



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
<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 	No
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V16 with HSP 0319 / V17
<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 	V2.35 / -
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"> Cam control (switching at comparison values) 	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 	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	
Rated value (DC)	24 V
Power	
Power consumption from the backplane bus	0.6 W
Power loss	
Power loss, typ.	3.5 W

Address area	
Address space per module	
• Inputs	0 byte
• Outputs	8 byte
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
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.	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
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	
Security			
safely removing data		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	
Absolute humidity			
• dew point, min.		-60 °C; suitable for dry room applications	
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			
		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
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval



[Miscellaneous](#)

[Manufacturer Declaration](#)



General Product Approval

For use in hazardous locations



[China RoHS](#)

[Manufacturer Declaration](#)

[CCC-Ex](#)



For use in hazardous locations

Maritime application



[Type Examination Certificate](#)

[Miscellaneous](#)

[CCC-Ex](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



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

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

Environment



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