



Figure similar

SIPLUS ET 200SP CM PTP based on 6ES7137-6AA01-0BA0 with conformal coating, -40...+70 °C, communications module for serial connection RS-422, RS-485 and RS-232, Freeport, 3964 (R), USS, MODBUS RTU master, slave, max. 250 Kbit/s, suitable for BU type A0,

| General information                 |                                                         |
|-------------------------------------|---------------------------------------------------------|
| Product type designation            | CM PtP                                                  |
| Firmware version                    |                                                         |
| • FW update possible                | Yes                                                     |
| usable BaseUnits                    | BU type A0                                              |
| Product function                    |                                                         |
| • I&M data                          | Yes; I&M0 to I&M3                                       |
| Supply voltage                      |                                                         |
| Rated value (DC)                    | 24 V                                                    |
| permissible range, lower limit (DC) | 19.2 V                                                  |
| permissible range, upper limit (DC) | 28.8 V                                                  |
| Reverse polarity protection         | Yes                                                     |
| Input current                       |                                                         |
| Current consumption (rated value)   | 31 mA                                                   |
| Current consumption, max.           | 35 mA                                                   |
| Power loss                          |                                                         |
| Power loss, typ.                    | 0.7 W                                                   |
| Address area                        |                                                         |
| Address space per module            |                                                         |
| • Inputs                            | 8 byte; performance mode: 32 byte                       |
| • Outputs                           | 0 byte; performance mode: 32 byte                       |
| 1. Interface                        |                                                         |
| Interface types                     |                                                         |
| • RS 485                            | Yes                                                     |
| • RS 422                            | Yes                                                     |
| • RS 232                            | Yes                                                     |
| • Design of the connection          | Push-in terminal                                        |
| Interface types                     |                                                         |
| RS 232                              |                                                         |
| • Transmission rate, max.           | 115.2 kbit/s                                            |
| • Cable length, max.                | 15 m                                                    |
| • RS 232 auxiliary signals          | RTS, CTS, DTR, DSR, RI, DCD                             |
| RS 485                              |                                                         |
| • Transmission rate, max.           | 250 kbit/s                                              |
| • Cable length, max.                | 1 200 m; 100 to 1200 m, depending on transmission speed |
| RS 422                              |                                                         |
| • Transmission rate, max.           | 115.2 kbit/s                                            |
| • Cable length, max.                | 1 200 m                                                 |

