6ES7222-1HF32-0XB0

Data sheet

SIMATIC S7-1200, DIGITAL OUTPUT SM 1222, 8 DO, RELAY 2A



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 (DC)	5 V DC to 30 V DC
Rated value (AC)	5 V AC to 250 V AC
Output current	
• for signal "1" rated value	2 A
Output delay with resistive load	
• "0" to "1", max.	10 ms
• "1" to "0", max.	10 ms
Total current of the outputs (per group)	
horizontal installation	
— up to 50 °C, max.	10 A; Current per mass
Relay outputs	
Number of relay outputs	8
 Rated supply voltage of relay coil L+ (DC) 	24 V
 Number of operating cycles, max. 	mechanically 10 million, at rated load voltage 100 000
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	
Interrupts/diagnostics/status information Alarms	Yes
Interrupts/diagnostics/status information Alarms • Diagnostic alarm	Yes
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED	Yes
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs	
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation	
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs	Yes
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels	Yes
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels • between the channels, in groups of	Yes Relays 2
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics indication LED • for status of the outputs Potential separation Potential separation digital outputs • between the channels	Yes
Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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	Yes Relays 2
Interrupts/diagnostics/status information Alarms • Diagnostic alarm Diagnostics 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	Yes Relays 2
Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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	Yes Relays 2 1500 V AC for 1 minute
Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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	Yes Relays 2 1500 V AC for 1 minute
Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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 Degree and class of protection	Yes Relays 2 1500 V AC for 1 minute
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Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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 Degree and class of protection Degree of protection acc. to EN 60529 IP20 Standards, approvals, certificates	Relays 2 1500 V AC for 1 minute 750 V AC for 1 minute
Interrupts/diagnostics/status information Alarms Diagnostic alarm Diagnostics 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 Degree and class of protection Degree of protection acc. to EN 60529 IP20 Standards, approvals, certificates CE mark	Yes Relays 2 1500 V AC for 1 minute 750 V AC for 1 minute Yes
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FM approval Yes RCM (formerly C-TICK) Yes Ambient conditions Free fall Fall height, max. 0.3 m; five times, in product package Ambient temperature during operation inin. 20°C max. 60°C horizontal installation, min. 20°C horizontal installation, max. 60°C vertical installation, max. 50°C vertical installation, max. 50°C vertical installation, max. 50°C vertical installation, max. 50°C Ambient 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. 1080 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 Isast modified: 11/28/2017	cULus	Yes
Ambient conditions Free fall Fall height, max. Ambient temperature during operation imin. horizontal installation, min. horizontal installation, max. horizontal installation, min. horizontal installation. h	FM approval	Yes
Ambient conditions Free fall Fall height, max. O.3 m; five times, in product package Ambient temperature during operation min. max. horizontal installation, min. horizontal installation, max. horizontal installation, max. vertical installation, max. permissible temperature change Ambient temperature during storage/transportation min. max. 70 °C Air pressure acc. to IEC 80068-2-13 Storage/transport, min. 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 Weight, approx. 190 g Weight, approx. 190 g	RCM (formerly C-TICK)	Yes
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Free fall Fall height, max. Ambient temperature during operation min. max. horizontal installation, min. vertical installation, max. permissible temperature change Ambient temperature during operation vertical installation, max. vertical installation, max. permissible temperature change Ambient temperature during storage/transportation min. max. 70 °C Air pressure acc. to IEC 60068-2-13 Storage/transport, min. Storage/transport, min. Storage/transport, min. Storage/transport, max. 1 080 hPa 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 75 mm Weights Weight, approx. 190 g	Ambient conditions	
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Ambient temperature during storage/transportation • min. • max. 70 °C Air pressure acc. to IEC 60068-2-13 • Storage/transport, min. • 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 Ves Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 190 g	• vertical installation, max.	50 °C
 min. -40 °C max. 70 °C Air pressure acc. to IEC 60068-2-13 Storage/transport, min. 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 	• permissible temperature change	5°C to 55°C, 3°C / minute
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Air pressure acc. to IEC 60068-2-13 • Storage/transport, min. • 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 Plastic Yes Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 190 g	• min.	-40 °C
Storage/transport, min. Storage/transport, max. Relative humidity Operation at 25 °C without condensation, max. 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	• max.	70 °C
● Storage/transport, max. Relative humidity ● Operation at 25 °C without condensation, max. 95 % Connection method required front connector Yes Mechanics/material Enclosure material (front) ● Plastic Ves Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 190 g	Air pressure acc. to IEC 60068-2-13	
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Connection method required front connector Yes Mechanics/material Enclosure material (front) • Plastic Pimensions Width Height 100 mm Depth 75 mm Weights Weight, approx. 190 g	Relative humidity	
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required front connector Mechanics/material Enclosure material (front) Plastic Plastic Yes Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 190 g	Connection method	
Enclosure material (front) Plastic Plastic Yes Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weight, approx. 190 g		Yes
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● Plastic Plastic Yes Dimensions Width 45 mm Height 100 mm Depth 75 mm Weights Weights Weight, approx. 190 g		
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last modified: 11/28/2017	Weight, approx.	190 g
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