

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
Relay outputs	
Switching capacity of contacts	
— with inductive load, max.	0.5 A
— on lamp load, max.	5 W
— with resistive load, max.	0.5 A
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

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

last modified: 10/13/2020