



Figure similar

SIPLUS S7-1500 DQ 8x230V AC/5A based on 6ES7522-5HF00-0AB0 with conformal coating, -25...+60 °C, digital output module, 8 channels in groups of 1; 5 A per group; diagnostics; substitute value

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
Firmware version	
• FW update possible	Yes
based on	<a href="#">6ES7522-5HF00-0AB0</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 V2.1.0 or higher
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	19.2 V
permissible range, upper limit (DC)	28.8 V
Reverse polarity protection	Yes
Input current	
Current consumption, max.	80 mA
Output voltage	
Rated value (AC)	230 V; 24 V DC to 120 V DC / 24 V AC to 230 V AC
Power	
Power consumption from the backplane bus	0.8 W
Power loss	
Power loss, typ.	5 W
Digital outputs	
Type of digital output	Relays
Number of digital outputs	8
Current-sinking	Yes
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
Short-circuit protection	No

Controlling a digital input	Yes; possible
Size of motor starters according to NEMA, max.	5
<b>Switching capacity of the outputs</b>	
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	1 500 W; 10 000 operating cycles
<ul style="list-style-type: none"> <li>• Low energy/fluorescent lamps with electronic control gear</li> </ul>	10x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> <li>• Fluorescent tubes, conventionally compensated</li> </ul>	1x 58 W (25 000 operating cycles)
<ul style="list-style-type: none"> <li>• Fluorescent tubes, uncompensated</li> </ul>	10x 58 W (25 000 operating cycles)
<b>Output current</b>	
<ul style="list-style-type: none"> <li>• for signal "1" rated value</li> </ul>	5 A
<ul style="list-style-type: none"> <li>• for signal "1" permissible range, min.</li> </ul>	5 mA; 10 V
<ul style="list-style-type: none"> <li>• for signal "1" permissible range, max.</li> </ul>	8 A; thermal continuous current
<ul style="list-style-type: none"> <li>• for signal "0" residual current, max.</li> </ul>	0 A
<b>Parallel switching of two outputs</b>	
<ul style="list-style-type: none"> <li>• for logic links</li> </ul>	Yes
<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
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	2 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>	2 Hz
<b>Total current of the outputs</b>	
<ul style="list-style-type: none"> <li>• Current per channel, max.</li> </ul>	8 A; see additional description in the manual
<ul style="list-style-type: none"> <li>• Current per group, max.</li> </ul>	8 A; see additional description in the manual
<ul style="list-style-type: none"> <li>• Current per module, max.</li> </ul>	64 A; see additional description in the manual
<b>Relay outputs</b>	
<ul style="list-style-type: none"> <li>• Number of relay outputs</li> </ul>	8
<ul style="list-style-type: none"> <li>• Rated supply voltage of relay coil L+ (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>• Current consumption of relays (coil current of all relays), typ.</li> </ul>	80 mA
<ul style="list-style-type: none"> <li>• external protection for relay outputs</li> </ul>	With miniature circuit breaker with characteristic B for: $\cos \varphi$ 1.0: 600 A $\cos \varphi$ 0.5 ... 0.7: 900 A with 8 A Diazed fuse: 1 000 A
<ul style="list-style-type: none"> <li>• Contact connection (internal)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Number of operating cycles, max.</li> </ul>	4 000 000; see additional description in the manual
<ul style="list-style-type: none"> <li>• Relay approved acc. to UL 508</li> </ul>	Yes; 250 V AC/5 A g.p.; 120 V AC TV-4 tungsten; A300, R300
<b>Switching capacity of contacts</b>	
<ul style="list-style-type: none"> <li>— with inductive load, max.</li> </ul>	see additional description in the manual
<ul style="list-style-type: none"> <li>— with resistive load, max.</li> </ul>	see additional description in the manual
<b>Cable length</b>	
<ul style="list-style-type: none"> <li>• shielded, max.</li> </ul>	1 000 m
<ul style="list-style-type: none"> <li>• unshielded, max.</li> </ul>	600 m
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Maintenance interrupt</li> </ul>	Yes
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Monitoring the supply voltage</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	No
<ul style="list-style-type: none"> <li>• Short-circuit</li> </ul>	No
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• RUN LED</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>• ERROR LED</li> </ul>	Yes; red LED
<ul style="list-style-type: none"> <li>• MAINT LED</li> </ul>	Yes; Yellow LED
<ul style="list-style-type: none"> <li>• Monitoring of the supply voltage (PWR-LED)</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>• Channel status display</li> </ul>	Yes; green LED
<ul style="list-style-type: none"> <li>• for channel diagnostics</li> </ul>	No
<ul style="list-style-type: none"> <li>• for module diagnostics</li> </ul>	Yes; red LED
<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 L+</li> </ul>	<p>Yes; Switching of different phases permitted</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 supply voltage L+, 250 V AC between the channels and the backplane bus; 250 V AC between the channels (500 V AC when connecting different phases; basic insulation)
<b>Isolation</b>	
Isolation tested with	between the channels: 3 100 V DC; between the channels and the backplane bus: 3 100 V DC; between the channels and the supply voltage L+: 3 100 V DC; between the L+ and the backplane bus: 707 V DC (type test)
<b>Standards, approvals, certificates</b>	
Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	Yes; From FS03
<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>Highest safety class achievable for safety-related tripping of standard modules</b>	
<ul style="list-style-type: none"> <li>• Performance level according to ISO 13849-1</li> <li>• Category according to ISO 13849-1</li> <li>• SIL acc. to IEC 62061</li> <li>• remark on safety-oriented shutdown</li> </ul>	<p>PL c</p> <p>Cat. 2</p> <p>SIL 1</p> <p><a href="https://support.industry.siemens.com/cs/de/en/view/39198632">https://support.industry.siemens.com/cs/de/en/view/39198632</a></p>
<b>Security</b>	
signed firmware update	No
data integrity	No
<b>Ambient conditions</b>	
<b>Ambient temperature during operation</b>	
<ul style="list-style-type: none"> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> </ul>	<p>-25 °C; = Tmin (incl. condensation/frost)</p> <p>60 °C; = Tmax</p> <p>-25 °C; = Tmin</p> <p>40 °C; = Tmax</p>
<b>Altitude during operation relating to sea level</b>	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	<p>2 000 m</p> <p>Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)</p>
<b>Relative humidity</b>	
<ul style="list-style-type: none"> <li>• With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	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	Yes; Class 6S3 incl. sand, dust; *

60721-3-6

Usage in industrial process technology

- Against chemically active substances acc. to EN 60654-4
- Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04

Yes; Class 3 (excluding trichlorethylene)  
  
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)

Remark

- 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!

Conformal coating

- Coatings for printed circuit board assemblies acc. to EN 61086
- Protection against fouling acc. to EN 60664-3
- Military testing according to MIL-I-46058C, Amendment 7
- Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A

Yes; Class 2 for high reliability  
  
Yes; Type 1 protection  
Yes; Discoloration of coating possible during service life  
Yes; Conformal coating, Class A

Dimensions

Width	35 mm
Height	147 mm
Depth	129 mm

Weights

Weight, approx.	350 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	EMV
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[Manufacturer Declaration](#)



[China RoHS](#)



[KC](#)

EMV	Maritime application	Environment
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