## **SIEMENS**

## Data sheet

## 6AG1540-1AB00-7AA0

SIPLUS S7-1500CM PtP RS422/485 -40...+70°C start up -25°C with conformal coating based on 6ES7540-1AB00-0AA0 . Communication module for Serial connection RS422, RS485 Freeport, 3964 (R), USS, 19200 Kbit/s, 15-Pin D-sub socket



Figure similar

General information	
Product type designation	CM PtP RS 422 / 485 BA
Product function	
● I&M data	Yes; I&M 0
<ul> <li>Fast startup</li> </ul>	Yes
Installation type/mounting	
Rail mounting	Yes; S7-1500 mounting rail
Supply voltage	
Type of supply voltage	system power supply
Input current	
Current consumption (rated value)	33 mA; From the backplane bus
Power	
Power available from the backplane bus	0.65 W
Power loss	
Power loss, typ.	0.6 W

Address space per module     8 byte       Interface types       RS 485       • Transmission rate, max.     19.2 kbit/s       • Cable length, max.     1200 m       RS 422     •       • Transmission rate, max.     19.2 kbit/s       • Cable length, max.     1200 m       • Avire full duplex connection     Yes       • 4-wire full duplex connection     Yes       • 4-wire full duplex connection     No       Protocols     •       Integrated protocols     •       Freeport     •       • Telegram length, max.     1 kbyte       • Bits per character     7 or 8       • Number of stop bits     1 or 2 bit       • Parity     None, even, odd, always 1, always 0, any       3964 (R)     •       • Telegram length, max.     1 kbyte       • Diagnostic structon     Yes       • Number of stop bits     1 or 2 bit       • Parity     None, even, odd, always 1, always 0, any       Telegram buffer     •       • Suffer memory for telegrams     2 kbyte       • Number of telegrams which can be buffered     255       Interrupts/cliagnostic slart     Yes       Alarms     •       • Diagnostic slart     Yes       • Hardware interrupt     No <t< th=""><th>Address area</th><th></th></t<>	Address area	
Interface types RS 485 • Transmission rate, max. • Cable length, max. • Cable length	Address space per module	
RS 485         • Transmission rate, max.       19.2 kbit/s         • Cable length, max.       1200 m         RS 422       • Transmission rate, max.         • Cable length, max.       19.2 kbit/s         • Cable length, max.       1200 m         • Cable length, max.       1200 m         • Cable length, max.       1200 m         • 4-wire full duplex connection       Yes         • 4-wire multipoint connection       No         Protocols       • Telegram length, max.         Integrated protocols       7 or 8         • Number of stop bits       1 of 2 bit         • Parity       None, even, odd, always 1, always 0, any         3964 (R)       • Elegram length, max.         • Bits per character       7 or 8         • Number of stop bits       1 or 2 bit         • Parity       None, even, odd, always 1, always 0, any         3964 (R)       • Elegram length, max.         • Bits per character       7 or 8         • Number of stop bits       1 or 2 bit         • Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 bit/e         • Number of telegrams which can be buffered       255         Interrupts/diagnostic s/status information	• Inputs	8 byte
• Transmission rate, max.19.2 kbit/s• Cable length, max.1 200 mRS 422•• Transmission rate, max.19.2 kbit/s• Cable length, max.1 200 m• 4-wire full duplex connectionYes• 4-wire multipoint connectionNoProtocolsIntegrated protocols• Treeport1 kbyte- Telegram length, max.1 kbyte- Bits per character7 or 8- Number of stop bits1 or 2 bit- ParityNone, even, odd, always 1, always 0, any3964 (R)1 or 2 bit- Telegram length, max.1 kbyte- Telegram length, max.1 kbyte- Bits per character7 or 8- Number of stop bits1 or 2 bit- ParityNone, even, odd, always 1, always 0, any3964 (R)1 or 2 bit- Telegram buffer2 bit- ParityNone, even, odd, always 1, always 0, anyTelegram buffer2 bit- ParityNone, even, odd, always 1, always 0, anyTelegram buffer255Euterupts/diagnostics/status informationDiagnostic sfunctionYesAlarmsNo- Hardware interruptNo- Diagnostic alarmYes- Hardware interruptNo- Nurbe-breakYes- Diagnostics indication LEDYes	nterface types	
• Cable length, max.       1 200 m         • FS 422       • Transmission rate, max.       19.2 kbit/s         • Cable length, max.       1 200 m         • 4-wire full duplex connection       Yes         • 4-wire multipoint connection       No         Protocols         Integrated protocols         Freeport       -         - Telegram length, max.       1 kbyle         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)         - Telegram length, max.       1 kbyle         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)         - Telegram length, max.       1 kbyle         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer         - Buffer memory for telegrams       2 kbyle         Number of telegrams which can be buffered       255         Diagnostic ala	RS 485	
