

Data sheet

6ES7241-1CA50-0XB0



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
protocols / Modbus RTU device / header	
— 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	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](#)

[KC](#)



[Manufacturer Declaration](#)

EMV For use in hazardous locations

[KC](#)

[CCC-Ex](#)

last modified:

5/18/2025