

SIPLUS S7-1200 SM1222 8DQ RLY T1 RAIL -25 ...+55°C T1 with 70°C for 10 min with conformal coating Based on: 6ES7222-1HF32-0XB0 . Digital output 8 DQ, relay 2 A

### General information

Product type designation SM 1222, DQ 8x relay/2 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. 120 mA

### Digital outputs

- from load voltage L+, max. 11 mA/relay coil

### Power loss

Power loss, typ. 4.5 W

### Digital outputs

Number of digital outputs 8

- in groups of 2

Short-circuit protection No; to be provided externally

### Switching capacity of the outputs

- with resistive load, max. 2 A

- on lamp load, max. 30 W with DC, 200 W with AC

### Output voltage

- Rated value (DC) 5 V DC to 30 V DC

- Rated value (AC) 5 V AC to 250 V AC

### Output current

- for signal "1" rated value 2 A

### Output delay with resistive load

- "0" to "1", max. 10 ms

- "1" to "0", max. 10 ms

### Total current of the outputs (per group)

horizontal installation

— up to 50 °C, max. 10 A; Current per mass

### Relay outputs

- Number of relay outputs 8

- Rated supply voltage of relay coil L+ (DC) 24 V

- Number of operating cycles, max. mechanically 10 million, at rated load voltage 100 000

<b>Switching capacity of contacts</b>	
— with inductive load, max.	2 A
— on lamp load, max.	30 W with DC, 200 W with AC
— with resistive load, max.	2 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	Relays
• between the channels, in groups of	2
• between the channels and backplane bus	1500 V AC for 1 minute
<b>Permissible potential difference</b>	
between different circuits	750 V AC for 1 minute
<b>Isolation</b>	
Isolation tested with	According to EN 50155 (routine test)
<b>Degree and class of protection</b>	
Degree of protection acc. to EN 60529	
• IP20	Yes
<b>Standards, approvals, certificates</b>	
CE mark	Yes
<b>Railway application</b>	
• EN 50121-3-2	Yes; EMC for rail vehicles
• EN 50121-4	Yes; EMC for signal and telecommunications systems
• EN 50124-1	Yes; Railway applications - overvoltage category OV2; pollution degree PD2; rated surge voltage UNi = 0.5 kV; UNm = 24 V DC
• EN 50125-1	Yes; Rail vehicles - see ambient conditions
• EN 50125-2	Yes; Stationary electrical equipment - see ambient conditions
• EN 50125-3	Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)
• EN 50155	Yes; Rail vehicles - temperature class T1, horizontal mounting position, salt spray Class ST2
• EN 61373	Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B
• Fire protection acc. to EN 45545-2	Yes; Rail vehicles - verification on request

Ambient conditions	
Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• min.	-25 °C
• max.	60 °C; = Tmax; +70 °C for 10 minutes (T1 acc. to EN 50155) for horizontal mounting position
• 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
Altitude during operation relating to sea level	
• Installation altitude above sea level, max.	2 000 m
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m)
Relative humidity	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on land craft, rail vehicles and special-purpose vehicles	
— to biologically active substances according to EN 60721-3-5	Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request
— to chemically active substances according to EN 60721-3-5	Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 50155 (ST2); *
— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 incl. sand, dust; *
from supply voltage 1L+	
— Note regarding classification of environmental conditions acc. to EN 60721	* The supplied plug covers must remain in place over the unused interfaces during operation!
Connection method	

required front connector	Yes
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### Mechanics/material

Enclosure material (front) <ul style="list-style-type: none"><li>• Plastic</li></ul>	Yes
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### Dimensions

Width	45 mm
Height	100 mm
Depth	75 mm

### Weights

Weight, approx.	190 g
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### Other

Note:	For use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A Online Support article 109736776
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