RS 422         • Transmission rate, max.       19.2 kbit/s         • Cable length, max.       1 200 m         • 4-wire full duplex connection       Yes         • 4-wire multipoint connection       No         Protocols         Integrated protocols         Freeport       -         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       -         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 kbyte         - Number of telegrams which can be buffered       255         Interrupts/diagnostics/status information       Yes         Alarms       Yes         Diagnostic alarm       Yes         Hardware interrupt       No         Diagnostic alarm       Yes         Wire-break <td< td=""><td><ul> <li>Transmission rate, max.</li> </ul></td><td>19.2 kbit/s</td></td<>	<ul> <li>Transmission rate, max.</li> </ul>	19.2 kbit/s
• Transmission rate, max.19.2 kbit/s• Cable length, max.1 200 m• 4-wire full duplex connectionYes• 4-wire multipoint connectionNoProtocolsProtocolsIntegrated protocolsFreeport1 kbyte- Telegram length, max.1 kbyte- Bits per character7 or 8- Number of stop bits1 or 2 bit- ParityNone, even, odd, always 1, always 0, any3964 (R)1 kbyte- Telegram length, max.1 kbyte- Telegram length, max.1 kbyte- Telegram length, max.1 kbyte- ParityNone, even, odd, always 1, always 0, any3964 (R)1 or 2 bit- Telegram length, max.1 kbyte- ParityNone, even, odd, always 1, always 0, anyTelegram buffer2 bit- Number of stop bits1 or 2 bit- ParityNone, even, odd, always 1, always 0, anyTelegram buffer255Interrupts/diagnostics/status informationYesDiagnostic alarmYes- Hardware interruptNoDiagnostic alarmYes- Wire-breakYesDiagnostic indication LEDYes	Cable length, max.	1 200 m
Cable length, max.       1 200 m         4-wire full duplex connection       No         Protocols       No         Integrated protocols       It kbyte         — Telegram length, max.       1 kbyte         — Bits per character       7 or 8         — Number of stop bits       1 or 2 bit         — Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 kbyte         — Telegram length, max.       1 kbyte         — Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 or 2 bit         — Telegram length, max.       1 kbyte         — Bits per character       7 or 8         — Number of stop bits       1 or 2 bit         — Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 bit         — Parity       None, even, odd, always 1, always 0, any         Telegram buffer       255         Interrupts/diagnostics/status information       Yes         Alarms       Yes         • Diagnostic alarm       Yes         • Hardware interrupt       No         Diagnostic alarm       Yes         • Wire-break       Yes	RS 422	
4-wire full duplex connection       Yes         4-wire multipoint connection       No         Protecols         Integrated protocols         Freeport       1 kbyte         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 kbyte         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 bit         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       255         Interrupts/diagnostics/status information       Yes         Diagnostics function       Yes         Alarms       Yes         Wire-break       Yes         Wire-break       Yes	<ul> <li>Transmission rate, max.</li> </ul>	19.2 kbit/s
• 4-wire multipoint connection       No         Protocols         Integrated protocols         Freeport         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 kbyte         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 or 2 bit         - Relegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 kbyte         • Buffer memory for telegrams       2 kbyte         • Number of telegrams which can be buffered       255         Diagnostics function       Yes         Alarms       Vire-break         • Diagnostic alarm       Yes         • Wire-break       Yes         Diagnostic indication LED       Yes	• Cable length, max.	1 200 m
Protocols         Integrated protocols         Freeport         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       1 kbyte         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 kbyte         • Number of telegrams       2 kbyte         • Number of telegrams which can be buffered       255         Interrupts/diagnostics/status information       Yes         Alarms       Ves         • Diagnostic alarm       Yes         • Hardware interrupt       No         Diagnostic indication LED       Yes	• 4-wire full duplex connection	Yes
