



SIMATIC S7-1500, digital output module, DQ 64xDC 24V/0.3A SNK BA, 64 channels in groups of 16, 2 A per group at 60 °C, sourcing output, 35 mm wide cables and terminal blocks to be ordered separately as accessories

General information	
Product type designation	DQ 64x24VDC/0.3A SNK BA
HW functional status	from FS01
Firmware version	V1.0.0
<ul style="list-style-type: none"> <li>FW update possible</li> </ul>	Yes
Product function	
<ul style="list-style-type: none"> <li>I&amp;M data</li> </ul>	Yes; I&M0 to I&M3
<ul style="list-style-type: none"> <li>Isochronous mode</li> </ul>	No
<ul style="list-style-type: none"> <li>Prioritized startup</li> </ul>	No
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated from version</li> </ul>	V16 with HSP 0319 / V17
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	V1.0 / V5.1
<ul style="list-style-type: none"> <li>PROFINET from GSD version/GSD revision</li> </ul>	V2.35 / -
Operating mode	
<ul style="list-style-type: none"> <li>DQ</li> </ul>	Yes
<ul style="list-style-type: none"> <li>DQ with energy-saving function</li> </ul>	No
<ul style="list-style-type: none"> <li>PWM</li> </ul>	No
<ul style="list-style-type: none"> <li>Cam control (switching at comparison values)</li> </ul>	No
<ul style="list-style-type: none"> <li>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSO</li> </ul>	Yes
<ul style="list-style-type: none"> <li>Integrated operating cycle counter</li> </ul>	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 4 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.	4.7 W

Digital outputs	
Type of digital output	Transistor
Number of digital outputs	64
Current-sinking	Yes
Current-sourcing	No
Digital outputs, parameterizable	No
Short-circuit protection	No; external fusing necessary, max. 4 A per group, tripping characteristic type B or C
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	5 W
Load resistance range	
<ul style="list-style-type: none"> <li>lower limit</li> </ul>	80 Ω
<ul style="list-style-type: none"> <li>upper limit</li> </ul>	10 kΩ
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	M+ (0.5 V)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range, max.</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> </ul>	100 μs
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	500 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> <li>for logic links</li> </ul>	Yes
<ul style="list-style-type: none"> <li>for uprating</li> </ul>	No
<ul style="list-style-type: none"> <li>for redundant control of a load</li> </ul>	Yes
Switching frequency	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> </ul>	100 Hz
<ul style="list-style-type: none"> <li>with inductive load, max.</li> </ul>	0.5 Hz; According to IEC 60947-5-1, DC-13
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> <li>Current per channel, max.</li> </ul>	0.3 A
<ul style="list-style-type: none"> <li>Current per group, max.</li> </ul>	2 A
<ul style="list-style-type: none"> <li>Current per module, max.</li> </ul>	8 A
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>unshielded, max.</li> </ul>	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> </ul>	No
<ul style="list-style-type: none"> <li>Maintenance interrupt</li> </ul>	No
Diagnoses	
<ul style="list-style-type: none"> <li>Monitoring the supply voltage</li> </ul>	No
<ul style="list-style-type: none"> <li>Wire break</li> </ul>	No
<ul style="list-style-type: none"> <li>Short-circuit</li> </ul>	No
<ul style="list-style-type: none"> <li>Group error</li> </ul>	No
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>RUN LED</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>ERROR LED</li> </ul>	Yes; red LED
<ul style="list-style-type: none"> <li>MAINT LED</li> </ul>	No
<ul style="list-style-type: none"> <li>Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; via SIMATIC TOP connect connection module
<ul style="list-style-type: none"> <li>Channel status display</li> </ul>	Yes; via SIMATIC TOP connect connection module
<ul style="list-style-type: none"> <li>for channel diagnostics</li> </ul>	No
<ul style="list-style-type: none"> <li>for module diagnostics</li> </ul>	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	No
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
Security	
signed firmware update	No
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
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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