

SIPLUS ET 200SP, digital output module, DQ 8x 24VDC/0.5A ST, -40...+70°C with conformal coating based on 6ES7132-6BF01-0BA0 . suitable for BU type A0, Color code CC02, Module diagnostics



| General information | |
|--|-----------------------------|
| Product type designation | DQ 8x24VDC/0.5A ST |
| Firmware version | |
| <ul style="list-style-type: none"> FW update possible | No |
| usable BaseUnits | BU type A0 |
| Color code for module-specific color identification plate | CC02 |
| Product function | |
| <ul style="list-style-type: none"> I&M data | Yes; I&M0 to I&M3 |
| Operating mode | |
| <ul style="list-style-type: none"> DQ DQ with energy-saving function PWM Oversampling MSO | Yes No No No No |
| Redundancy | |
| <ul style="list-style-type: none"> Redundancy capability | Yes |
| 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, max. | 35 mA; without load |
|---------------------------|---------------------|

Output voltage

| | |
|------------------|------|
| Rated value (DC) | 24 V |
|------------------|------|

Power loss

| | |
|------------------|-----|
| Power loss, typ. | 1 W |
|------------------|-----|

Address area

| | |
|--------------------------|-----------------------------|
| Address space per module | |
| • Inputs | + 1 byte for QI information |
| • Outputs | 1 byte |

Hardware configuration

| | |
|-----------------------------|-----|
| Automatic encoding | Yes |
| • Mechanical coding element | Yes |

Submodules

| | |
|---|---|
| • Number of configurable submodules, max. | 4 |
|---|---|

Selection of BaseUnit for connection variants

| | |
|---------------------|---|
| • 1-wire connection | BU type A0 |
| • 2-wire connection | BU type A0 |
| • 3-wire connection | BU type A0 with AUX terminals |
| • 4-wire connection | BU type A0 + Potential isolation module |

Digital outputs

| | |
|---|---------------------------------------|
| Type of digital output | Source output (PNP, current-sourcing) |
| Number of digital outputs | 8 |
| Current-sourcing | Yes |
| Digital outputs, parameterizable | Yes |
| Short-circuit protection | Yes |
| • Response threshold, typ. | 1 A |
| Limitation of inductive shutdown voltage to | Typ. L+ (-50 V) |
| Controlling a digital input | Yes |

Switching capacity of the outputs

| | |
|-----------------------------|-------|
| • with resistive load, max. | 0.5 A |
| • on lamp load, max. | 5 W |

Load resistance range

| | |
|---------------|-------|
| • lower limit | 48 Ω |
| • upper limit | 12 kΩ |

Output voltage

| | |
|---|--------------------------------------|
| • for signal "1", min. | L+ (-0.8 V) |
| Output current | |
| • for signal "1" rated value | 0.5 A |
| • for signal "1" permissible range, max. | 0.5 A |
| • for signal "0" residual current, max. | 0.1 mA |
| Output delay with resistive load | |
| • "0" to "1", max. | 50 µs; at rated load |
| • "1" to "0", max. | 100 µs; at rated load |
| Parallel switching of two outputs | |
| • for uprating | No |
| • for redundant control of a load | Yes |
| Switching frequency | |
| • with resistive load, max. | 100 Hz |
| • with inductive load, max. | 2 Hz |
| • on lamp load, max. | 10 Hz |
| Total current of the outputs | |
| • Current per channel, max. | 0.5 A |
| • Current per module, max. | 4 A |
| Total current of the outputs (per module) | |
| horizontal installation | |
| — up to 30 °C, max. | 4 A |
| — up to 40 °C, max. | 4 A |
| — up to 50 °C, max. | 4 A |
| — up to 60 °C, max. | 4 A |
| vertical installation | |
| — up to 30 °C, max. | 4 A; in all other mounting positions |
| — up to 40 °C, max. | 4 A; in all other mounting positions |
| — up to 50 °C, max. | 4 A; in all other mounting positions |
| Cable length | |
| • shielded, max. | 1 000 m |
| • unshielded, max. | 600 m |
| Isochronous mode | |
| Isochronous operation (application synchronized up to terminal) | No |
| Interrupts/diagnostics/status information | |
| Diagnostics function | Yes |
| Substitute values connectable | Yes |
| Alarms | |
| • Diagnostic alarm | Yes |
| Diagnostic messages | |
| • Monitoring the supply voltage | Yes |

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| • Wire-break | Yes; Module-wise |
| • Short-circuit to M | Yes; Module-wise |
| • Short-circuit to L+ | Yes; Module-wise |
| Diagnostics indication LED | |
| • Monitoring of the supply voltage (PWR-LED) | Yes; Green PWR LED |
| • Channel status display | Yes; Green LED |
| • for channel diagnostics | No |
| • for module diagnostics | Yes; green/red DIAG LED |
| Potential separation | |
| Potential separation channels | |
| • between the channels | No |
| • between the channels and backplane bus | Yes |
| • between the channels and the power supply of the electronics | No |
| Isolation | |
| Isolation tested with | 707 V DC (type test) |
| Standards, approvals, certificates | |
| Suitable for safety functions | No |
| Suitable for safety-related tripping of standard modules | Yes |
| Ambient conditions | |
| Ambient temperature during operation | |
| • horizontal installation, min. | -40 °C; = Tmin (incl. condensation/frost) |
| • horizontal installation, max. | 70 °C; = Tmax; > +60 °C max. total current 1.0 A |
| Altitude during operation relating to sea level | |
| • 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) |
| Relative humidity | |
| • With condensation, tested in accordance with IEC 60068-2-38, max. | 100 %; incl. condensation / frost permitted (no commissioning under condensation conditions) |
| 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); * |

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|---|--|
| — 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 and fungal spores (excluding fauna); Class 6B3 on request |
| — 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; * |
| Remark | |
| — Note regarding classification of environmental conditions acc. to EN 60721 | * The supplied plug covers must remain in place over the unused interfaces during operation! |
| Conformal coating | |
| <ul style="list-style-type: none"> • Coatings for printed circuit board assemblies acc. to EN 61086 • Protection against fouling acc. to EN 60664-3 • Military testing according to MIL-I-46058C, Amendment 7 • Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies according to IPC-CC-830A | <p>Yes; Class 2 for high availability</p> <p>Yes; Type 1 protection</p> <p>Yes; Discoloration of coating possible during service life</p> <p>Yes; Conformal coating, Class A</p> |
| Dimensions | |
| Width | 15 mm |
| Height | 73 mm |
| Depth | 58 mm |
| Weights | |
| Weight, approx. | 30 g |
| last modified: | 05/30/2019 |