SIEMENS

Data sheet   **6AG1541-1AB01-7AB0**

Figure similar

SIPLUS S7-1500 CM PTP RS422/485 HF based on 6ES7541-1AB01-0AB0 with conformal coating, -40...+70 °C RS422/485 HF communications module for serial connection RS-422 and RS-485, Freeport, 3964(R), USS, Modbus RTU Master, device, 250000 bit/s, 15-pin D-sub socket 15-pin D-sub socket

General information	
Product type designation	CM PtP RS 422 / 485 HF
based on	6ES7541-1AB01-0AB0
Product function	
● I&M data	Yes; I&M 0
● Fast startup	Yes
Engineering with	
● STEP 7 TIA Portal configurable/integrated from version	see entry ID: 109746275
Installation type/mounting	
Rail mounting	Yes; S7-1500 mounting rail
Supply voltage	
Design of the power supply	system power supply
Input current	
Current consumption (rated value)	43 mA; From the backplane bus
Power	
Power consumption from the backplane bus	0.65 W
Power loss	
Power loss, typ.	0.6 W
Address area	
Address space per module	
● Inputs	8 byte; performance mode: 32 byte
● Outputs	0 byte; performance mode: 32 byte
Interface types	
RS 485	
● Transmission rate, max.	250 kbit/s
● Cable length, max.	1 200 m
RS 422	
● Transmission rate, max.	115.2 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.	4 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.	4 kbyte
— Bits per character	7 or 8
— Number of stop bits	1 or 2 bit
— Parity	None, even, odd, always 1, always 0, any
Modbus RTU master	
— Address area	1 to 247, extended 1 to 65535
— max. number of devices	32
Modbus RTU device	
— Address area	1 to 247, extended 1 to 65535
Telegram buffer	
● Buffer memory for telegrams	8 kbyte
● Number of telegrams which can be buffered	255

Interrupts/diagnostics/status information

Diagnostics function	Yes
Alarms	
● Diagnostic alarm	Yes
● Hardware interrupt	No
Diagnoses	
● Wire-break	Yes
Diagnostics indication LED	
● RUN LED	Yes; green LED
● ERROR LED	Yes; red LED
● Receive RxD	Yes; Yellow LED
● Transmit TxD	Yes; Yellow LED

Potential separation

between backplane bus and interface	Yes

Isolation

Isolation tested with	707 V DC (type test)

Ambient conditions

Ambient temperature during operation	
● horizontal installation, min.	-40 °C; = Tmin (incl. condensation/frost)
● horizontal installation, max.	70 °C; = Tmax
● vertical installation, min.	-40 °C; = Tmin
● vertical installation, max.	40 °C; = Tmax
Altitude during operation relating to sea level	
● Installation altitude above sea level, max.	5 000 m; restrictions for installation altitudes > 2 000 m, see ET 200MP system manual
Relative humidity	
● With condensation, tested in accordance with IEC 60068-2-38, max.	100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation
Resistance	
Coolants and lubricants	
— Resistant to commercially available coolants and lubricants	Yes; Incl. diesel and oil droplets in the air
Use in stationary industrial systems	
— to biologically active substances according to EN 60721-3-3	Yes; Class 3B2 mold, fungus and dry rot spores (with the exception of fauna); Class 3B3 on request
— to chemically active substances according to EN 60721-3-3	Yes; Class 3C4 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-3	Yes; Class 3S4 incl. sand, dust, *
Use on ships/at sea	
— to biologically active substances according to EN 60721-3-6	Yes; Class 6B2 mold, fungal and dry rot spores (excluding fauna)
— to chemically active substances according to EN 60721-3-6	Yes; Class 6C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); *
— to mechanically active substances according to EN 60721-3-6	Yes; Class 6S3 incl. sand, dust; *
Usage in industrial process technology	
— Against chemically active substances acc. to EN 60654-4	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	
— Note regarding classification of environmental conditions acc. to EN 60721, EN 60654-4 and ANSI/ISA-71.04	* The supplied plug covers must remain in place over the unused interfaces during operation!

Conformal coating	
● Coatings for printed circuit board assemblies acc. to EN 61086	Yes; Class 2 for high reliability
● Protection against fouling acc. to EN 60664-3	Yes; Type 1 protection
● Military testing according to MIL-I-46058C, Amendment 7	Yes; Discoloration of coating possible during service life
● Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A	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
Height	147 mm
Depth	127 mm

Weights
Weight, approx.	0.22 kg

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

Approvals / Certificates

General Product Approval

[Manufacturer Declaration](#)   CE EG-Konf.   UKCA   [China RoHS](#)

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