

Siemens
EcoTech



SIMATIC S7-1500, digital output module, DQ 64xDC 24V/0.3A BA, 64 channels in groups of 16, 2 A per group at 60 °C, sinking output, 35 mm wide, the module supports the safety-oriented shutdown of load groups up to SIL2 according to EN IEC 62061:2021 and Category 3 / PL d according to EN ISO 13849-1:2015. cables and terminal blocks to be ordered separately as accessories



General information	
Product type designation	DQ 64x24VDC/0.3A BA
HW functional status	from FS01
Firmware version	V1.0.0
• FW update possible	Yes
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Prioritized startup	No
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	V16 with HSP 0319 / V17
• 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	V2.35 / -
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	No
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 7 A per group
external protection for power supply lines (recommendation)	24 V DC/6 A miniature circuit breaker with type B tripping characteristic
Input current	
Current consumption, max.	90 mA; without load
output voltage / header	
Rated value (DC)	24 V
Power	
Power consumption from the backplane bus	0.6 W
Power loss	
Power loss, typ.	3.5 W
Digital outputs	

Type of digital output	Transistor
Number of digital outputs	64
Current-sinking	No
Current-sourcing	Yes
Digital outputs, parameterizable	No
Short-circuit protection	Yes
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
• with resistive load, max.	0.3 A
• on lamp load, max.	5 W
Load resistance range	
• lower limit	80 Ω
• upper limit	10 kΩ
Output voltage	
• for signal "1", min.	L+ (-0.8 V)
Output current	
• for signal "1" rated value	0.3 A
• for signal "1" permissible range, max.	0.3 A
• for signal "0" residual current, max.	0.5 mA
Output delay with resistive load	
• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs
Parallel switching of two outputs	
• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13
• on lamp load, max.	10 Hz
Total current of the outputs	
• Current per channel, max.	0.3 A
• Current per group, max.	2 A
• Current per module, max.	8 A
Total current of the outputs (per module)	
horizontal installation	
— up to 60 °C, max.	8 A
vertical installation	
— up to 40 °C, max.	8 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
• Diagnostic alarm	No
• Maintenance interrupt	No
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	No
• Monitoring of the supply voltage (PWR-LED)	Yes; via SIMATIC TOP connect connection module
• Channel status display	Yes; via SIMATIC TOP connect connection module
• for channel diagnostics	No

• for module diagnostics	No																																							
Potential separation																																								
Potential separation channels																																								
• between the channels	No																																							
• between the channels, in groups of	16; 32 when using SIMATIC TOP connect connection module																																							
• between the channels and backplane bus	Yes																																							
Isolation																																								
Isolation tested with	707 V DC (type test)																																							
Standards, approvals, certificates																																								
Siemens Eco Profile (SEP)	Siemens EcoTech																																							
Suitable for safety functions	No																																							
Suitable for safety-related tripping of standard modules	Yes; from FS01																																							
Ecological footprint																																								
• environmental product declaration	Yes																																							
Global warming potential																																								
— global warming potential, (total) [CO2 eq]	43.8 kg																																							
— global warming potential, (during production) [CO2 eq]	9.5 kg																																							
— global warming potential, (during operation) [CO2 eq]	34.5 kg																																							
— global warming potential, (after end of life cycle) [CO2 eq]	-0.231 kg																																							
Highest safety class achievable for safety-related tripping of standard modules																																								
• Performance level according to ISO 13849-1	PL d																																							
• Category according to ISO 13849-1	Cat. 3																																							
• SIL acc. to IEC 62061	SIL 2																																							
• remark on safety-oriented shutdown	https://support.industry.siemens.com/cs/de/en/view/39198632																																							
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																																							
Dimensions																																								
Width	35 mm																																							
Height	147 mm																																							
Depth	129 mm																																							
Weights																																								
Weight, approx.	270 g																																							
Other																																								
Note:	Please order cable and connection modules separately																																							
Classifications																																								
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Approvals / Certificates																																								

General Product Approval

[Miscellaneous](#)



[KC](#)



For use in hazardous locations

[CCC-Ex](#)



[Type Examination Certificate](#)



[Miscellaneous](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

Maritime application

Environment



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