



Figure similar

SIPLUS S7-1200 SM 1222 16DQ RLY based on 6ES7222-1HH32-0XB0 with conformal coating, -20...+60 °C, digital output 16 DQ, relay 2 A

General information	
Product type designation	SM 1222, DQ 16x relay/2 A
based on	<a href="#">6ES7222-1HH32-0XB0</a>
Supply voltage	
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V
Input current	
from backplane bus 5 V DC, max.	135 mA
Digital outputs	
<ul style="list-style-type: none"> <li>from load voltage L+, max.</li> </ul>	11 mA/relay coil
Power loss	
Power loss, typ.	8.5 W
Digital outputs	
Number of digital outputs	16
<ul style="list-style-type: none"> <li>in groups of</li> </ul>	1
Short-circuit protection	No; to be provided externally
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>on lamp load, max.</li> </ul>	2 A 30 W with DC, 200 W with AC
Output voltage	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>Rated value (AC)</li> </ul>	5 V DC to 30 V DC 5 V AC to 250 V AC
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> </ul>	2 A
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> <li>"1" to "0", max.</li> </ul>	10 ms 10 ms
Total current of the outputs (per group)	
horizontal installation	
— up to 50 °C, max.	10 A; Current per mass
Relay outputs	
<ul style="list-style-type: none"> <li>Number of relay outputs</li> <li>Rated supply voltage of relay coil L+ (DC)</li> <li>Number of operating cycles, max.</li> </ul>	16 24 V mechanically 10 million, at rated load voltage 100 000
Switching capacity of contacts	
<ul style="list-style-type: none"> <li>with inductive load, max.</li> <li>on lamp load, max.</li> <li>with resistive load, max.</li> </ul>	2 A 30 W with DC, 200 W with AC 2 A

<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	150 m
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostics indication LED</b>	
• for status of the outputs	Yes
<b>Potential separation</b>	
<b>Potential separation digital outputs</b>	
• between the channels	Relay, dry contact
• between the channels, in groups of	4
• between the channels and backplane bus	1 500 V AC for 1 minute
<b>Permissible potential difference</b>	
between different circuits	750 V AC for 1 minute
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<b>Standards, approvals, certificates</b>	
<b>Ecological footprint</b>	
• environmental product declaration	Yes
<b>Global warming potential</b>	
— global warming potential, (total) [CO2 eq]	68.6 kg
— global warming potential, (during production) [CO2 eq]	8.16 kg
— global warming potential, (during operation) [CO2 eq]	60.7 kg
— global warming potential, (after end of life cycle) [CO2 eq]	-0.334 kg
<b>Ambient conditions</b>	
<b>Free fall</b>	
• Fall height, max.	0.3 m; five times, in product package
<b>Ambient temperature during operation</b>	
• min.	-20 °C; = Tmin (incl. condensation/frost); start-up @ 0 °C
• max.	60 °C; = Tmax
• At cold restart, min.	0 °C
<b>Ambient temperature during storage/transportation</b>	
• min.	-40 °C
• max.	70 °C
<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) // 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); above 2 000 m max. 132 V AC
<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 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	Yes; Class 2 for high reliability
• Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
• Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
• Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	Yes; Conformal coating, Class A

<b>Connection method</b>	
required front connector	Yes

<b>Mechanics/material</b>	
Enclosure material (front)	
• Plastic	Yes

<b>Dimensions</b>	
Width	45 mm
Height	100 mm
Depth	75 mm

<b>Weights</b>	
Weight, approx.	260 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

**Approvals / Certificates**

**General Product Approval**

[Manufacturer Declaration](#)



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<b>General Product Approval</b>	<b>EMV</b>	<b>Maritime application</b>
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Environment



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