



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	8 A; Current per mass
— up to 50 °C, max.	
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			
• between the channels, in groups of		1	
• between the channels and backplane bus		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			
• 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			
• 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.		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](#)



EMV

For use in hazardous locations



[EM](#)



For use in hazardous locations

Maritime application

[CCC-Ex](#)



[NK / Nippon Kaiji Kyokai](#)



Maritime application

Environment

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



last modified:

4/6/2025