Data sheet 6ES7222-1HF32-0XB0

SIMATIC S7-1200, Digital output SM 1222, 8 DO, relay 2 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.	120 mA	
Digital outputs		
• from load voltage L+, max.	11 mA/relay coil	
Power loss		
Power loss, typ.	4.5 W	
Digital outputs		
Number of digital outputs	8	
• in groups of	2	
Short-circuit protection	No; to be provided externally	
Switching capacity of the outputs		
• with resistive load, max.	2 A	
• on lamp load, max.	30 W with DC, 200 W with AC	
Output voltage		

Rated value (AC) S V AC to 250 V AC Output current of or signal "1" rated value 2 A Output delay with resistive load o"0" to "1", max. 10 ms 10 ms 10 ms Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs Number of relay outputs Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. — with resistive load, max. — sheledd, max. 150 m Interrupts (diagnostics/status information) Alarms Diagnostics indication LED of or status of the outputs Potential separation Potential separation digital outputs between the channels in groups of between difference between difference between difference between difference between difference Degree of protection Degree of protection Degree of protection acc, to EN 60529 of Poen CSA approval Ves UL approval Ves UL approval	Rated value (DC)	5 V DC to 30 V DC
• for signal "1" rated value Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms • "1" to "0", max. 10 ms Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. • shelded, max. • shelded, max. • unshielded, max. • unshielded, max. • Diagnostic alarm Diagnostic indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels, in groups of • between the channels, in groups of • between the channels, in groups of • between difference between difference between difference between difference between difference between of protection Degree and class of protection Degree of protection acc. to EN 60529 • P20 • P20 • Yes Standards, approvals, certificates CE mark Yes CSA approval	• Rated value (AC)	5 V AC to 250 V AC
Output delay with resistive load • "0" to "1", max. • "1" to "0", max. 10 ms Total current of the outputs (per group) horizontal installation — up to 50 "C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. — to lamp load, max. — with possible load, max. 150 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Potential separation digital outputs • between the channels • between the channels, in groups of • between difference between difference between difference between of protection Degree and class of protection Degree and class of protection Degree of protection acc. to EN 60529 • IP20 • Yes Standards, approvals, certificates CE mark — Yes CSA approval	Output current	
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• "1" to "0", max. Total current of the outputs (per group) horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Number of relay outputs • Number of perating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — on lamp load, max. — with resistive load, max. • shielded, max. • shielded, max. • unshielded, max. • Diagnostics Indication LED • for status of the outputs • between the channels and backplane bus • between the channels and backplane bus Permissible potential difference between different circuits Person Potential separation Degree of protection acc. to EN 60529 • IP20 Yes Standards, approval Yes CSA approval	Output delay with resistive load	
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horizontal installation — up to 50 °C, max. Relay outputs • Number of relay outputs • Rated supply voltage of relay coil L+ (DC) • Number of operating cycles, max. Switching capacity of contacts — with inductive load, max. — on lamp load, max. — with resistive load, max. — with resistive load, max. — with resistive load, max. — with shielded, max. • shielded, max. • unshielded, max. • Unshielded, max. • Unshielded, max. • Unshielded, max. • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • P20 Standards, approvals, certificates CE mark Yes CSA approval	• "1" to "0", max.	10 ms
up to 50 °C, max. Relay outputs • Number of relay outputs • Number of poretating cycles, max. Switching capacity of contacts with inductive load, max on lamp load, max with resistive load, wax with resistive load with AC wit	Total current of the outputs (per group)	
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Rated supply voltage of relay coil L+ (DC) Number of operating cycles, max. Number of operating cycles, max. Switching capacity of contacts - with inductive load, max on lamp load, max with resistive load, max. 2 A Sale length shielded, max. Interrupts/diagnostics/status information Alarms Diagnostic alarm Potential separation Potential separation Potential separation digital outputs Between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 Interrupts (Pess Potential separaval) Pess Standards, approvals, certificates CE mark Yes CSA approval	Relay outputs	
