

Siemens  
EcoTech



SIMATIC S7-1500, digital output module DQ 16x230 V AC/1 A ST; TRIAC; 16 channels in groups of 2; 2 A per group; Substitute value: Front connector (screw terminals or push-in) to be ordered separately



Figure similar

General information	
Product type designation	DQ 16x230VAC/1A ST (Triac)
HW functional status	from FS01
Firmware version	V1.3.0
<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>Isochronous mode</li> </ul>	No
<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 from version</li> </ul>	V13 SP1 / -
<ul style="list-style-type: none"> <li>STEP 7 configurable/integrated from version</li> </ul>	V5.5 SP3 / -
<ul style="list-style-type: none"> <li>PROFIBUS from GSD version/GSD revision</li> </ul>	V1.0 / V5.1
<ul style="list-style-type: none"> <li>PROFINET from 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
<ul style="list-style-type: none"> <li>Integrated operating cycle counter</li> </ul>	Yes; FW V1.3.0 or higher
output voltage / header	
Rated value (AC)	230 V; 120/230 V AC, 50/60 Hz
Power	
Power consumption from the backplane bus	1.2 W
Power loss	
Power loss, typ.	11.1 W
Digital outputs	
Type of digital output	Triac
Number of digital outputs	16
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
<ul style="list-style-type: none"> <li>built-in fuse</li> </ul>	6.3 A melting fuse, slow-blow
Size of motor starters according to NEMA, max.	4

<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>on lamp load, max.</li> </ul>	<p>1 A</p> <p>50 W</p>
<b>Output voltage</b>	
<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
<b>Output current</b>	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> <li>for signal "1" permissible range, min.</li> <li>for signal "1" permissible range, max.</li> <li>for signal "0" residual current, max.</li> </ul>	<p>1 A</p> <p>10 mA</p> <p>15 A; max. 1 AC cycle</p> <p>2 mA</p>
<b>Output delay with resistive load</b>	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> <li>"1" to "0", max.</li> </ul>	<p>1 AC cycle</p> <p>1 AC cycle</p>
<b>Parallel switching of two outputs</b>	
<ul style="list-style-type: none"> <li>for logic links</li> <li>for uprating</li> <li>for redundant control of a load</li> </ul>	<p>No</p> <p>No</p> <p>Yes</p>
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>with inductive load, max.</li> <li>on lamp load, max.</li> </ul>	<p>10 Hz</p> <p>0.5 Hz</p> <p>1 Hz</p>
<b>Total current of the outputs</b>	
<ul style="list-style-type: none"> <li>Current per channel, max.</li> <li>Current per group, max.</li> <li>Current per module, max.</li> </ul>	<p>1 A; see additional description in the manual</p> <p>2 A; see additional description in the manual</p> <p>10 A; see additional description in the manual</p>
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>shielded, max.</li> <li>unshielded, max.</li> </ul>	<p>1 000 m</p> <p>600 m</p>
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	No
Substitute values connectable	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> <li>Maintenance interrupt</li> </ul>	<p>No</p> <p>Yes; maintenance alarm for switching cycle counter</p>
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>Monitoring the supply voltage</li> <li>Wire-break</li> <li>Short-circuit</li> </ul>	<p>No</p> <p>No</p> <p>No</p>
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>RUN LED</li> <li>ERROR LED</li> <li>Monitoring of the supply voltage (PWR-LED)</li> <li>Channel status display</li> <li>for channel diagnostics</li> <li>for module diagnostics</li> </ul>	<p>Yes; green LED</p> <p>Yes; red LED</p> <p>No</p> <p>Yes; green LED</p> <p>No</p> <p>Yes; red LED</p>
<b>Potential separation</b>	
<b>Potential separation channels</b>	
<ul style="list-style-type: none"> <li>between the channels</li> <li>between the channels, in groups of</li> <li>between the channels and backplane bus</li> </ul>	<p>No</p> <p>2</p> <p>Yes</p>
<b>Permissible potential difference</b>	
between different circuits	250 V AC between the channels and the backplane bus; 500 V AC between the channels
<b>Isolation</b>	
Isolation tested with	3 100 V DC
<b>Standards, approvals, certificates</b>	
Siemens Eco Profile (SEP)	Siemens EcoTech
Suitable for safety functions	No
<b>Ecological footprint</b>	
<ul style="list-style-type: none"> <li>environmental product declaration</li> </ul>	Yes
Global warming potential	

— global warming potential, (total) [CO2 eq]	43.8 kg
— global warming potential, (during production) [CO2 eq]	9.5 kg
— global warming potential, (during operation) [CO2 eq]	34.5 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.231 kg

**product functions / security / header**

signed firmware update	No
data integrity	No

**Ambient conditions**

<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-25 °C; from FS04
• horizontal installation, max.	60 °C
• vertical installation, min.	-25 °C; from FS04
• vertical installation, max.	40 °C

**Dimensions**

Width	35 mm
Height	147 mm
Depth	129 mm

**Weights**

Weight, approx.	310 g
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**Classifications**

	Version	Classification
eClass	14	27-24-22-04
eClass	12	27-24-22-04
eClass	9.1	27-24-22-04
eClass	9	27-24-22-04
eClass	8	27-24-22-04
eClass	7.1	27-24-22-04
eClass	6	27-24-22-04
ETIM	10	EC001419
ETIM	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

**Approvals / Certificates**

**General Product Approval**



[Miscellaneous](#)

[Manufacturer Declaration](#)



[KC](#)

General Product Approval	For use in hazardous locations	Maritime application
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[FM](#)



**Maritime application**



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)



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last modified:

6/8/2025