

SIPLUS S7-1500 DQ 8x230V AC ST 5A T1 RAIL -25 ... +55°C T1 with 70°C for 10 min with conformal coating based on 6ES7522-5HF00-0AB0 . DQ 8xAC "230V/5A; relay; 8 channels in" "groups of 1 5 A per group;" "diagnostics; Substitute value"



Figure similar

General information	
Product type designation	DQ 8x230 V AC/5 A ST (relay)
Product function	
<ul style="list-style-type: none"> <li>• I&amp;M data</li> <li>• Isochronous mode</li> <li>• Fast startup</li> </ul>	Yes; I&M0 to I&M3 No Yes; 500 ms
Supply voltage	
Rated value (DC)	24 V
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Power	
Power available 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
Digital outputs, parameterizable	Yes
Controlling a digital input	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), max.</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

- unshielded, max.

600 m

### Interrupts/diagnostics/status information

Diagnostics function	Yes
Substitute values connectable	Yes
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
• Wire-break	No
• Short-circuit	No
<b>Diagnostics indication LED</b>	
• RUN LED	Yes; green LED
• ERROR LED	Yes; red LED
• Monitoring of the supply voltage (PWR-LED)	Yes; green LED
• Channel status display	Yes; green LED
• for channel diagnostics	No
• for module diagnostics	Yes; red LED

### Potential separation

<b>Potential separation channels</b>	
• between the channels	Yes; Switching of different phases permitted
• between the channels, in groups of	1
• between the channels and backplane bus	Yes
• Between the channels and load voltage L+	Yes

### Isolation

Isolation tested with	Between the channels: 2 500 V DC; between the channels and backplane bus: 2 500 V DC; between L+ and backplane bus 707 V DC (type test) and according to EN 50155 (routine test)
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### Standards, approvals, certificates

Suitable for safety functions	No
Suitable for safety-related tripping of standard modules	No
<b>Railway application</b>	
• EN 50121-3-2	Yes; EMC for rail vehicles
• EN 50121-4	Yes; EMC for signal and telecommunications systems
• EN 50124-1	Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC
• EN 50125-1	Yes; Rail vehicles - see ambient conditions
• EN 50125-2	Yes; Stationary electrical equipment - see ambient conditions
• EN 50125-3	Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)

- EN 50155
- EN 61373
- Fire protection acc. to EN 45545-2

Yes; Rail vehicles - temperature class T1, horizontal mounting position, salt spray Class ST2

Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B

Yes; Rail vehicles - verification on request

## Ambient conditions

<b>Ambient temperature during operation</b>	
• horizontal installation, min.	-25 °C; = Tmin (incl. condensation/frost)
• horizontal installation, max.	60 °C; = Tmax; +70 °C for 10 min (T1 acc. to EN 50155)
<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 land craft, rail vehicles and special-purpose vehicles</b>	
— to biologically active substances according to EN 60721-3-5	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request
— to chemically active substances according to EN 60721-3-5	Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *
— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 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
- Electronic equipment on rolling stock acc. to EN 50155
- 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; Class PC2 protective coating acc. to EN 50155:2017

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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#### Other

Note:	for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776
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