Number of operating cycles, max. Switching capacity of contacts - with inductive load, max. - on lamp load, max. - with resistive load, max. - bold length - shielded, max. - unshielded, max. - unshielded, max. - unshielded, max. - biagnostics/status information Alarms - Diagnostic alarm - Ves Diagnostics indication LED - for status of the outputs - Ves Potential separation Potential separation digital outputs - between the channels - between the channels, in groups of - between the channels and backplane bus - Permissible potential difference - between different circuits - Degree and class of protection Degree of protection acc. to EN 60529 - iP20 - Yes Standards, approvals, certificates CE mark - Yes CSA approval - Yes - CSA approval	Number of relay outputs	8
Switching capacity of contacts - with inductive load, max. 2 A - on lamp load, max. 30 W with DC, 200 W with AC - with resistive load, max. 2 A Cable length • shielded, max. 500 m • unshielded, max. 150 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Yes Diagnostic indication LED • for status of the outputs Yes Potential separation Potential separation digital outputs • between the channels Relays • between the channels, in groups of 2 • between the channels and backplane bus 1500 V AC for 1 minute Permissible potential difference between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 • iP20 Yes Standards, approvals, certificates CE mark Yes CSA approval	 Rated supply voltage of relay coil L+ (DC) 	24 V
- with inductive load, max on lamp load, max with resistive load, max with resistive load, max with resistive load, max with resistive load, max. 2 A Cable length • shielded, max. • unshielded, max. 1500 m Interrupts/diagnostics/status information Alarms • Diagnostic alarm Polagnostic indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval	 Number of operating cycles, max. 	mechanically 10 million, at rated load voltage 100 000
- on lamp load, max. - with resistive load, max. 2 A Cable length • shielded, max. • unshielded, max. • Unique load, max. • Diagnostics/status information Alarms • Diagnostic alarm Potential separation Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus • between different circuits Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Yes Standards, approvals, certificates CE mark Yes Standards, approval	Switching capacity of contacts	
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Alarms Diagnostic alarm Poing Diagnostic indication LED for status of the outputs Potential separation Potential separation digital outputs between the channels between the channels, in groups of between the channels and backplane bus Permissible potential difference between different circuits Permissible potential difference between different circuits Pegree and class of protection Degree of protection acc. to EN 60529 IP20 Yes Standards, approvals, certificates CE mark Yes CSA approval Yes	Interrupts/diagnostics/status information	
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between different circuits 750 V AC for 1 minute Degree and class of protection Degree of protection acc. to EN 60529 IP20 Standards, approvals, certificates CE mark CSA approval Yes Yes	Potential separation digital outputs • between the channels • between the channels, in groups of	2
Degree of protection acc. to EN 60529	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus	2
Degree of protection acc. to EN 60529	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference	2 1500 V AC for 1 minute
Standards, approvals, certificates CE mark CSA approval Yes Yes	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits	2 1500 V AC for 1 minute
CE mark Yes CSA approval Yes	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection	2 1500 V AC for 1 minute
CE mark Yes CSA approval Yes	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529	2 1500 V AC for 1 minute 750 V AC for 1 minute
	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20	2 1500 V AC for 1 minute 750 V AC for 1 minute
UL approval Yes	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates	2 1500 V AC for 1 minute 750 V AC for 1 minute Yes
	Potential separation digital outputs • between the channels • between the channels, in groups of • between the channels and backplane bus Permissible potential difference between different circuits Degree and class of protection Degree of protection acc. to EN 60529 • IP20 Standards, approvals, certificates CE mark	2 1500 V AC for 1 minute 750 V AC for 1 minute Yes

cULus	Yes
FM approval	Yes
RCM (formerly C-TICK)	Yes
Marine approval	Yes
Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-20 °C
• max.	60 °C
 horizontal installation, min. 	-20 °C
 horizontal installation, max. 	60 °C
• vertical installation, min.	-20 °C
• vertical installation, max.	50 °C
• permissible temperature change	5°C to 55°C, 3°C / minute
Ambient temperature during storage/transportation	
• min.	-40 °C
● max.	70 °C
Air pressure acc. to IEC 60068-2-13	
• Storage/transport, min.	660 hPa
 Storage/transport, max. 	1 080 hPa
Relative humidity	
 Operation at 25 °C without condensation, max. 	95 %
Connection method	
required front connector	Yes
Mechanics/material	
Enclosure material (front)	
• Plastic	Yes
Dimensions	
Width	45 mm
Height	100 mm
Depth	75 mm
Weights	
Weight, approx.	190 g
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