|                                                                     |                                                                                                                                                                                                                 |
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| • 4-wire full duplex connection                                     | Yes                                                                                                                                                                                                             |
| • 4-wire multipoint connection                                      | Yes                                                                                                                                                                                                             |
| <b>Protocols</b>                                                    |                                                                                                                                                                                                                 |
| <b>Integrated protocols</b>                                         |                                                                                                                                                                                                                 |
| <b>Freeport</b>                                                     |                                                                                                                                                                                                                 |
| — Telegram length, max.                                             | 2 kbyte; performance mode: receive data max. 24 byte and send data max. 30 byte                                                                                                                                 |
| — Bits per character                                                | 7 or 8                                                                                                                                                                                                          |
| — Number of stop bits                                               | 1 or 2 bit                                                                                                                                                                                                      |
| — Parity                                                            | None, even, odd, always 1, always 0, any                                                                                                                                                                        |
| <b>3964 (R)</b>                                                     |                                                                                                                                                                                                                 |
| — Telegram length, max.                                             | 2 kbyte; performance mode: receive data max. 24 byte and send data max. 30 byte                                                                                                                                 |
| — Bits per character                                                | 7 or 8                                                                                                                                                                                                          |
| — Number of stop bits                                               | 1 or 2 bit                                                                                                                                                                                                      |
| — Parity                                                            | None, even, odd, always 1, always 0, any                                                                                                                                                                        |
| <b>Modbus RTU master</b>                                            |                                                                                                                                                                                                                 |
| — Address area                                                      | 1 to 247, extended 1 to 65535                                                                                                                                                                                   |
| — Number of slaves, max.                                            | 32                                                                                                                                                                                                              |
| <b>MODBUS RTU slave</b>                                             |                                                                                                                                                                                                                 |
| — Address area                                                      | 1 to 247, extended 1 to 65535                                                                                                                                                                                   |
| <b>Telegram buffer</b>                                              |                                                                                                                                                                                                                 |
| • Buffer memory for telegrams                                       | 4 kbyte                                                                                                                                                                                                         |
| • Number of telegrams which can be buffered                         | 255                                                                                                                                                                                                             |
| <b>Interrupts/diagnostics/status information</b>                    |                                                                                                                                                                                                                 |
| Diagnostics function                                                | Yes                                                                                                                                                                                                             |
| <b>Alarms</b>                                                       |                                                                                                                                                                                                                 |
| • Diagnostic alarm                                                  | Yes                                                                                                                                                                                                             |
| • Hardware interrupt                                                | No                                                                                                                                                                                                              |
| <b>Diagnoses</b>                                                    |                                                                                                                                                                                                                 |
| • Wire-break                                                        | Yes                                                                                                                                                                                                             |
| <b>Diagnostics indication LED</b>                                   |                                                                                                                                                                                                                 |
| • Monitoring of the supply voltage (PWR-LED)                        | Yes; green PWR LED                                                                                                                                                                                              |
| • for module diagnostics                                            | Yes; green/red DIAG LED                                                                                                                                                                                         |
| • Receive RxD                                                       | Yes; green LED                                                                                                                                                                                                  |
| • Transmit TxD                                                      | Yes; green LED                                                                                                                                                                                                  |
| <b>Potential separation</b>                                         |                                                                                                                                                                                                                 |
| between backplane bus and interface                                 | Yes                                                                                                                                                                                                             |
| <b>Isolation</b>                                                    |                                                                                                                                                                                                                 |
| Isolation tested with                                               | 707 V DC (type test)                                                                                                                                                                                            |
| <b>Ambient conditions</b>                                           |                                                                                                                                                                                                                 |
| <b>Ambient temperature during operation</b>                         |                                                                                                                                                                                                                 |
| • horizontal installation, min.                                     | -40 °C; = Tmin (incl. condensation/frost)                                                                                                                                                                       |
| • horizontal installation, max.                                     | 70 °C; = Tmax                                                                                                                                                                                                   |
| • vertical installation, min.                                       | -40 °C; = Tmin                                                                                                                                                                                                  |
| • vertical installation, max.                                       | 50 °C; = Tmax                                                                                                                                                                                                   |
| <b>Altitude during operation relating to sea level</b>              |                                                                                                                                                                                                                 |
| • Installation altitude above sea level, max.                       | 5 000 m                                                                                                                                                                                                         |
| • Ambient air temperature-barometric pressure-altitude              | 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) |
| <b>Relative humidity</b>                                            |                                                                                                                                                                                                                 |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; RH incl. condensation / frost (no commissioning in bedewed state), horizontal installation                                                                                                               |
| <b>Resistance</b>                                                   |                                                                                                                                                                                                                 |
| <b>Coolants and lubricants</b>                                      |                                                                                                                                                                                                                 |
| — Resistant to commercially available coolants and lubricants       | Yes; Incl. diesel and oil droplets in the air                                                                                                                                                                   |
| <b>Use in stationary industrial systems</b>                         |                                                                                                                                                                                                                 |
| — 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                                                                                                              |

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| — 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, *                                                                                                                                                  |
| — Against mechanical environmental conditions acc. to EN 60721-3-3                                                      | Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)                                                                                                          |
| <b>Use on land craft, rail vehicles and special-purpose vehicles</b>                                                    |                                                                                                                                                                                     |
| — Against mechanical environmental conditions acc. to EN 60721-3-5                                                      | Yes; Class 5M2 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)                                                                                                          |
| — against mechanical environmental conditions in agriculture acc. to ISO 15003                                          | Yes; level 1 (Location LE) using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)                                                                                              |
| <b>Use on ships/at sea</b>                                                                                              |                                                                                                                                                                                     |
| — 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; *                                                                                                                                                  |
| — Against mechanical environmental conditions acc. to EN 60721-3-6                                                      | Yes; Class 6M4 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0)                                                                                                          |
| <b>Usage in industrial process technology</b>                                                                           |                                                                                                                                                                                     |
| — 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) |
| <b>Remark</b>                                                                                                           |                                                                                                                                                                                     |
| — 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!                                                                                        |
| <b>Conformal coating</b>                                                                                                |                                                                                                                                                                                     |
| • 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                                                                                                                                                     |
| <b>Decentralized operation</b>                                                                                          |                                                                                                                                                                                     |
| to SIMATIC S7-300                                                                                                       | Yes                                                                                                                                                                                 |
| to SIMATIC S7-400                                                                                                       | Yes                                                                                                                                                                                 |
| to SIMATIC S7-1200                                                                                                      | Yes                                                                                                                                                                                 |
| to SIMATIC S7-1500                                                                                                      | Yes                                                                                                                                                                                 |
| to standard PROFINET controller                                                                                         | Yes                                                                                                                                                                                 |
| <b>Dimensions</b>                                                                                                       |                                                                                                                                                                                     |
| Width                                                                                                                   | 15 mm                                                                                                                                                                               |
| Height                                                                                                                  | 73 mm                                                                                                                                                                               |
| Depth                                                                                                                   | 58 mm                                                                                                                                                                               |
| <b>Weights</b>                                                                                                          |                                                                                                                                                                                     |
| Weight, approx.                                                                                                         | 30 g                                                                                                                                                                                |
| <b>last modified:</b>                                                                                                   | 12/20/2021                                                                                       |