

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	
HW functional status	FS02
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>Prioritized startup</li> </ul>	Yes
Engineering with	
<ul style="list-style-type: none"> <li>STEP 7 TIA Portal configurable/integrated as of version</li> </ul>	V13 SP1 / -
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated as of version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS as of GSD version/GSD revision</li> </ul>	V1.0 / V5.1
<ul style="list-style-type: none"> <li>PROFINET as of GSD version/GSD revision</li> </ul>	V2.3 / -
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

- 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

### Isochronous mode

Isochronous operation (application synchronized up to terminal)	No
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### 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
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### Isolation

Isolation tested with	2 000 V DC
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### 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

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|---------------------------------|-------|
| • 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:** 11/16/2019