



SIMATIC S7-1500, digital output module DQ16x24...48VUC/125V DC/0.5A ST; 16 channels in groups of 1; 0.5 A per group; substitute value: observe derating 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. front connector (screw terminals or push-in) to be ordered separately

General information	
Product type designation	DQ 16x24 ... 48 V UC/125 V DC/0.5 A ST
HW functional status	FS02
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 	Yes
Engineering with	
<ul style="list-style-type: none"> STEP 7 TIA Portal configurable/integrated from version 	V13 SP1 / -
<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 	V2.3 / -
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
output voltage / header	
Rated value (DC)	24 V; 48 V, 125 V
Rated value (AC)	24 V; 48 V (50 - 60 Hz)
Power	
Power available from the backplane bus	2 W
Power loss	
Power loss, typ.	3.8 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	16
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Limitation of inductive shutdown voltage to	200 V (suppressor diode)
Controlling a digital input	Yes
Switching capacity of the outputs	

<ul style="list-style-type: none"> with resistive load, max. on lamp load, max. 	0.5 A 40 W; At 125 V DC, 10 W at 48 V UC, 5 W at 24 V UC
Output voltage	
<ul style="list-style-type: none"> for signal "1", min. 	L+ (-1.0 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value for signal "1" permissible range, max. 	0.5 A 0.6 A
Output delay with resistive load	
<ul style="list-style-type: none"> "0" to "1", max. "1" to "0", max. 	5 ms 5 ms
Parallel switching of two outputs	
<ul style="list-style-type: none"> for logic links for uprating for redundant control of a load 	Yes No Yes
Switching frequency	
<ul style="list-style-type: none"> with resistive load, max. with inductive load, max. on lamp load, max. 	25 Hz 0.5 Hz 10 Hz
Total current of the outputs	
<ul style="list-style-type: none"> Current per channel, max. Current per group, max. Current per module, max. 	0.5 A 0.5 A 8 A
Cable length	
<ul style="list-style-type: none"> shielded, max. unshielded, max. 	1 000 m 600 m
Interrupts/diagnostics/status information	
Diagnostics function	No
Substitute values connectable	Yes
Alarms	
<ul style="list-style-type: none"> Diagnostic alarm Maintenance interrupt 	No No
Diagnoses	
<ul style="list-style-type: none"> Monitoring the supply voltage Wire-break Short-circuit 	No No No
Diagnostics indication LED	
<ul style="list-style-type: none"> RUN LED ERROR LED Monitoring of the supply voltage (PWR-LED) Channel status display for channel diagnostics for module diagnostics 	Yes; green LED Yes; red LED No Yes; green LED No Yes; red LED
Potential separation	
Potential separation channels	
<ul style="list-style-type: none"> between the channels between the channels, in groups of between the channels and backplane bus 	Yes 1 Yes
Permissible potential difference	
between different circuits	125 V DC/48 V AC
Isolation	
Isolation tested with	2 000 V DC
Standards, approvals, certificates	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS02
Highest safety class achievable for safety-related tripping of standard modules	
<ul style="list-style-type: none"> Performance level according to ISO 13849-1 Category according to ISO 13849-1 SIL acc. to IEC 62061 	PL d Cat. 3 SIL 2
Ambient conditions	

Ambient temperature during operation	
• horizontal installation, min.	0 °C
• horizontal installation, max.	60 °C
• vertical installation, min.	0 °C
• vertical installation, max.	40 °C
Dimensions	
Width	35 mm
Height	147 mm
Depth	129 mm
Weights	
Weight, approx.	230 g
last modified:	3/3/2022 