

SIMATIC S7-1200 G2: CM 1241 communication module; interfaces:
RS232/422/485, with push-in terminal block

General information	
Product type designation	CM 1241 RS 232 / 422 / 485
Input current	
from backplane bus 5 V DC, typ.	170 mA
Power loss	
Power loss, typ.	0.9 W
Interfaces	
Interfaces/bus type	RS 232 (full duplex) / 422 / 485
Number of interfaces	1
Point-to-point connection	
<ul style="list-style-type: none"> Cable length, max. 	1 000 m; RS 232 10 m shielded max., RS 422/485 1 000 m shielded max.
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 232	
<ul style="list-style-type: none"> Transmission rate, max. 	115.2 kbit/s
RS 485	
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> DIAG LED 	Yes
<ul style="list-style-type: none"> 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	30 mm	
Height	125 mm	
Depth	100 mm	
Weights		
Weight, approx.	178 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	9	EC001423
ETIM	8	EC001423
ETIM	7	EC001423
IDEA	4	3564
UNSPSC	15	32-15-17-05
Approvals / Certificates		
General Product Approval	EMV	For use in hazardous locations



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