



Figure similar

spare part SIPLUS S7-300 SM 322-20-pole based on 6ES7322-1BH01-0AA0 with conformal coating, -25...+70 °C, digital output isolated 16 DO, 24 V DC, 0.5 A, total current 4 A/group (8 A/module)

General information

based on

[6ES7322-1BH01-0AA0](#)

Supply voltage

Load voltage L+

• Rated value (DC)	24 V
• permissible range, lower limit (DC)	20.4 V
• permissible range, upper limit (DC)	28.8 V

Input current

from load voltage L+ (without load), max.	80 mA
from backplane bus 5 V DC, max.	80 mA

Power loss

Power loss, typ.	4.9 W
------------------	-------

Digital outputs

Number of digital outputs	16
Short-circuit protection	Yes; Electronic
• Response threshold, typ.	1 A
Limitation of inductive shutdown voltage to	L+ (-53 V)
Controlling a digital input	Yes

Switching capacity of the outputs

• on lamp load, max.	5 W
----------------------	-----

Load resistance range

• lower limit	48 Ω
• upper limit	4 kΩ

Output voltage

• for signal "1", min.	L+ (-0.8 V)
------------------------	-------------

Output current

• for signal "1" rated value	0.5 A
• for signal "1" permissible range for 0 to 40 °C, min.	5 mA
• for signal "1" permissible range for 0 to 40 °C, max.	0.6 A
• for signal "1" permissible range for 40 to 60 °C, min.	5 mA
• for signal "1" permissible range for 40 to 60 °C, max.	0.6 A
• for signal "1" minimum load current	5 mA
• for signal "0" residual current, max.	0.5 mA

Output delay with resistive load

• "0" to "1", max.	100 μs
• "1" to "0", max.	500 μs

Parallel switching of two outputs

• for uprating	No
----------------	----

• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	100 Hz
• with inductive load, max.	0.5 Hz
• with inductive load (acc. to IEC 60947-5-1, DC13), max.	0.5 Hz
• on lamp load, max.	10 Hz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	3 A
— up to 70 °C, max.	3 A
vertical installation	
— up to 40 °C, max.	2 A
Cable length	
• shielded, max.	1 000 m
• unshielded, max.	600 m
Interrupts/diagnostics/status information	
Alarms	No
Diagnostics function	No
Alarms	
• Diagnostic alarm	No
Diagnoses	
• Wire-break	No
• Short-circuit	No
• Fuse blown	No
• missing load voltage	No
Diagnostics indication LED	
• Rated load voltage PWR (green)	No
• Fuse OK FSG (green)	No
• Status indicator digital output (green)	Yes
Potential separation	
Potential separation digital outputs	
• between the channels	Yes
• between the channels, in groups of	8
• between the channels and backplane bus	Yes; Optocoupler
Isolation	
Isolation tested with	500 V DC
Standards, approvals, certificates	
CE mark	Yes
UL approval	Yes; File E239877
RCM (formerly C-TICK)	Yes
KC approval	Yes
EAC (formerly Gost-R)	Yes
Railway application	
• EN 50155	Yes; Sections 4, 5 and 12; no further agreements apply; T1, Category 1, Class A/B, EN 50155:2007 (see SIOS entry 109755985)
Ambient conditions	
Ambient temperature during operation	
• min.	-25 °C; = Tmin
• max.	70 °C; = Tmax; for use on railway vehicles according to EN50155, the rated temperature range -25 ... +55 °C (T1) or 60 °C @ UL/ULhaz/ATEX/FM use applies
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	5 000 m
• Ambient air temperature-barometric pressure-altitude	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																																											
● With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)																																										
Resistance																																											
Use in stationary industrial systems																																											
— 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, *																																										
Use on land craft, rail vehicles and special-purpose vehicles																																											
— 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; *																																										
Use on ships/at sea																																											
— 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; *																																										
Usage in industrial process technology																																											
— 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)																																										
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!																																										
Connection method																																											
required front connector	20-pin																																										
Dimensions																																											
Width	40 mm																																										
Height	125 mm																																										
Depth	120 mm																																										
Weights																																											
Weight, approx.	190 g																																										
Classifications																																											
	<table><tr><td></td><td>Version</td><td>Classification</td></tr><tr><td>eClass</td><td>14</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>12</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>9.1</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>9</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>8</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>7.1</td><td>27-24-22-04</td></tr><tr><td>eClass</td><td>6</td><td>27-24-22-04</td></tr><tr><td>ETIM</td><td>10</td><td>EC001419</td></tr><tr><td>ETIM</td><td>9</td><td>EC001419</td></tr><tr><td>ETIM</td><td>8</td><td>EC001419</td></tr><tr><td>ETIM</td><td>7</td><td>EC001419</td></tr><tr><td>IDEA</td><td>4</td><td>3566</td></tr><tr><td>UNSPSC</td><td>15</td><td>32-15-17-05</td></tr></table>		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
	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](#)

[Declaration of Conformity](#)



[China RoHS](#)



EMV

For use in hazardous locations

[KC](#)



[CCC-Ex](#)

last modified:

5/29/2024