

SIMATIC S7-1500 Digital output module DQ16x24...48 V UC/125 V DC/0.5 A ST; 16 channels in groups of 1; 0.5 A per group; Substitute value: observe derating 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 as of version 	V13 SP1 / -
<ul style="list-style-type: none"> STEP 7 configurable/integrated as of version 	V5.5 SP3 / -
<ul style="list-style-type: none"> PROFIBUS as of GSD version/GSD revision 	V1.0 / V5.1
<ul style="list-style-type: none"> PROFINET as of 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

- Cam control (switching at comparison values) No
- Oversampling No
- MSO Yes
- Integrated operating cycle counter No

Output voltage

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
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Power loss

Power loss, typ.	3.8 W
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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

- with resistive load, max. 0.5 A
- on lamp load, max. 40 W; At 125 V DC, 10 W at 48 V UC, 5 W at 24 V UC

Output voltage

- for signal "1", min. L+ (-1.0 V)

Output current

- for signal "1" rated value 0.5 A
- for signal "1" permissible range, max. 0.6 A

Output delay with resistive load

- "0" to "1", max. 5 ms
- "1" to "0", max. 5 ms

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. 25 Hz
- with inductive load, max. 0.5 Hz
- on lamp load, max. 10 Hz

Total current of the outputs

- Current per channel, max. 0.5 A
- Current per group, max. 0.5 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	Yes
Alarms	
• Diagnostic alarm	No
• Maintenance interrupt	No
Diagnostic messages	
• Monitoring the supply voltage	No
• Wire-break	No
• Short-circuit	No
Diagnostics indication LED	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• Monitoring of the supply voltage (PWR-LED)	No
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; red LED
Potential separation	
Potential separation channels	
• between the channels	Yes
• between the channels, in groups of	1
• between the channels and backplane bus	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	
• Performance level according to ISO 13849-1	PL d
• Category according to ISO 13849-1	Cat. 3
• SILCL according to IEC 62061	SILCL 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
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last modified: 04/10/2020