			
<ul style="list-style-type: none">• Installation altitude above sea level, max.	2 000 m		
Absolute humidity			
<ul style="list-style-type: none">• dew point, min.	-60 °C; suitable for dry room applications		
Dimensions			
Width	35 mm		
Height	147 mm		
Depth	129 mm		
Weights			
Weight, approx.	310 g		
Classifications			
		Version	Classification
	eClass	16	27-24-22-04
	eClass	14	27-24-22-04
	eClass	12	27-24-22-04
	eClass	9.1	27-24-22-04
	eClass	9	27-24-22-04
	eClass	8	27-24-22-04
	eClass	7.1	27-24-22-04
	eClass	6	27-24-22-04
	ETIM	10	EC001419
	ETIM	9	EC001419
	ETIM	8	EC001419
	ETIM	7	EC001419

IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Miscellaneous](#)



General Product Approval	For use in hazardous locations	Maritime application
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[China RoHS](#)

[Manufacturer Declaration](#)



[EM](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application	Environment
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[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)



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