



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 µA
Output delay with resistive load	
• "0" to "1", max.	50 µs
• "1" to "0", max.	200 µs
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"> • between the channels, in groups of • between the channels and backplane bus 	1	500 V AC	
Degree and class of protection			
IP degree of protection	IP20		
Standards, approvals, certificates			
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		
Ecological footprint			
<ul style="list-style-type: none"> • environmental product declaration 	Yes		
Global warming potential			
— 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		
Ambient conditions			
Free fall			
<ul style="list-style-type: none"> • Fall height, max. 	0.3 m; five times, in product package		
Ambient temperature during operation			
<ul style="list-style-type: none"> • min. • max. • horizontal installation, min. • horizontal installation, max. • vertical installation, min. • vertical installation, max. • permissible temperature change 	-20 °C 60 °C -20 °C 60 °C -20 °C 50 °C 5°C to 55°C, 3°C / minute		
Ambient temperature during storage/transportation			
<ul style="list-style-type: none"> • min. • max. 	-40 °C 70 °C		
Air pressure acc. to IEC 60068-2-13			
<ul style="list-style-type: none"> • Storage/transport, min. • Storage/transport, max. 	660 hPa 1 080 hPa		
Relative humidity			
<ul style="list-style-type: none"> • Operation at 25 °C without condensation, max. 	95 %		
Connection method			
required front connector	Yes		
Mechanics/material			
Enclosure material (front) <ul style="list-style-type: none"> • Plastic 	Yes		
Dimensions			
Width	45 mm		
Height	100 mm		
Depth	75 mm		
Weights			
Weight, approx.	220 g		
Classifications			
		Version	Classification
	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



[Miscellaneous](#)

[Manufacturer Declaration](#)

[China RoHS](#)



General Product Approval

EMV

For use in hazardous locations



[EM](#)

For use in hazardous locations

Maritime application



[Miscellaneous](#)

[CCC-Ex](#)



[NK / Nippon Kaiji Kyokai](#)

Maritime application

Environment



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

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



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