



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 / header	
Rated value (DC)	24 V
Power	
Power available 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	
<ul style="list-style-type: none"> with resistive load, max. 	0.3 A
<ul style="list-style-type: none"> on lamp load, max. 	5 W
Load resistance range	
<ul style="list-style-type: none"> lower limit 	80 Ω
<ul style="list-style-type: none"> upper limit 	10 kΩ
Output voltage	
<ul style="list-style-type: none"> for signal "1", min. 	L+ (-0.8 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	0.3 A
<ul style="list-style-type: none"> for signal "1" permissible range, max. 	0.3 A
<ul style="list-style-type: none"> for signal "0" residual current, max. 	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. 	100 μs
<ul style="list-style-type: none"> "1" to "0", max. 	500 μs
Parallel switching of two outputs	
<ul style="list-style-type: none"> for logic links 	Yes
<ul style="list-style-type: none"> for uprating 	No
<ul style="list-style-type: none"> for redundant control of a load 	Yes
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. 	100 Hz
<ul style="list-style-type: none"> with inductive load, max. 	0.5 Hz; According to IEC 60947-5-1, DC-13
<ul style="list-style-type: none"> on lamp load, max. 	10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> Current per channel, max. 	0.3 A
<ul style="list-style-type: none"> Current per group, max. 	2 A
<ul style="list-style-type: none"> Current per module, max. 	8 A
Total current of the outputs (per module)	
horizontal installation	
<ul style="list-style-type: none"> — up to 60 °C, max. 	8 A
vertical installation	
<ul style="list-style-type: none"> — up to 40 °C, max. 	8 A
Cable length	
<ul style="list-style-type: none"> shielded, max. 	1 000 m
<ul style="list-style-type: none"> unshielded, max. 	600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	No
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm 	No
<ul style="list-style-type: none"> Maintenance interrupt 	No
Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage 	No
<ul style="list-style-type: none"> Wire-break 	No
<ul style="list-style-type: none"> Short-circuit 	No
<ul style="list-style-type: none"> Group error 	No
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED 	Yes; green LED
<ul style="list-style-type: none"> ERROR LED 	Yes; red LED
<ul style="list-style-type: none"> MAINT LED 	No
<ul style="list-style-type: none"> Monitoring of the supply voltage (PWR-LED) 	Yes; via SIMATIC TOP connect connection module
<ul style="list-style-type: none"> 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	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS01
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
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
last modified:	3/3/2022 