



Figure similar

SIPLUS S7-1500 DQ 8x230V AC/2A based on 6ES7522-5FF00-0AB0 with conformal coating, -40...+70 °C, digital output module, 8 channels in groups of 1; 2 A per group; substitute value

General information	
Product type designation	DQ 8x230 V AC/2A ST (triac)
Firmware version	
• FW update possible	Yes
based on	<a href="#">6ES7522-5FF00-0AB0</a>
Product function	
• I&M data	Yes; I&M0 to I&M3
• Isochronous mode	No
• Prioritized startup	Yes
Engineering with	
• STEP 7 TIA Portal configurable/integrated from version	see entry ID: 109746275
Operating mode	
• DQ	Yes
• DQ with energy-saving function	No
• PWM	No
• Oversampling	No
• MSO	Yes
• Integrated operating cycle counter	Yes; FW V2.3.0 or higher
Output voltage	
Rated value (AC)	230 V; 120/230 V AC, 50/60 Hz
Power	
Power consumption from the backplane bus	0.9 W
Power loss	
Power loss, typ.	10.8 W
Digital outputs	
Type of digital output	Triac
Number of digital outputs	8; > +60 °C number of simultaneously controllable outputs max. 8x 0.25 A, max. total current 2 A
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No
• built-in fuse	6.3 A melting fuse, slow-blow
Size of motor starters according to NEMA, max.	5
Switching capacity of the outputs	
• with resistive load, max.	2 A
• on lamp load, max.	50 W
Output voltage	
• for signal "1", min.	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>2 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>2 A; = Tmax; &gt; +60 °C number of simultaneously controllable outputs max. 8x 0.25 A, max. total current per group 2 A</p> <p>2 A; = Tmax; &gt; +60 °C number of simultaneously controllable outputs max. 8x 0.25 A, max. total current per group 2 A</p> <p>10 A; = Tmax; &gt; +60 °C number of simultaneously controllable outputs max. 8x 0.25 A, max. total current per group 2 A</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> <li>• Between the channels and load voltage L1</li> </ul>	<p>Yes</p> <p>1</p> <p>Yes</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>	
Suitable for safety functions	No
<b>Ecological footprint</b>	
<ul style="list-style-type: none"> <li>• environmental product declaration</li> </ul>	Yes
<b>Global warming potential</b>	
— 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
<b>Security</b>	
signed firmware update	No
data integrity	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-40 °C; = Tmin (incl. condensation/frost)
• horizontal installation, max.	70 °C; = Tmax; > +60 °C number of simultaneously controllable outputs max. 8x 0.25 A, max. total current 2 A
• vertical installation, min.	-40 °C; = Tmin
• vertical installation, max.	40 °C; = Tmax
<b>Altitude during operation relating to sea level</b>	
• Installation altitude above sea level, max.	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
<b>Relative humidity</b>	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
<b>Use in stationary industrial systems</b>	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
<b>Use on ships/at sea</b>	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
<b>Usage in industrial process technology</b>	
— Against chemically active substances acc. to EN 60654-4	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)
<b>Remark</b>	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!
<b>Conformal coating</b>	
• Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A
<b>Dimensions</b>	
Width	35 mm
Height	147 mm
Depth	129 mm
<b>Weights</b>	
Weight, approx.	290 g

**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**

[Manufacturer Declaration](#)



[China RoHS](#)



**General Product Approval**

**EMV**

**Maritime application**

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**Environment**



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