



Figure similar

\*\*\*spare part\*\*\* SIPLUS S7-300 SM 322-20-pole based on 6ES7322-8BF00-0AB0 with conformal coating, -25...+60 °C,

General information	
based on	<a href="#">6ES7322-8BF00-0AB0</a>
Supply voltage	
Load voltage L+	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> </ul>	24 V
<ul style="list-style-type: none"> <li>permissible range, lower limit (DC)</li> </ul>	20.4 V
<ul style="list-style-type: none"> <li>permissible range, upper limit (DC)</li> </ul>	28.8 V
Input current	
from load voltage L+ (without load), max.	90 mA
from backplane bus 5 V DC, max.	70 mA
Power loss	
Power loss, typ.	5 W
Digital outputs	
Number of digital outputs	8
Short-circuit protection	Yes; Electronic
<ul style="list-style-type: none"> <li>Response threshold, typ.</li> </ul>	0.75 to 1.5 A
Limitation of inductive shutdown voltage to	L+ (-45 V)
Controlling a digital input	Yes
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>on lamp load, max.</li> </ul>	5 W
Load resistance range	
<ul style="list-style-type: none"> <li>lower limit</li> </ul>	48 Ω
<ul style="list-style-type: none"> <li>upper limit</li> </ul>	3 kΩ
Output voltage	
<ul style="list-style-type: none"> <li>for signal "1", min.</li> </ul>	L+ (-0.8 to -1.6 V)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	0.5 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 0 to 40 °C, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 0 to 40 °C, max.</li> </ul>	0.6 A
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, min.</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "1" permissible range for 40 to 60 °C, max.</li> </ul>	0.6 A
<ul style="list-style-type: none"> <li>for signal "1" minimum load current</li> </ul>	10 mA
<ul style="list-style-type: none"> <li>for signal "0" residual current, max.</li> </ul>	0.5 mA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> </ul>	180 μs
<ul style="list-style-type: none"> <li>"1" to "0", max.</li> </ul>	245 μs
Parallel switching of two outputs	
<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>	Outputs with series diodes only
<b>Switching frequency</b>	
<ul style="list-style-type: none"> <li>• with resistive load, max.</li> </ul>	100 Hz
<ul style="list-style-type: none"> <li>• with inductive load, max.</li> </ul>	2 Hz
<ul style="list-style-type: none"> <li>• with inductive load (acc. to IEC 60947-5-1, DC13), max.</li> </ul>	2 Hz
<ul style="list-style-type: none"> <li>• on lamp load, max.</li> </ul>	10 Hz
<b>Total current of the outputs (per group)</b>	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
— up to 70 °C, max.	2.5 A; (without diode) & 1.5 A (with diode)
vertical installation	
— up to 40 °C, max.	4 A
<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; Parameterizable
<b>Alarms</b>	
<ul style="list-style-type: none"> <li>• Diagnostic alarm</li> </ul>	Yes; Parameterizable
<b>Diagnoses</b>	
<ul style="list-style-type: none"> <li>• Diagnostic information readable</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Wire-break</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Short-circuit</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Fuse blown</li> </ul>	No
<ul style="list-style-type: none"> <li>• missing load voltage</li> </ul>	Yes
<b>Diagnostics indication LED</b>	
<ul style="list-style-type: none"> <li>• Rated load voltage PWR (green)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Fuse OK FSG (green)</li> </ul>	No
<ul style="list-style-type: none"> <li>• Group error SF (red)</li> </ul>	Yes
<ul style="list-style-type: none"> <li>• Status indicator digital output (green)</li> </ul>	Yes; per channel
<ul style="list-style-type: none"> <li>• Channel fault indicator F (red)</li> </ul>	Yes
<b>Potential separation</b>	
Potential separation digital outputs	
<ul style="list-style-type: none"> <li>• between the channels, in groups of</li> </ul>	8
<ul style="list-style-type: none"> <li>• between the channels and backplane bus</li> </ul>	Yes; Optocoupler
<b>Isolation</b>	
Isolation tested with	500 V DC
<b>Standards, approvals, certificates</b>	
CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
<b>Railway application</b>	
<ul style="list-style-type: none"> <li>• EN 50155</li> </ul>	Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 (see SIOS entry 109755985)
<b>Ambient conditions</b>	
Ambient temperature during operation	
<ul style="list-style-type: none"> <li>• min.</li> </ul>	-25 °C; = Tmin
<ul style="list-style-type: none"> <li>• max.</li> </ul>	70 °C; = Tmax; 60 °C @ UL/cUL use
Altitude during operation relating to sea level	
<ul style="list-style-type: none"> <li>• Installation altitude above sea level, max.</li> </ul>	5 000 m
<ul style="list-style-type: none"> <li>• Ambient air temperature-barometric pressure-altitude</li> </ul>	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)
Relative humidity	
<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)
Resistance	

<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>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>Connection method</b>		
required front connector	20-pin	
<b>Dimensions</b>		
Width	40 mm	
Height	125 mm	
Depth	120 mm	
<b>Weights</b>		
Weight, approx.	210 g	
<b>Classifications</b>		
	<b>Version</b>	<b>Classification</b>
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
<b>Approvals / Certificates</b>		
<b>General Product Approval</b>		



[Manufacturer Declaration](#)

[Declaration of Conformity](#)



[China RoHS](#)



EMV

For use in hazardous locations

[KC](#)



RCM



IECEx



ATEX

[CCC-Ex](#)

last modified:

5/29/2024