Integrated protocols         Freeport       1 kbyte         — Telegram length, max.       1 kbyte         — Bits per character       7 or 8         — Number of stop bits       1 or 2 bit         — Parity       None, even, odd, always 1, always 0, any         3964 (R)       -         — Telegram length, max.       1 kbyte         — Bits per character       7 or 8         — Number of stop bits       1 or 2 bit         — Bits per character       7 or 8         — Number of stop bits       1 or 2 bit         — Parity       None, even, odd, always 1, always 0, any         Telegram buffer       -         • Buffer memory for telegrams       2 kbyte         • Number of telegrams which can be buffered       255         Interrupts/diagnostics/status information       Yes         Alarms       -         • Diagnostic alarm       Yes         • Hardware interrupt       No         Diagnostic suffer       Ves         • Wire-break       Yes         • Diagnostic indication LED       Yes	• 4-wire multipoint connection	No
Freeport         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         3964 (R)       -         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Number of stop bits       1 or 2 bit         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer       2 kbyte         • Number of telegrams which can be buffered       255         Interrupts/diagnostics/status information       Yes         Alarms       Yes         • Diagnostic alarm       Yes         • Hardware interrupt       No         Diagnostic subtroperation       Yes         • Wire-break       Yes         Diagnostics indication LED       Yes	Protocols	
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Industry and 	— Bits per character	7 or 8
3964 (R)       1 kbyte         - Telegram length, max.       1 kbyte         - Bits per character       7 or 8         - Number of stop bits       1 or 2 bit         - Parity       None, even, odd, always 1, always 0, any         Telegram buffer         - Buffer memory for telegrams       2 kbyte         - Number of telegrams which can be buffered       255         Interrupts/diagnostics/status information         Diagnostics function       Yes         Alarms       Yes         - Diagnostic alarm       Yes         - Hardware interrupt       No         Diagnoses       Yes         - Wire-break       Yes         Diagnostics indication LED       Yes	— Number of stop bits	1 or 2 bit
Telegram length, max.1 kbyte- Bits per character7 or 8- Number of stop bits1 or 2 bit- ParityNone, even, odd, always 1, always 0, anyTelegram buffer2 kbyte• Buffer memory for telegrams2 kbyte• Number of telegrams which can be buffered255Interrupts/diagnostics/status informationYesAlarms• Diagnostic alarmYes• Hardware interruptNoDiagnosesYes• Wire-breakYes• Wire-breakYesDiagnostics indication LEDYes	— Parity	None, even, odd, always 1, always 0, any
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ParityNone, even, odd, always 1, always 0, anyTelegram buffer2 kbyte• Buffer memory for telegrams2 kbyte• Number of telegrams which can be buffered255Interrupts/diagnostics/status informationDiagnostics functionYes• Diagnostic alarmYes• Hardware interruptNoDiagnosesNo• Wire-breakYes• Diagnostics indication LEDYes	— Bits per character	7 or 8
Telegram buffer       • Buffer memory for telegrams     2 kbyte       • Number of telegrams which can be buffered     255       Interrupts/diagnostics/status information     Yes       Diagnostics function     Yes       • Diagnostic alarm     Yes       • Hardware interrupt     No       Diagnoses     Yes       • Wire-break     Yes       Diagnostics indication LED     Yes	— Number of stop bits	1 or 2 bit
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Interrupts/diagnostics/status information       Diagnostics function     Yes       Alarms     Yes          • Diagnostic alarm     Yes          • Hardware interrupt     No       Diagnoses     Yes          • Wire-break     Yes       Diagnostics indication LED     Yes	Buffer memory for telegrams	2 kbyte
Diagnostics function     Yes       Alarms     Yes          • Diagnostic alarm     Yes          • Hardware interrupt     No       Diagnoses     Yes          • Wire-break     Yes       Diagnostics indication LED     Yes	<ul> <li>Number of telegrams which can be buffered</li> </ul>	255
Diagnostics function     Yes       Alarms     Yes          • Diagnostic alarm     Yes          • Hardware interrupt     No       Diagnoses     Yes          • Wire-break     Yes       Diagnostics indication LED     Yes	nterrupts/diagnostics/status information	
• Diagnostic alarmYes• Hardware interruptNoDiagnosesYes• Wire-breakYesDiagnostics indication LEDYes		Yes
• Hardware interrupt     No       Diagnoses     Yes       • Wire-break     Yes       Diagnostics indication LED     Yes	Alarms	
Diagnoses       • Wire-break       Yes       Diagnostics indication LED	Diagnostic alarm	Yes
• Wire-break Yes Diagnostics indication LED	Hardware interrupt	No
Diagnostics indication LED	Diagnoses	
	• Wire-break	Yes
RUN LED Yes; green LED	Diagnostics indication LED	
	• RUN LED	Yes; green LED
Receive RxD     Yes; Yellow LED	Receive RxD	Yes; Yellow LED
Transmit TxD     Yes; Yellow LED	• Transmit TxD	Yes; Yellow LED
Potential separation	Potential separation	
between backplane bus and interface Yes		Yes

