

SIPLUS S7-1200 CM1241 RS232 T1 RAIL -25 ... +55°C T1 with 70°C for 10 min with conformal coating Based on: 6ES7241-1AH32-0XB0 . Communication module RS232, 9-pole D-sub (socket), supports Freeport



### General information

Product type designation	CM 1241 RS232
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### Supply voltage

Rated value (DC)	Yes
• 24 V DC	
permissible range, lower limit (DC)	20.4 V
permissible range, upper limit (DC)	28.8 V

### Input current

Current consumption, max.	200 mA; From backplane bus 5 V DC
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### Power loss

Power loss, typ.	1.1 W
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### Interfaces

Number of interfaces	1
Interface physics, RS 232C (V.24)	Yes

### Point-to-point

• Cable length, max.	10 m
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Integrated protocol driver	
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— Freeport	Yes
— ASCII	Yes; Available as library function
— Modbus	Yes
— Modbus RTU master	Yes
— MODBUS RTU slave	Yes

## Protocols

Integrated protocols	
Freeport	
— Bits per character	7 or 8
— Number of stop bits	1 (Standard), 2
— Parity	No parity (standard); even, uneven, mark (parity bit always 1); space (parity bit always 0)
3964 (R)	
— Bits per character	7 or 8
— Number of stop bits	1 (Standard), 2
— Parity	No parity (standard); even, uneven, mark (parity bit always 1); space (parity bit always 0)
Modbus RTU master	
— Address area	1 through 49 999 (Standard Modbus addressing)
— Number of slaves, max.	247; slave numbers 1 through 247, per MODBUS network segment maximum 32 devices, additional repeaters needed to expand the network to maximum configuration
MODBUS RTU slave	
— Address area	1 through 49 999 (Standard Modbus addressing)

## Interrupts/diagnostics/status information

Diagnostic functions	Yes
Diagnostics indication LED	
• for status of the outputs	Yes

## Degree and class of protection

Degree of protection acc. to EN 60529	
• IP20	Yes

## Standards, approvals, certificates

Railway application	
• 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
- EN 50155
- EN 61373
- Fire protection acc. to EN 45545-2

Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track)

Yes; Rail vehicles - temperature class T1, horizontal mounting position, salt spray Class ST2

Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B

Yes; Rail vehicles - verification on request

## Ambient conditions

<b>Free fall</b>	
• Fall height, max.	0.3 m; five times, in product package
<b>Ambient temperature during operation</b>	
• min.	-25 °C; = Tmin; Startup @ -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
<b>Ambient temperature during storage/transportation</b>	
• min.	-40 °C
• max.	70 °C
<b>Altitude during operation relating to sea level</b>	
• 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)
<b>Relative humidity</b>	
• With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
<b>Resistance</b>	
<b>Coolants and lubricants</b>	
— Resistant to commercially available coolants and lubricants	Yes
<b>Use in stationary industrial systems</b>	
— 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, *
<b>Use on land craft, rail vehicles and special-purpose vehicles</b>	
— 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!

#### Dimensions

Width	30 mm
Height	100 mm
Depth	75 mm

#### Weights

Weight, approx.	150 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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