

SIMATIC S7-1200, Digital output SM 1222, 8 DO, Relay Changeover contact

General information	
Product type designation	SM 1222, DQ 8x 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.	140 mA
Digital outputs	
<ul style="list-style-type: none"> <li>from load voltage L+, max.</li> </ul>	16.7 mA/relay coil
Power loss	
Power loss, typ.	5 W
Digital outputs	
Number of digital outputs	8
<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.	2 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>	8 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
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> <li>unshielded, max.</li> </ul>	500 m 150 m
Interrupts/diagnostics/status information	
Alarms	
<ul style="list-style-type: none"> <li>Diagnostic alarm</li> </ul>	Yes
Diagnostics indication LED	
<ul style="list-style-type: none"> <li>for status of the outputs</li> </ul>	Yes
Potential separation	
Potential separation digital outputs	
<ul style="list-style-type: none"> <li>between the channels</li> <li>between the channels, in groups of</li> <li>between the channels and backplane bus</li> </ul>	Relays 1 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>			
CE mark	Yes		
CSA approval	Yes		
UL approval	Yes		
cULus	Yes		
FM approval	Yes		
RCM (formerly C-TICK)	Yes		
KC approval	Yes		
Marine approval	Yes		
<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		
• max.	60 °C; Number of simultaneously activated outputs: 4 (no adjacent points) at 60 °C horizontal or 50 °C vertical, 8 at 55 °C horizontal or 45 °C vertical		
• 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		
<b>Ambient temperature during storage/transportation</b>			
• min.	-40 °C		
• max.	70 °C		
<b>Air pressure acc. to IEC 60068-2-13</b>			
• Storage/transport, min.	660 hPa		
• Storage/transport, max.	1 080 hPa		
<b>Relative humidity</b>			
• Operation at 25 °C without condensation, max.	95 %		
<b>Connection method</b>			
required front connector	Yes		
<b>Mechanics/material</b>			
Enclosure material (front)	Yes		
• Plastic	Yes		
<b>Dimensions</b>			
Width	70 mm		
Height	100 mm		
Depth	75 mm		
<b>Weights</b>			
Weight, approx.	310 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](#)

[Miscellaneous](#)



**General Product Approval      EMV      For use in hazardous locations**



[China RoHS](#)

[Manufacturer Declaration](#)



[EM](#)

**Maritime application      Environment**



[NK / Nippon Kaiji Kyokai](#)



[KR \(Korean Register of Shipping\)](#)



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