

SIPLUS S7-1200 CM1241 RS232 T1 RAIL -25 ... +70 Degree C T1 with 70 Degree C for 10 min with Conformal Coating Based On 6ES7241-1AH32-0XB0 . Communication module RS232, 9 PIN SUB D (female), Support Message Based Freeport



General information	
Product type designation	CM 1241 RS232
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
Power loss	
Power loss, typ.	1.1 W
Interfaces	
Number of interfaces	1
Interface physics, RS 232C (V.24)	Yes
Point-to-point	
• Cable length, max.	10 m
Integrated protocol driver	

— 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

Free fall	
• Fall height, max.	0.3 m; five times, in product package
Ambient temperature during operation	
• 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
Ambient temperature during storage/transportation	
• min.	-40 °C
• max.	70 °C
Altitude during operation based on sea level	
• Ambient air temperature-barometric pressure-altitude	Tmin ... Tmax at 1080 hPa ... 795 hPa (-1000 m ... +2000 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	
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 according to EN 60068-2-52 (degree of severity 3). The supplied connector covers must remain on the unused interfaces during operation!
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust. The supplied connector covers must remain on the unused interfaces during operation!
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%) including salt spray according to EN 50155 (ST2). The supplied plug covers must remain in place over the unused interfaces during operation!
— to mechanically active substances according to EN 60721-3-5	Yes; Class 5S3 including sand and dust. The supplied plug covers must remain in place over the unused interfaces during operation!
Dimensions	
Width	30 mm
Height	100 mm

Depth 75 mm

Other

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

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