



SIMATIC S7-1500, digital output module, DQ 8x24 V DC/5 A AUX, width 35 mm, 8 channels in groups of 4, 5 A / channel, 8 A / group, per group, two channels can be parallel-switched (2 x 8 A), 8 channels with pulse width modulation (PWM; max 12.5 kHz), front connector (screw terminal or push-in) to be ordered separately

General information	
Product type designation	DQ 8x24VDC/5A HS
HW functional status	from FS01
Firmware version	from V1.0.0
<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 	Yes
<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 	V18 with HSP 0434 / V20
<ul style="list-style-type: none"> STEP 7 configurable/integrated from version 	STEP 7 V5.7 or higher SP1 or higher
<ul style="list-style-type: none"> PROFIBUS from GSD version/GSD revision 	revision 3 / version 5.1
<ul style="list-style-type: none"> PROFINET from GSD version/GSD revision 	V 2.43 / -
Operating mode	
<ul style="list-style-type: none"> DQ 	Yes
<ul style="list-style-type: none"> DQ with energy-saving function 	Yes; Valve control
<ul style="list-style-type: none"> PWM 	Yes; max. 12.5 kHz
<ul style="list-style-type: none"> Cam control (switching at comparison values) 	No
<ul style="list-style-type: none"> Oversampling 	Yes
<ul style="list-style-type: none"> MSO 	Yes
<ul style="list-style-type: none"> Integrated operating cycle counter 	Yes
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; through internal protection with 10 A per group
Input current	
Current consumption, max.	40 mA; 20 mA per group, no output is activated.
output voltage / header	
Rated value (DC)	24 V
Power	
Power consumption from the backplane bus	0.55 W
Power loss	
Power loss, typ.	2.4 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	8
Current-sinking	No
Current-sourcing	Yes; Push-pull output

Digital outputs, parameterizable	Yes
Short-circuit protection	Yes
• Response threshold, typ.	10 A; 4 us response time
Open-circuit detection	No
Overload protection	Thermal overload protection
Limitation of inductive shutdown voltage to	M (-1 V)
Controlling a digital input	Yes
Digital output functions, parameterizable	
• Freely usable digital output	Yes
• PWM output	Yes
— Number, max.	8
— Cycle duration, parameterizable	Yes; 0.08 ... 100 ms
— ON period, min.	0 %
— ON period, max.	100 %
— Resolution of the duty cycle	0.1 %
— Minimum pulse duration	30 μs
• Digital output with oversampling	Yes
— Number, max.	8
— Values per cycle, max.	16
Switching capacity of the outputs	
• with resistive load, max.	5 A
• with inductive load, max.	5 A
• on lamp load, max.	10 W
Load resistance range	
• lower limit	4.8 Ω
• upper limit	4 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	5 A
• for signal "1" permissible range, max.	6 A; note derating data in the manual
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", typ.	3 μs
• "1" to "0", typ.	3 μs
Parallel switching of two outputs	
• for logic links	No
• for uprating	Yes; 8A for parallel connection of channel 0 and 1 / channel 4 and 5
• for redundant control of a load	No
Switching frequency	
• with resistive load, max.	12.5 kHz
• with inductive load, max.	12.5 kHz; According to IEC 60947-5-1, DC-13
• on lamp load, max.	12.5 kHz
Total current of the outputs	
• Current per channel, max.	5 A; see additional description in the manual
• Current per group, max.	8 A; see additional description in the manual
• Current per module, max.	16 A; see additional description in the manual
Total current of the outputs (per module)	
horizontal installation	
— up to 40 °C, max.	8 A
— up to 60 °C, max.	5 A
vertical installation	
— up to 40 °C, max.	5 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Isochronous mode	
Bus cycle time (TDP), min.	250 μs
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Substitute values connectable	Yes

Alarms			
• Diagnostic alarm	Yes		
• Maintenance interrupt	Yes		
Diagnoses			
• Monitoring the supply voltage	Yes		
• Wire-break	No		
• Short-circuit	Yes		
• Group error	Yes		
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)	Yes; green LED		
• Channel status display	Yes; green LED		
• for channel diagnostics	Yes; red LED		
• for module diagnostics	Yes; red LED		
Potential separation			
Potential separation channels			
• between the channels	No		
• between the channels, in groups of	4		
• between the channels and backplane bus	Yes		
Isolation			
Isolation tested with	707 V DC (type test)		
Standards, approvals, certificates			
Suitable for safety functions	No		
Suitable for safety-related tripping of standard modules	No		
product functions / security / header			
signed firmware update	Yes		
data integrity	No		
Ambient conditions			
Ambient temperature during operation			
• horizontal installation, min.	-30 °C		
• horizontal installation, max.	60 °C		
• vertical installation, min.	-30 °C		
• vertical installation, max.	40 °C		
Altitude during operation relating to sea level			
• Installation altitude above sea level, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual		
Dimensions			
Width	35 mm		
Height	147 mm		
Depth	129 mm		
Weights			
Weight, approx.	236 g		
Classifications			
		Version	Classification
	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
Approvals / Certificates			

[Miscellaneous](#)

[KC](#)

[Manufacturer Declaration](#)



[KC](#)

For use in hazardous locations



[CCC-Ex](#)

[FM](#)



[Type Examination Certificate](#)



For use in hazardous locations

[Miscellaneous](#)

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