Isolation	
Isolation tested with	500 V
Ambient conditions	
Ambient temperature during operation	
<ul> <li>horizontal installation, min.</li> </ul>	-40 °C; = Tmin (incl. condensation/frost); start-up @ -25 °C
<ul> <li>horizontal installation, max.</li> </ul>	70 °C
<ul> <li>vertical installation, min.</li> </ul>	-40 °C; = Tmin; Startup @ -25 °C
<ul> <li>vertical installation, max.</li> </ul>	40 °C
Ambient temperature during storage/transportation	
• min.	-40 °C
● max.	70 °C
Altitude during operation relating to sea level	
<ul> <li>Installation altitude above sea level, max.</li> </ul>	5 000 m
<ul> <li>Ambient air temperature-barometric pressure- altitude</li> </ul>	Tmin Tmax at 1 140 hPa 795 hPa (-1 000 m +2 000 m) // Tmin (Tmax - 10 K) at 795 hPa 658 hPa (+2 000 m +3 500 m) // Tmin (Tmax -20 K) at 658 hPa 540 hPa (+3 500 m +5 000 m)
Relative humidity	
<ul> <li>With condensation, tested in accordance with IEC 60068-2-38, max.</li> </ul>	100 %; RH incl. condensation/frost (no commissioning under condensation conditions)
Resistance	
Coolants and lubricants	
<ul> <li>Resistant to commercially available coolants and lubricants</li> </ul>	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
<ul> <li>— to biologically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
<ul> <li>to chemically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); *
<ul> <li>— to mechanically active substances according to EN 60721-3-3</li> </ul>	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
<ul> <li>to biologically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6B2 mold and fungal spores (excluding fauna); Class 6B3 on request
<ul> <li>— to chemically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2- 52 (severity degree 3); *
<ul> <li>— to mechanically active substances according to EN 60721-3-6</li> </ul>	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
<ul> <li>Against chemically active substances acc. to EN 60654-4</li> </ul>	Yes; Class 3 (excluding trichlorethylene)
— Environmental conditions for process, measuring and control systems acc. to ANSI/ISA-71.04	Yes; Level GX group A/B (excluding trichlorethylene; harmful gas concentrations up to the limits of EN 60721-3-3 class 3C4 permissible); level LC3 (salt spray) and level LB3 (oil)



Remark	
<ul> <li>— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04</li> </ul>	* The supplied plug covers must remain in place over the unused interfaces during operation!
Conformal coating	
<ul> <li>Coatings for printed circuit board assemblies acc. to EN 61086</li> </ul>	Yes; Class 2 for high reliability
<ul> <li>Protection against fouling acc. to EN 60664-3</li> </ul>	Yes; Type 1 protection
<ul> <li>Military testing according to MIL-I-46058C, Amendment 7</li> </ul>	Yes; Discoloration of coating possible during service life
<ul> <li>Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A</li> </ul>	Yes; Conformal coating, Class A
Decentralized operation	
to SIMATIC S7-300	Yes
to SIMATIC S7-400	Yes
to SIMATIC S7-1500	Yes
to standard PROFINET controller	Yes
Dimensions	
Width	35 mm
11 • 17	
Height	147 mm
Depth	147 mm 127 mm
Depth	

