

SIMATIC S7-1200, Digital output SM 1222, 16 DO, 24 V DC, sourcing (Sinking Output), NPN transistor 0.5 A



### General information

Product type designation	SM 1222, DO 16x 24 V DC/0.5 A Sink
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### 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
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### Power loss

Power loss, typ.	2.5 W
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### Digital outputs

Number of digital outputs	16
• in groups of	1
Current-sinking	Yes
Short-circuit protection	No; to be provided externally
Limitation of inductive shutdown voltage to	Typ 45 V

### Switching capacity of the outputs

• with resistive load, max.	0.5 A
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• on lamp load, max.	5 W
<b>Output voltage</b>	
• Rated value (DC)	24 V
• for signal "0", max.	L+ minus 0.75 V DC with 10k Load
• for signal "1", min.	0,5 V
<b>Output current</b>	
• for signal "1" rated value	0.5 A
• for signal "0" residual current, max.	75 µA
<b>Output delay with resistive load</b>	
• "0" to "1", max.	20 µs
• "1" to "0", max.	350 µs
<b>Total current of the outputs (per group)</b>	
horizontal installation	
— up to 50 °C, max.	8 A; Current per mass
<b>Relay outputs</b>	
<b>Switching capacity of contacts</b>	
— with inductive load, max.	0.5 A
— on lamp load, max.	5 W
— with resistive load, max.	0.5 A
<b>Cable length</b>	
• shielded, max.	500 m
• unshielded, max.	150 m
<b>Interrupts/diagnostics/status information</b>	
<b>Alarms</b>	
• Diagnostic alarm	Yes
<b>Diagnostics indication LED</b>	
• for status of the outputs	Yes
<b>Potential separation</b>	
<b>Potential separation digital outputs</b>	
• between the channels, in groups of	1
• between the channels and backplane bus	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
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### Ambient conditions

#### 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 %
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### Connection method

required front connector	Yes
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### Mechanics/material

Enclosure material (front)	
• Plastic	Yes

### Dimensions

Width	45 mm
Height	100 mm
Depth	75 mm

### Weights

Weight, approx.	220 g
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**last modified:** 07/10/2020