



SIMATIC S7-1200 G2: SM 1222 digital output, 16 DO; outputs: 16x DO, 24 V DC 0.5 A, sourcing transistor

Figure similar

General information	
Product type designation	SM 1222, DQ 16x 24 V DC/0.5 A
Supply voltage	
Rated value (DC)	24 V
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.	120 mA
Digital outputs	
<ul style="list-style-type: none"> <li>from load voltage L+, max.</li> </ul>	45 mA
Power loss	
Power loss, typ.	3.5 W
Digital outputs	
Number of digital outputs	16
<ul style="list-style-type: none"> <li>in groups of</li> </ul>	8
Short-circuit protection	No; to be provided externally
Limitation of inductive shutdown voltage to	typ. (L+) -40 V, 1 W dissipation
Switching capacity of the outputs	
<ul style="list-style-type: none"> <li>with resistive load, max.</li> <li>on lamp load, max.</li> </ul>	0.5 A 5 W
Output voltage	
<ul style="list-style-type: none"> <li>Rated value (DC)</li> <li>for signal "0", max.</li> <li>for signal "1", min.</li> </ul>	24 V 0.1 V; with 10 kOhm load L+ (-0.5 V)
Output current	
<ul style="list-style-type: none"> <li>for signal "1" rated value</li> <li>for signal "0" residual current, max.</li> </ul>	0.5 A 10 µA
Output delay with resistive load	
<ul style="list-style-type: none"> <li>"0" to "1", max.</li> <li>"1" to "0", max.</li> </ul>	50 µs 200 µs
Total current of the outputs (per group)	
horizontal installation	
— up to 50 °C, max.	4 A; Current per mass (Group of 8)
Cable length	
<ul style="list-style-type: none"> <li>shielded, max.</li> <li>unshielded, max.</li> </ul>	500 m 150 m
Interrupts/diagnostics/status information	
Diagnostics function	Yes
Alarms	

• Diagnostic alarm	Yes
<b>Diagnoses</b>	
• Monitoring the supply voltage	Yes
<b>Diagnostics indication LED</b>	
• DIAG LED	Yes
• for status of the outputs	Yes
<b>Potential separation</b>	
Potential separation digital outputs	
• between the channels, in groups of	8
• between the channels and backplane bus	707 V DC (type test)
<b>Isolation</b>	
Isolation tested with	707 V DC (type test)
<b>Degree and class of protection</b>	
IP degree of protection	IP20
<b>Standards, approvals, certificates</b>	
CE mark	Yes
CSA approval	No
UL approval	Yes
cULus	Yes
FM approval	No
RCM (formerly C-TICK)	Yes
KC approval	No
Marine approval	No
<b>Ambient conditions</b>	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• horizontal installation, min.	-20 °C
• horizontal installation, max.	60 °C; at max. voltages and max. specification
• vertical installation, min.	-20 °C
• vertical installation, max.	50 °C; at max. voltages and max. specification
• 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	
• Operation, min.	540 hPa
• Operation, max.	1 140 hPa
• Storage/transport, min.	540 hPa
• Storage/transport, max.	1 140 hPa
Altitude during operation relating to sea level	
• Installation altitude, min.	-1 000 m
• Installation altitude, max.	5 000 m; Restrictions for installation altitudes > 2 000 m, see manual
Relative humidity	
• Operation at 25 °C without condensation, max.	95 %
Vibrations	
• Vibration resistance during operation acc. to IEC 60068-2-6	3.5 mm from 5 - 8.4 Hz, 1g from 8.4 - 150 Hz
• Operation, tested according to IEC 60068-2-6	Yes
Shock testing	
• tested according to IEC 60068-2-27	Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms
Pollutant concentrations	
• SO2 at RH < 60% without condensation	SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60% condensation-free
<b>connection method</b>	
required front connector	No
<b>Mechanics/material</b>	
Enclosure material (front)	
• Plastic	Yes
<b>Dimensions</b>	
Width	30 mm

Height	125 mm
Depth	100 mm
<b>Weights</b>	
Weight, approx.	173 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

<b>Approvals / Certificates</b>		
<b>General Product Approval</b>	<b>EMV</b>	<b>For use in hazardous locations</b>



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<b>For use in hazardous locations</b>	<b>Environment</b>
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