SIEMENS

## Data sheet 6AG1331-6SB00-7AY0


SIPLUS LOGO! POWER 24V 1.3A

SIPLUS LOGO! Power 24V 1,3A
for medial stress -40...+70°C start up at -25°C based on 6EP3331-6SB00-0AY0 . stabilized power supply input: AC 100-240 V
output: DC 24 V / 1,3 A

| Input | |
|---|---|
| Input | 1-phase AC or DC |
| Rated voltage value Vin rated | 100 ... 240 V |
| Voltage range AC | 85 ... 264 V |
| input voltage | |
| ● at DC | 110 ... 300 V |
| Wide-range input | Yes |
| Mains buffering | at Vin = 187 V |
| Mains buffering at Iout rated, min. | 40 ms; at Vin = 187 V |
| Rated line frequency 1 | 50 Hz |
| Rated line frequency 2 | 60 Hz |
| Rated line range | 47 ... 63 Hz |
| input current | |
| ● at rated input voltage 120 V | 0.7 A |
| ● at rated input voltage 230 V | 0.35 A |
| Switch-on current limiting (+25 °C), max. | 25 A |
| $I^2t$, max. | 0.8 $A^2 \cdot s$ |
| Built-in incoming fuse | internal |
| Protection in the mains power input (IEC 898) | Recommended miniature circuit breaker: from 6 A characteristic B or from 2 A characteristic C |

| Output | |
|---|---|
| Output | Controlled, isolated DC voltage |
| Rated voltage Vout DC | 24 V |
| ● output voltage at output 1 at DC rated value | 24 V |
| Total tolerance, static ± | 3 % |
| Static mains compensation, approx. | 0.1 % |
| Static load balancing, approx. | 0.1 % |
| Residual ripple peak-peak, max. | 200 mV |
| Residual ripple peak-peak, typ. | 30 mV |
| Spikes peak-peak, max. (bandwidth: 20 MHz) | 300 mV |
| Spikes peak-peak, typ. (bandwidth: 20 MHz) | 50 mV |
| Adjustment range | 22.2 ... 26.4 V |
| product function output voltage adjustable | Yes |

| | |
|---|---|
| Output voltage setting | via potentiometer |
| Status display | Green LED for output voltage OK |
| On/off behavior | No overshoot of Vout (soft start) |
| Startup delay, max. | 0.5 s |
| Voltage rise, typ. | 100 ms |
| Rated current value Iout rated | 1.3 A |
| Current range | 0 ... 1.3 A |
| ● Note | +55 ... +70 °C: Derating 2%/K |
| supplied active power typical | 31.2 W |
| Parallel switching for enhanced performance | Yes |
| Numbers of parallel switchable units for enhanced performance | 2 |
| **Efficiency** | |
| Efficiency at Vout rated, Iout rated, approx. | 86 % |
| Power loss at Vout rated, Iout rated, approx. | 5 W |
| power loss [W] during no-load operation maximum | 0.3 W |
| **Closed-loop control** | |
| Dynamic mains compensation (Vin rated ±15 %), max. | 0.2 % |
| Dynamic load smoothing (Iout: 10/90/10 %), Uout ± typ. | 1 % |
| Load step setting time 10 to 90%, typ. | 1 ms |
| Load step setting time 90 to 10%, typ. | 1 ms |
| **Protection and monitoring** | |
| Output overvoltage protection | Yes, according to EN 60950-1 |
| Current limitation, typ. | 1.7 A |
| property of the output short-circuit proof | Yes |
| Short-circuit protection | Constant current characteristic |
| enduring short circuit current RMS value | |
| ● maximum | 1.7 A |
| overcurrent overload capability in normal operation | overload capability 150% Iout rated typ. 200 ms |
| Overload/short-circuit indicator | - |
| measuring point for output current | 50 mV =^ 1.3 A |
| overcurrent overload capability when switching on | 150% Iout rated typ. 200 ms |
| **Safety** | |
| Primary/secondary isolation | Yes |
| galvanic isolation | Safety extra-low output voltage Uout acc. to EN 60950-1 and EN 50178 |
| Protection class | Class II (without protective conductor) |
| Degree of protection (EN 60529) | IP20 |
| **Approvals** | |
| CE mark | Yes |
| **EMC** | |
| Emitted interference | EN 55022 Class B |
| Supply harmonics limitation | not applicable |
| Noise immunity | EN 61000-6-2 |
| **environmental conditions** | |
| ambient temperature in horizontal mounting position during operation | -40; Startup @ -25 °C ... +70; with natural convection |
| ambient temperature during storage and transport | -40 ... +85 |
| installation altitude at height above sea level maximum | 6 000 m |
| ambient condition relating to ambient temperature - air pressure - installation altitude | In case of operation at altitudes of 2000 - 6000 m above sea level: Output power derating of -7.5 %/1000 m or reduction of the ambient temperature by 5 K/1000 m |
| relative humidity with condensation acc. to IEC 60068-2-38 maximum | 100 %; RH incl. condensation/frost (no commissioning if condensation is present), horizontal installation |
| chemical resistance to commercially available cooling lubricants | Yes; incl. diesel and oil droplets in the air |
| resistance to biologically active substances conformity acc. to EN 60721-3-3 | Yes; Class 3B2 mold, fungal, sponge spores (except fauna); class 3B3 upon request |
| resistance to chemically active substances conformity acc. to EN 60721-3-3 | Yes; Class 3C4 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3) |

| | |
|---|---|
| resistance to mechanically active substances conformity acc. to EN 60721-3-3 | Yes; Class 3S4 incl. sand, dust |
| resistance to biologically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6B2 mold, fungal, sponge spores (except fauna) |
| resistance to chemically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6C3 (RH < 75%) incl. salt spray acc. to EN 60068-2-52 (severity level 3) |
| resistance to mechanically active substances conformity acc. to EN 60721-3-6 | Yes; Class 6S3 incl. sand, dust |
| coating for equipped printed circuit board acc. to EN 61086 | Yes; Class 2 for high availability |
| type of coating protection against pollution according to EN 60664-3 | Yes; Type 1 protection |
| type of test of the coating acc. to MIL-I-46058C | Yes; Discoloration of the coating during service life possible |
| product conformity of the coating Qualification and Performance of Electrical Insulating Compound for Printed Board Assemblies acc. to IPC-CC-830A | Yes; Conformal Coating, Class A |
| **Mechanics** | |
| Connection technology | screw-type terminals |
| Connections | |
| ● Supply input | L, N: 1 screw terminal each for 0.5 ... 2.5 mm2 single-core/finely stranded |
| ● Output | +, -: 2 screw terminals each for 0.5 ... 2.5 mm² |
| ● Auxiliary | - |
| width of the enclosure | 36 mm |
| height of the enclosure | 90 mm |
| depth of the enclosure | 53 mm |
| required spacing | |
| ● top | 20 mm |
| ● bottom | 20 mm |
| ● left | 0 mm |
| ● right | 0 mm |
| Weight, approx. | 0.12 kg |
| product feature of the enclosure housing can be lined up | Yes |
| Installation | Snaps onto DIN rail EN 60715 35x7.5/15, direct mounting in different mounting positions |
| MTBF at 40 °C | 3 094 996 h |
| other information | Specifications at rated input voltage and ambient temperature +25 °C (unless otherwise specified) |