SIEMENS

## Data sheet 6BK1942-2DA00-0AA0

***spare part*** SIPLUS HCS4200 POM4220 Highend with 8 outputs each max. 4600 W (at 230 V AC)

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| **General information** | |
| Product type designation | POM4220 High-end |
| **Installation type/mounting** | |
| Mounting type | Screw mounting to rack |
| Mounting position | vertical |
| Type of ventilation | Self ventilation or forced ventilation |
| **Supply voltage** | |
| Type of supply voltage | AC |
| Rated value (AC) | 230 V; phase - neutral conductor |
| ● Relative negative tolerance | 10 % |
| ● Relative positive tolerance | 30 % |
| 2nd rated value (AC) | 277 V; phase - neutral conductor |
| ● Relative negative tolerance | 25 % |
| ● Relative positive tolerance | 8 % |
| 3rd rated value (AC) | 400 V; Phase - phase |
| ● Relative negative tolerance | 10 % |
| ● Relative positive tolerance | 30 % |
| 4th rated value (AC) | 480 V; Phase - phase |
| ● Relative negative tolerance | 25 % |
| ● Relative positive tolerance | 8 % |
| Line frequency | |
| ● Rated value 50 Hz | Yes |
| ● Rated value 60 Hz | Yes |
| ● Relative symmetrical tolerance | 5 % |
| Mains buffering | |
| ● Recovery time after power failure, typ. | 1 s |
| Connection method | |
| ● Design of electrical connection for supply voltage | plug, 3-pole with spring-type terminal, push-in |
| — Connectable conductor cross-sections, solid | 1x (0.75 ... 16 mm²) |
| — Connectable conductor cross-sections, finely stranded with wire end processing | 1x (0.75 ... 16 mm²) |
| — Connectable conductor cross-sections for AWG cables | 1x (18 ... 4) |
| **Input voltage** | |
| device version of the power supply for electronics | Power supply via rack |
| **Power** | |
| Active power input, max. | 1.5 W |
| **Power electronics** | |
| Type of load | Ohmic load |

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| Power capacity, max. | 51.2 kW; At 400 V AC |
| ● For phase against phase with fan at 40 °C, max. | 51.2 kW; At 400 V AC |
| ● For phase against phase without fan at 40 °C, max. | 12.5 kW; At 400 V AC |
| ● For phase against neutral with fan at 40 °C, max. | 29.4 kW; at 230 V AC |
| ● For phase against neutral without fan at 40 °C, max. | 7.3 kW; at 230 V AC |
| Switching capacity current per phase, max. | 64 A |
| Short-time withstand current (SCCR) acc. to UL 508A | 100 kA |
| Control of heating elements | |
| ● Half-wave control | Yes |
| ● Soft start | Yes |
| ● Phase control | Yes |
| Load connection type | |
| ● Star connection with neutral conductor (single-phase) | Yes |
| ● Open delta connection (single-phase) | Yes |
| ● closed delta connection (2-phase) | No |
| ● Closed delta connection (3-phase) | No |
| ● Star connection with neutral conductor (2-phase) | Yes; Economy circuit |
| ● star connection without neutral conductor (3-phase) | No |
| ● 2-pole switching | Yes; Phase - neutral conductor, phase - phase |
| Setpoint input | |
| ● Percent | Yes |
| ● Watts | Yes |
| Heating power | |
| ● Number of digital outputs | 8 |
| ● Number of heating elements per output, max. | 5; Recommended, depends on tolerance of heating elements |
| ● Output voltage for heating power | 230 V |
| ● 2nd output voltage for heating power | 277 V |
| ● 3rd output voltage for heating power | 400 V |
| ● 4th output voltage for heating power | 480 V |
| ● Power carrying capacity per output, min. | 400 W; at 230 V AC |
| ● Power carrying capacity per output, max. | 4 600 W; at 230 V AC |
| — for heating elements with high inrush current, max. | 2 700 W; at 230 V AC |
| ● Output current for heating power | 20 A; max. |
| ● Melting I2t value | 120 $A^2 \cdot s$ |
| ● Design of short-circuit protection per output | Melting fuse 25 A |
| ● Design of overvoltage protection | Transil Diode |
| Connection method | |
| ● Design of electrical connection at output for heating and fan | plug, 4-pole with spring-type terminal, push-in |
| — Connectable conductor cross-sections, solid | 1x (0.2 ... 10 $mm^2$) |
| — Connectable conductor cross-sections, finely stranded with wire end processing | 1x (0.25 ... 6 $mm^2$) |
| — Connectable conductor cross-sections for AWG cables, stranded | 1x (24 ... 8) |
| **Interfaces** | |
| Interfaces/bus type | system interface |
| **Interrupts/diagnostics/status information** | |
| Number of status displays | 11 |
| LED status display | LED green = ready, LED yellow = heating on/off, LED red = error display, LED red = error for each channel |
| Diagnostics function | Voltage and current diagnosis |
| Diagnoses | |
| ● Fuse blown | Yes |
| ● Load failure | Yes |
| ● Triac error | Yes |
| ● Switch-off threshold for internal device temperature | Yes |
| ● Parallel-connected heating elements | Yes |
| ● Rotating field fault | Yes |
| ● Communication error | Yes |
| ● Supply voltage not connected | Yes |

