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## 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 |


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| | |
|---|---|
| **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** | |


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**General Product Approval**










Miscellaneous







**General Product Approval**




Manufacturer Declaration

China RoHS

**EMV**




**For use in hazardous locations**







**For use in hazardous locations**

FM




Miscellaneous

CCC-Ex

**Maritime application**







**Maritime application**




NK / Nippon Kaiji Kyokai










CCS (China Classification Society)

**Maritime application**

KR (Korean Register of Shipping)

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