

Data sheet

6ES7241-1CH30-1XB0



SIMATIC S7-1200, Communication Board CB 1241, RS485, terminal block, supports Freeport

| General information | |
|---|---|
| Product type designation | CB 1241 RS 485 |
| Input current | |
| from backplane bus 5 V DC, typ. | 50 mA |
| Power loss | |
| Power loss, typ. | 1.5 W |
| Interfaces | |
| Point-to-point connection | |
| • Cable length, max. | 1 000 m |
| Integrated protocol driver | |
| — Freeport | Yes |
| — ASCII | Yes; Available as library function |
| — Modbus RTU master | Yes |
| — Modbus RTU device | Yes |
| — USS | Yes; Available as library function |
| Protocols | |
| Integrated protocols | |
| Freeport | |
| — Telegram length, max. | 1 kbyte |
| — 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) | |
| — Telegram length, max. | 1 kbyte |
| — 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) |
| — max. number of devices | 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 device | |
| — Address area | 1 through 49 999 (Standard Modbus addressing) |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Degree and class of protection | |
| IP degree of protection | IP20 |

| Standards, approvals, certificates | | | |
|---|---------------------------------------|---------|----------------|
| CE mark | Yes | | |
| CSA approval | Yes | | |
| UL approval | Yes | | |
| cULus | Yes | | |
| FM approval | Yes | | |
| RCM (formerly C-TICK) | Yes | | |
| KC approval | Yes | | |
| Marine approval | Yes | | |
| Ambient conditions | | | |
| Free fall | | | |
| • Fall height, max. | 0.3 m; five times, in product package | | |
| Ambient temperature during operation | | | |
| • min. | -20 °C | | |
| • max. | 60 °C | | |
| • horizontal installation, min. | -20 °C | | |
| • horizontal installation, max. | 60 °C | | |
| • vertical installation, min. | -20 °C | | |
| • vertical installation, max. | 50 °C | | |
| • 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. | 795 hPa | | |
| • Operation, max. | 1 080 hPa | | |
| • Storage/transport, min. | 660 hPa | | |
| • Storage/transport, max. | 1 080 hPa | | |
| Relative humidity | | | |
| • Operation at 25 °C without condensation, max. | 95 % | | |
| Mechanics/material | | | |
| Enclosure material (front) | | | |
| • Plastic | Yes | | |
| Dimensions | | | |
| Width | 38 mm | | |
| Height | 62 mm | | |
| Depth | 21 mm | | |
| Weights | | | |
| Weight, approx. | 40 g | | |
| Classifications | | | |
| | | Version | Classification |
| | eClass | 16 | 27-24-22-08 |
| | eClass | 14 | 27-24-22-08 |
| | eClass | 12 | 27-24-22-08 |
| | eClass | 9.1 | 27-24-22-08 |
| | eClass | 9 | 27-24-22-08 |
| | eClass | 8 | 27-24-22-08 |
| | eClass | 7.1 | 27-24-22-08 |
| | eClass | 6 | 27-24-22-08 |
| | ETIM | 10 | EC001423 |
| | ETIM | 9 | EC001423 |
| | ETIM | 8 | EC001423 |
| | ETIM | 7 | EC001423 |
| | IDEA | 4 | 3564 |
| | UNSPSC | 15 | 32-15-17-05 |
| Approvals / Certificates | | | |

General Product Approval



[Miscellaneous](#)

[Manufacturer Declaration](#)



General Product Approval

EMV

For use in hazardous locations



[China RoHS](#)

[Manufacturer Declaration](#)



For use in hazardous locations

Maritime application



[EM](#)



[Miscellaneous](#)

[CCC-Ex](#)



Maritime application



[NK / Nippon Kaiji Kyokai](#)



Maritime application

[CCS \(China Classification Society\)](#)

[KR \(Korean Register of Shipping\)](#)

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7/2/2025

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