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## Data sheet 6AG2193-6BP20-4BB1



Figure similar

SIPLUS ET 200SP BU20-P12+A0+4B TX rail based on 6ES7193-6BP20-0BB1 with conformal coating, -40…+70 °C, OT4 with ST1/2 (+85 °C for 10 minutes), BU type B1, push-in terminals, without AUX terminals, new load group, WxH: 15 mm x 117 mm, with temperature acquisition

| | |
|---|---|
| **General information** | |
| Product type designation | BU type B1 |
| based on | 6ES7193-6BP20-0BB1 |
| **Supply voltage** | |
| Rated value (DC) | See manual |
| ● For P1 and P2 bus | 24 V |
| ● For AUX bus | 24 V; Equal potential group to P1/P2 bus or PE |
| ● for process terminals | 24 V |
| Rated value (AC) | See manual |
| ● For P1 and P2 bus | 230 V |
| ● For AUX bus | 230 V; Equal potential group to P1/P2 bus or PE |
| ● for process terminals | 230 V |
| external protection for power supply lines | Yes |
| Mains filter | |
| ● Integrated | No |
| **Current carrying capacity** | |
| up to 60 °C, max. | 10 A |
| For P1 and P2 bus, max. | 10 A |
| For AUX bus, max. | 10 A |
| For process terminals, max. | 5 A |
| **Hardware configuration** | |
| Automatic encoding | Yes |
| Slots | |
| ● Number of slots | 1 |
| **Potential separation** | |
| between backplane bus and supply voltage | Yes |
| between process terminals and supply voltage | Yes; Not applicable for process terminals 9 to 12 |
| between power bus and supply voltage | Yes |
| **Isolation** | |
| Isolation tested with | 2 545 V DC (type test) and according to EN 50155 (routine test) |
| **Standards, approvals, certificates** | |
| Railway application | |
| ● EN 50121-3-2 | Yes; EMC for rail vehicles |
| ● EN 50121-4 | Yes; EMC for signal and telecommunications systems |
| ● EN 50121-5 | Yes; EMC for fixed installations and railway power supply equipment |
| ● EN 50124-1 | Yes; Railway applications - overvoltage category OV3; pollution degree PD2; UNm = 230 V AC |
| ● EN 50125-1 | Yes; Rail vehicles - see ambient conditions |


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| | |
|---|---|
| ● EN 50125-2 | Yes; Stationary electrical equipment - see ambient conditions |
| ● EN 50125-3 | Yes; Signal and telecommunications systems - see ambient conditions; vibrations and shocks: Application point outside of tracks (1 m to 3 m away from track) |
| ● EN 50155 | Yes; Rail vehicles - temperature class OT4, ST1/ST2, horizontal mounting position |
| ● EN 61373 | Yes; Rail vehicles - vibrations and shocks: Category 1 Class A/B |
| ● Fire protection acc. to EN 45545-2 | Yes; For proof of conformity, see Service & Support |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● horizontal installation, min. | -40 °C; = Tmin (incl. condensation/frost) |
| ● horizontal installation, max. | 70 °C; = Tmax; +85 °C for 10 min (OT4, ST1/ST2 acc. to EN 50155) |
| ● vertical installation, min. | -40 °C; = Tmin |
| ● vertical installation, max. | 50 °C; = Tmax |
| Altitude during operation relating to sea level | |
| ● Installation altitude above sea level, max. | 2 000 m |
| ● Ambient air temperature-barometric pressure-altitude | Tmin ... Tmax at 1 140 hPa ... 795 hPa (-1 000 m ... +2 000 m) |
| 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, * |
| — Against mechanical environmental conditions acc. to EN 60721-3-3 | Yes; Class 3M8 using the SIPLUS Mounting Kit ET 200SP (6AG1193-6AA00-0AA0) |
| Use on land craft, rail vehicles and special-purpose vehicles | |
| — to biologically active substances according to EN 60721-3-5 | Yes; Class 5B2 mold, fungus and dry rot spores (with the exception of fauna); Class 5B3 on request |
| — to chemically active substances according to EN 60721-3-5 | Yes; Class 5C3 (RH < 75 %) incl. salt spray acc. to EN 60068-2-52 (severity degree 3); * |
| — to mechanically active substances according to EN 60721-3-5 | Yes; Class 5S3 incl. sand, dust; * |
| — 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) |
| 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 |
| ● Electronic equipment on rolling stock acc. to EN 50155 | Yes; Class PC2 protective coating acc. to EN 50155:2017 |
| ● 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 |
| **Dimensions** | |
| Width | 20 mm |


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|---|---|
| Height | 117 mm |
| Depth | 35 mm |
| **Weights** | |
| Weight, approx. | 48 g |
| **Other** | |
| Note: | for use in railway applications, also observe the product information "SIPLUS extreme RAIL" A5E37661960A, Online Support article 109736776 |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 16 | 27-24-26-03 |
| eClass | 14 | 27-24-26-03 |
| eClass | 12 | 27-24-26-03 |
| eClass | 9.1 | 27-24-26-03 |
| eClass | 9 | 27-24-26-03 |
| eClass | 8 | 27-24-26-03 |
| eClass | 7.1 | 27-24-26-03 |
| eClass | 6 | 27-24-26-03 |
| ETIM | 10 | EC001598 |
| ETIM | 9 | EC001598 |
| ETIM | 8 | EC001598 |
| ETIM | 7 | EC001598 |
| IDEA | 4 | 3560 |
| UNSPSC | 15 | 32-15-17-04 |

**Approvals / Certificates**

**General Product Approval**

Manufacturer Declaration

**General Product Approval** | **EMV** | **Railway**

China RoHS

Confirmation

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