



SIMATIC S7-1200, Digital output SM 1222, 16 DO, 24 V DC, transistor 0.5 A

General information	
Product type designation	SM 1222, DQ 16x24 V DC/0.5 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
Power loss	
Power loss, typ.	2.5 W
Digital outputs	
Number of digital outputs	16
• in groups of	1
Short-circuit protection	No; to be provided externally
Limitation of inductive shutdown voltage to	typ. (L+) -48 V
Switching capacity of the outputs	
• with resistive load, max.	0.5 A
• on lamp load, max.	5 W
Output voltage	
• Rated value (DC)	24 V
• for signal "0", max.	0.1 V; with 10 kOhm load
• for signal "1", min.	20 V DC
Output current	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	10 $\mu$ A
Output delay with resistive load	
• "0" to "1", max.	50 $\mu$ s
• "1" to "0", max.	200 $\mu$ s
Total current of the outputs (per group)	
horizontal installation	
— up to 50 °C, max.	8 A; Current per mass
Cable length	
• shielded, max.	500 m
• unshielded, max.	150 m
Interrupts/diagnostics/status information	
Alarms	
• Diagnostic alarm	Yes
Diagnostics indication LED	
• for status of the outputs	Yes
Potential separation	
Potential separation digital outputs	

<ul style="list-style-type: none"> <li>• between the channels, in groups of</li> <li>• between the channels and backplane bus</li> </ul>	1 500 V AC		
<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>			
<ul style="list-style-type: none"> <li>• environmental product declaration</li> </ul>	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>			
<ul style="list-style-type: none"> <li>• Fall height, max.</li> </ul>	0.3 m; five times, in product package		
<b>Ambient temperature during operation</b>			
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> <li>• horizontal installation, min.</li> <li>• horizontal installation, max.</li> <li>• vertical installation, min.</li> <li>• vertical installation, max.</li> <li>• permissible temperature change</li> </ul>	-20 °C 60 °C -20 °C 60 °C -20 °C 50 °C 5°C to 55°C, 3°C / minute		
<b>Ambient temperature during storage/transportation</b>			
<ul style="list-style-type: none"> <li>• min.</li> <li>• max.</li> </ul>	-40 °C 70 °C		
<b>Air pressure acc. to IEC 60068-2-13</b>			
<ul style="list-style-type: none"> <li>• Storage/transport, min.</li> <li>• Storage/transport, max.</li> </ul>	660 hPa 1 080 hPa		
<b>Relative humidity</b>			
<ul style="list-style-type: none"> <li>• Operation at 25 °C without condensation, max.</li> </ul>	95 %		
<b>connection method</b>			
required front connector	Yes		
<b>Mechanics/material</b>			
Enclosure material (front) <ul style="list-style-type: none"> <li>• Plastic</li> </ul>	Yes		
<b>Dimensions</b>			
Width	45 mm		
Height	100 mm		
Depth	75 mm		
<b>Weights</b>			
Weight, approx.	220 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	9	EC001419
ETIM	8	EC001419
ETIM	7	EC001419
IDEA	4	3566
UNSPSC	15	32-15-17-05

Approvals / Certificates

General Product Approval EMV



[Manufacturer Declaration](#)



For use in hazardous locations



[FM](#)



[CCC-Ex](#)

Marine / Shipping



[NK / Nippon Kaiji Kyokai](#)



[CCS \(China Classification Society\)](#)

Marine / Shipping Environment



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