



Figure similar

spare part SIPLUS S7-300 SM 322 8 DO 120/ 230 V AC 1 A based on 6ES7322-1FF01-0AA0 with conformal coating, -40...+70 °C, digital output isolated, 8 DO, 120/230 V AC, 1 A, 1x 20-pole

General information	
based on	6ES7322-1FF01-0AA0
Supply voltage	
Load voltage L1	
<ul style="list-style-type: none"> Rated value (AC) 	230 V; 120/230 V AC
<ul style="list-style-type: none"> permissible range, lower limit (AC) 	93 V
<ul style="list-style-type: none"> permissible range, upper limit (AC) 	264 V
<ul style="list-style-type: none"> permissible frequency range, lower limit 	47 Hz
<ul style="list-style-type: none"> permissible frequency range, upper limit 	63 Hz
Input current	
from load voltage L1 (without load), max.	2 mA
from backplane bus 5 V DC, max.	100 mA
Power loss	
Power loss, typ.	8.6 W
Digital outputs	
Number of digital outputs	8
Short-circuit protection	Yes; Fuse 8 A, 250 V; per group
<ul style="list-style-type: none"> required current for fuse shutdown, min. 	40 A
<ul style="list-style-type: none"> Response time, max. 	300 ms
Controlling a digital input	Yes
Size of motor starters according to NEMA, max.	5 NEMA compliant
Spare fuses	8 A / quick response
Zero-crossing switch	Yes; Max. 60 V
Switching capacity of the outputs	
<ul style="list-style-type: none"> on lamp load, max. 	50 W
Output voltage	
<ul style="list-style-type: none"> for signal "1", min. 	L1 (-1.5 V)
<ul style="list-style-type: none"> for signal "1" (at max. current), min. 	L1 (-1.5 V)
<ul style="list-style-type: none"> for signal "1" (at min. current), min. 	L1 (-8.5 V)
Output current	
<ul style="list-style-type: none"> for signal "1" rated value 	2 A
<ul style="list-style-type: none"> for signal "1" permissible range for 0 to 40 °C, min. 	10 mA
<ul style="list-style-type: none"> for signal "1" permissible range for 0 to 40 °C, max. 	2 A
<ul style="list-style-type: none"> for signal "1" permissible range for 40 to 60 °C, min. 	10 mA
<ul style="list-style-type: none"> for signal "1" permissible range for 40 to 60 °C, max. 	1 A
<ul style="list-style-type: none"> for signal "1" minimum load current 	10 mA
<ul style="list-style-type: none"> for signal "1" permissible surge current, max. 	20 A; max. 1 AC cycle
<ul style="list-style-type: none"> for signal "0" residual current, max. 	2 mA

Output delay with resistive load	
• "0" to "1", max.	1 AC cycle
• "1" to "0", max.	1 AC cycle
Parallel switching of two outputs	
• for uprating	No
• for redundant control of a load	Yes
Switching frequency	
• with resistive load, max.	10 Hz
• with inductive load, max.	0.5 Hz
• with inductive load (acc. to IEC 60947-5-1, AC15), max.	0.5 Hz
• on lamp load, max.	1 Hz
Total current of the outputs (per group)	
horizontal installation	
— up to 40 °C, max.	4 A
— up to 60 °C, max.	2 A
— up to 70 °C, max.	1.5 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	Yes; Fuse blown or load voltage missing
Alarms	
• Diagnostic alarm	No
Diagnoses	
• Wire break	No
• Short-circuit	No
• Fuse blown	Yes
• missing load voltage	Yes
Diagnostics indication LED	
• Rated load voltage PWR (green)	Yes
• Fuse OK FSG (green)	Yes
• Group error SF (red)	Yes
• Status indicator digital output (green)	Yes
Potential separation	
Potential separation digital outputs	
• between the channels	Yes
• between the channels, in groups of	4
• between the channels and backplane bus	Yes; Optocoupler
Isolation	
Isolation tested with	1 500 V AC
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; T1 Category 1 Class A/B horizontal mounting position
Ambient conditions	
Ambient temperature during operation	
• min.	-40 °C
• max.	70 °C; = Tmax; for use on railway vehicles according to EN 50155, the rated temperature range -25 ... +55 °C (T1) or 60 °C @ UL/UL hazardous 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.	2 000 m	
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 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 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.	275 g	
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		

[Manufacturer Declaration](#)



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