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| ● Line voltage outside the permissible range | Yes |
| ● Frequency outside the permissible range | Yes |
| ● Fault current too high | Yes |
| **Integrated Functions** | |
| Monitoring functions | |
| ● Temperature monitoring | Yes |
| ● Type of temperature monitoring | NTC thermistor |
| Measuring functions | |
| ● Voltage measurement | Yes |
| ● Current measurement | Yes |
| ● Fault current detection | Yes; For 2-pole switching |
| **Potential separation** | |
| Design of electrical isolation | Optocoupler and/or protective impedance between main circuit and PELV |
| between the outputs | No |
| **Isolation** | |
| Overvoltage category | III |
| Degree of pollution | 2 |
| **EMC** | |
| EMC interference emission | Limit value in accordance with IEC 61000-6-4:2007 + A1:2011 |
| Electrostatic discharge acc. to IEC 61000-4-2 | 4 kV contact discharge / 8 kV air discharge |
| Field-related interference acc. to IEC 61000-4-3 | 10 V/m (80 ... 1 000 MHz), 3 V/m (1.4 ... 2.0 GHz), 1 V/m (2.0 ... 2.7 GHz) |
| Conducted interference due to burst acc. to IEC 61000-4-4 | 2 kV power supply lines, 2 kV load lines |
| Conducted interference due to surge acc. to IEC 61000-4-5 | Supply and load lines: 1 kV symmetrical, 2 kV asymmetrical |
| Conducted interference due to high-frequency radiation acc. to IEC 61000-4-6 | 10 V (0.15 ... 80 MHz) |
| **Degree and class of protection** | |
| IP degree of protection | IP20 |
| **Standards, approvals, certificates** | |
| CE mark | Yes |
| UL approval | Yes |
| RCM (formerly C-TICK) | Yes |
| KC approval | Yes |
| EAC (formerly Gost-R) | Yes |
| China RoHS compliance | Yes |
| **Ambient conditions** | |
| Ambient temperature during operation | |
| ● min. | 0 °C |
| ● max. | 55 °C |
| Ambient temperature during storage/transportation | |
| ● Storage, min. | -25 °C |
| ● Storage, max. | 70 °C |
| ● Transportation, min. | -25 °C |
| ● Transportation, max. | 70 °C |
| Air pressure acc. to IEC 60068-2-13 | |
| ● Operation, min. | 860 hPa |
| ● Operation, max. | 1 080 hPa |
| ● Storage, min. | 660 hPa |
| ● Storage, max. | 1 080 hPa |
| Altitude during operation relating to sea level | |
| ● Installation altitude above sea level, max. | 2 000 m |
| Relative humidity | |
| ● Operation at 25 °C, max. | 95 % |
| ● Operation at 50 °C, max. | 50 %; 95 % at 25 °C, decreasing linearly to 50 % at 50 °C |
| Vibrations | |
| ● Vibration resistance during operation acc. to IEC 60068-2-6 | 10 ... 58 Hz / 0.075 mm, 58 ... 150 Hz / 1 g |
| ● Vibration resistance during storage acc. to IEC 60068-2-6 | 5 ... 8.5 Hz / 3.5 mm, 8.5 ... 500 Hz / 1 g |
| Shock testing | |
| ● Shock resistance during operation acc. to IEC 60068-2- | 15 g / 11 ms / 3 shocks/axis |

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| ● Shock resistance during storage acc. to IEC 60068-2-29 | 25 g / 6 ms / 1 000 shocks/axis |

**Dimensions**

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| Width | 36 mm |
| Height | 285 mm |
| Depth | 281 mm |

**Classifications**

| | Version | Classification |
|---|---|---|
| eClass | 14 | 27-24-40-01 |
| eClass | 12 | 27-24-40-01 |
| eClass | 9.1 | 27-24-40-01 |
| eClass | 9 | 27-24-40-01 |
| eClass | 8 | 27-24-26-90 |
| eClass | 7.1 | 27-24-26-90 |
| eClass | 6 | 27-24-26-90 |
| ETIM | 10 | EC002982 |
| ETIM | 9 | EC002982 |
| ETIM | 8 | EC002982 |
| ETIM | 7 | EC002982 |
| IDEA | 4 | 3567 |
| UNSPSC | 15 | 32-15-17-05 |

**Approvals / Certificates**

| General Product Approval | EMV |
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