

SIMATIC S7-1500, DIGITAL OUTPUT MODULE DQ 16 X 230VAC / 1A ST, TRIAC; 16 CHANNELS IN GROUPS OF 2, 2A PER GROUP; SUBSTITUTE VALUE



General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	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
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>Oversampling</li> </ul>	No
<ul style="list-style-type: none"> <li>MSO</li> </ul>	Yes

Output voltage	
Rated value (AC)	230 V; 120/230V AC, 50/60 Hz
Power	
Power available from the backplane bus	1.2 W
Power loss	
Power loss, typ.	11.1 W
Digital outputs	
Number of digital outputs	16
Current-sinking	Yes
Current-sourcing	Yes
Short-circuit protection	No
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> </ul>	1 A
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	50 W
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	L1 (-1.5 V) at maximum output current; L1 (-8.5 V) at minimum output current
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	1 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range, max.</li> </ul>	15 A; max. 1 AC cycle
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	2 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> </ul>	1 AC cycle
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	1 AC cycle
Parallel switching of two outputs	
<ul style="list-style-type: none"> <li>for logic links</li> </ul>	No
<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>	10 Hz
<ul style="list-style-type: none"> <li>with inductive load, max.</li> </ul>	0.5 Hz
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	1 Hz
Total current of the outputs	
<ul style="list-style-type: none"> <li>Current per channel, max.</li> </ul>	1 A; see additional description in the manual
<ul style="list-style-type: none"> <li>Current per group, max.</li> </ul>	2 A; see additional description in the manual
<ul style="list-style-type: none"> <li>Current per module, max.</li> </ul>	10 A; see additional description in the manual
Triac outputs	
<ul style="list-style-type: none"> <li>Size of motor starters according to NEMA, max.</li> </ul>	4
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> </ul>	1 000 m

- unshielded, max.

600 m

### Isochronous mode

Isochronous operation (application synchronized up to terminal) No

### Interrupts/diagnostics/status information

Diagnostics function No

Substitute values connectable Yes

#### Alarms

- Diagnostic alarm 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 No
- between the channels, in groups of 2
- between the channels and backplane bus Yes

### Permissible potential difference

between different circuits 250 V AC between the channels and the backplane bus; 500 V AC between the channels

### Isolation

Isolation tested with 3 100 V DC

### Ambient conditions

#### Ambient temperature during operation

- horizontal installation, min. 0 °C
- horizontal installation, max. 60 °C
- vertical installation, min. 0 °C
- vertical installation, max. 60 °C

### Decentralized operation

Prioritized startup Yes

### Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	310 g
<b>last modified:</b>	12/01/2016