SIEMENS

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

SIPLUS HCS4200 POM4220 Highend. Power Output Module (POM) to insert in HCS RACK4200. With 8 power outputs 5540 W at 277V and 9600 W at 480V (with control mode half-wave control:depending on the inrush current of the electric there is a limitation of max. 3324 W at 277V and 5760 W at 480V)

| 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 |
| • Relative negative tolerance | 10 % |
| • Relative positive tolerance | 30 % |
| 2nd rated value (AC) | 277 V |
| • Relative negative tolerance | 25 % |
| • Relative positive tolerance | 8 % |
| 3rd rated value (AC) | 400 V |
| • Relative negative tolerance | 10 % |
| • Relative positive tolerance | 30 % |
| 4th rated value (AC) | 480 V |

| | |
|---|---|
| • 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 | Connector, 3-pole with spring-loaded connection |
| — 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

| | |
|---|---|
| Design of the power supply | Power supply via rack |

## Power

| | |
|---|---|
| Active power input, max. | 1 W |

## Power electronics

| | |
|---|---|
| Type of load | Ohmic load |
| Power capacity, max. | 40 kW; At 400 V AC |
| • For phase against phase with fan at 40 °C, max. | 40 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. | 23 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. | 50 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 (3-phase) | No |
| • Star connection with neutral conductor (2-phase) | Yes; Economy circuit |
| • 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 A²·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-loaded connection |
| — Connectable conductor cross-sections, solid | 1x (0.2 ... 10 mm²) |
| — Connectable conductor cross-sections, finely stranded with wire end processing | 1x (0.25 ... 6 mm²) |
| — 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 |
| **Diagnostic messages** | |
| • 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 |
| • 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 |
| Reference designation according to DIN EN 81346-2 | Q |

## 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 60068-2-27 | 15 g / 11 ms / 3 shocks/axis |
| • Shock resistance during storage acc. to IEC 60068-2-29 | 25 g / 6 ms / 1 000 shocks/axis |

## Dimensions

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

**last modified:** 06/16/2020