

SIPLUS S7-1200 CM1241 RS422/485 T1 RAIL -25 ... +55 Degree C
 T1 with 70 Degree C for 10 min with Conformal Coating Based On
 6ES7241-1CH32-0XB0 . Communication module CM 1241 Supports
 message based Freeport RS422/485, 9 PIN SUB D(male)



General information	
Product type designation	CM 1241 RS422/485
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.	220 mA; From backplane bus 5 V DC
Power loss	
Power loss, typ.	1.1 W
Interfaces	
Number of interfaces	1
Interface (physical) RS 422/485 (X.27)	Yes
Point-to-point	
• Cable length, max.	1 000 m
Integrated protocol driver	

— Freeport	Yes
— ASCII	Yes; Available as library function
— Modbus	Yes
— Modbus RTU master	Yes
— MODBUS RTU slave	Yes
— USS	Yes; Available as library function

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)

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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)
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Interrupts/diagnostics/status information

Diagnostic functions	Yes
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Diagnostics indication LED

• for status of the outputs	Yes
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Degree and class of protection

Degree of protection acc. to EN 60529

• IP20	Yes
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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 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; = 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
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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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