



SIMATIC S7-1200 G2: CB 1241 Communication Board, interface: RS485, with push-in terminal block

### General information

|                          |                |
|--------------------------|----------------|
| Product type designation | CB 1241 RS 485 |
|--------------------------|----------------|

### Input current

|                                 |       |
|---------------------------------|-------|
| from backplane bus 5 V DC, typ. | 75 mA |
|---------------------------------|-------|

### Power loss

|                  |       |
|------------------|-------|
| Power loss, typ. | 0.4 W |
|------------------|-------|

### Interfaces

|                     |        |
|---------------------|--------|
| Interfaces/bus type | RS 485 |
|---------------------|--------|

|                      |   |
|----------------------|---|
| Number of interfaces | 1 |
|----------------------|---|

|                           |  |
|---------------------------|--|
| 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 |

### Interface types

|        |  |
|--------|--|
| RS 485 |  |
|--------|--|

|                           |            |
|---------------------------|------------|
| • Transmission rate, max. | 250 kbit/s |
|---------------------------|------------|

### Protocols

|                      |  |
|----------------------|--|
| Integrated protocols |  |
|----------------------|--|

|          |  |
|----------|--|
| Freeport |  |
|----------|--|

|                         |                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------|
| — Telegram length, max. | 4 kbyte                                                                                  |
| — Bits per character    | 7 or 8                                                                                   |
| — Number of stop bits   | 1 (Standard), 2                                                                          |
| — Parity                | no parity (standard); even, odd, mark (parity bit always 1); space (parity bit always 0) |

|                   |  |
|-------------------|--|
| Modbus RTU master |  |
|-------------------|--|

|                          |                                                                                                                                                             |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| — Address area           | 1 through 65535 (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 65535 (Standard Modbus addressing) |
|----------------|----------------------------------------------|

### Interrupts/diagnostics/status information

|                      |     |
|----------------------|-----|
| Diagnostics function | Yes |
|----------------------|-----|

|                            |  |
|----------------------------|--|
| Diagnostics indication LED |  |
|----------------------------|--|

|                             |     |
|-----------------------------|-----|
| • DIAG LED                  | Yes |
| • for status of the outputs | Yes |

| Degree and class of protection                                |        |                                                                                           |                |
|---------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------|----------------|
| IP degree of protection                                       |        | IP20                                                                                      |                |
| Standards, approvals, certificates                            |        |                                                                                           |                |
| CE mark                                                       |        | Yes                                                                                       |                |
| CSA approval                                                  |        | No                                                                                        |                |
| UL approval                                                   |        | Yes                                                                                       |                |
| cULus                                                         |        | Yes                                                                                       |                |
| FM approval                                                   |        | No                                                                                        |                |
| RCM (formerly C-TICK)                                         |        | Yes                                                                                       |                |
| KC approval                                                   |        | Yes                                                                                       |                |
| Marine approval                                               |        | No                                                                                        |                |
| Ambient conditions                                            |        |                                                                                           |                |
| Free fall                                                     |        |                                                                                           |                |
| • Fall height, max.                                           |        | 0.3 m; five times, in product package                                                     |                |
| Ambient temperature during operation                          |        |                                                                                           |                |
| • horizontal installation, min.                               |        | -20 °C                                                                                    |                |
| • horizontal installation, max.                               |        | 60 °C; at max. voltages and max. specification                                            |                |
| • vertical installation, min.                                 |        | -20 °C                                                                                    |                |
| • vertical installation, max.                                 |        | 50 °C; at max. voltages and max. specification                                            |                |
| Ambient temperature during storage/transportation             |        |                                                                                           |                |
| • min.                                                        |        | -40 °C                                                                                    |                |
| • max.                                                        |        | 70 °C                                                                                     |                |
| Air pressure acc. to IEC 60068-2-13                           |        |                                                                                           |                |
| • Operation, min.                                             |        | 540 hPa                                                                                   |                |
| • Operation, max.                                             |        | 1 140 hPa                                                                                 |                |
| • Storage/transport, min.                                     |        | 540 hPa                                                                                   |                |
| • Storage/transport, max.                                     |        | 1 140 hPa                                                                                 |                |
| Altitude during operation relating to sea level               |        |                                                                                           |                |
| • Installation altitude, min.                                 |        | -1 000 m                                                                                  |                |
| • Installation altitude, max.                                 |        | 5 000 m; Restrictions for installation altitudes > 2 000 m, see manual                    |                |
| Relative humidity                                             |        |                                                                                           |                |
| • Operation, max.                                             |        | 95 %; no condensation                                                                     |                |
| Vibrations                                                    |        |                                                                                           |                |
| • Vibration resistance during operation acc. to IEC 60068-2-6 |        | 3.5 mm from 5 - 8.4 Hz, 1g from 8.4 - 150 Hz                                              |                |
| • Operation, tested according to IEC 60068-2-6                |        | Yes                                                                                       |                |
| Shock testing                                                 |        |                                                                                           |                |
| • tested according to IEC 60068-2-27                          |        | Yes; IEC 68, Part 2-27 half-sine: strength of the shock 15 g (peak value), duration 11 ms |                |
| Pollutant concentrations                                      |        |                                                                                           |                |
| • SO2 at RH < 60% without condensation                        |        | SO2: < 0.5 ppm; H2S: < 0.1 ppm; RH < 60 % condensation-free                               |                |
| Mechanics/material                                            |        |                                                                                           |                |
| Enclosure material (front)                                    |        |                                                                                           |                |
| • plastic                                                     |        | Yes                                                                                       |                |
| Dimensions                                                    |        |                                                                                           |                |
| Width                                                         |        | 15 mm                                                                                     |                |
| Height                                                        |        | 62 mm                                                                                     |                |
| Depth                                                         |        | 63 mm                                                                                     |                |
| Weights                                                       |        |                                                                                           |                |
| Weight, approx.                                               |        | 29 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

CCC

[Miscellaneous](#)

[Manufacturer Declaration](#)

UL

RCM

EAC

General Product Approval

EMV

CE  
EG-Konf.

UK  
CA

[China RoHS](#)

[Manufacturer Declaration](#)

KC

KC

For use in hazardous locations

UL

[CCC-Ex](#)

[CCC-Ex](#)

last modified:

7/1/2026 