



Figure similar

SIPLUS S7-1500 DQ 32x24VDC/0.5A based on 6ES7522-1BL01-0AB0 with conformal coating, -40...+70 °C, digital output module, 32 channels in groups of 8; 4 A per group; single-channel diagnostics; substitute value

General information	
Product type designation	DQ 32x24VDC/0.5A HF
based on	<a href="#">6ES7522-1BL01-0AB0</a>
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>	Yes
<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>	see entry ID: 109746275
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
<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
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; through internal protection with 7 A per group
Input current	
Current consumption, max.	60 mA
Output voltage	
Rated value (DC)	24 V
Power	
Power consumption from the backplane bus	1.1 W
Power loss	
Power loss, typ.	3.5 W
Digital outputs	
Type of digital output	Transistor
Number of digital outputs	32
Current-sourcing	Yes
Digital outputs, parameterizable	Yes
output type acc. to IEC 61131, type 0.5	Yes
Short-circuit protection	Yes; Clocked electronically
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	1 A

Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes
<b>Switching capacity of the outputs</b>	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
<b>Load resistance range</b>	
• lower limit	48 Ω
• upper limit	12 kΩ
<b>Output voltage</b>	
• for signal "1", min.	L+ (-0.8 V)
<b>Output current</b>	
• for signal "1" rated value	0.5 A
• for signal "1" permissible range, max.	0.5 A
• for signal "0" residual current, max.	0.5 mA
<b>Output delay with resistive load</b>	
• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs
<b>Parallel switching of two outputs</b>	
• for logic links	Yes
• for uprating	No
• for redundant control of a load	Yes
<b>Switching frequency</b>	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz; According to IEC 60947-5-1, DC-13
• on lamp load, max.	10 Hz
<b>Total current of the outputs</b>	
• Current per channel, max.	0.5 A; see additional description in the manual
• Current per group, max.	4 A; see additional description in the manual
• Current per module, max.	16 A; see additional description in the manual
<b>Cable length</b>	
• shielded, max.	1 000 m
• unshielded, max.	600 m
<b>Isochronous mode</b>	
Execution and activation time (TCO), min.	70 μs
Bus cycle time (TDP), min.	250 μs
<b>Interrupts/diagnostics/status information</b>	
Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire break	Yes
• Short-circuit	Yes
• Group error	Yes
<b>Diagnostics indication LED</b>	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• MAINT LED	Yes; Yellow LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED
• for channel diagnostics	Yes; red LED
• for module diagnostics	Yes; red LED
<b>Potential separation</b>	
<b>Potential separation channels</b>	
• between the channels	No
• between the channels, in groups of	8
• between the channels and backplane bus	Yes
<b>Isolation</b>	

Isolation tested with	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 FS02
<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>	PL d Cat. 3 SIL 2 <a href="https://support.industry.siemens.com/cs/de/en/view/39198632">https://support.industry.siemens.com/cs/de/en/view/39198632</a>
<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> </ul>	-40 °C; = Tmin (incl. condensation/frost) 70 °C; = Tmax; see Derating BasedOn (e.g. manual), additionally Tmax > 60 °C max. aggregate current 2 A per group
<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>	5 000 m Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) // Tmin ... (Tmax - 10 K) at 795 hPa ... 658 hPa (+2 000 m ... +3 500 m) // Tmin ... (Tmax -20 K) at 658 hPa ... 540 hPa (+3 500 m ... +5 000 m)
<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 in bedewed state), horizontal installation
<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
- 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.	280 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**

[China RoHS](#)

[Manufacturer Declaration](#)



**General Product Approval**

**EMV**

**For use in hazardous locations**



[China RoHS](#)



**For use in hazardous locations**

**Maritime application**

**Environment**



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