## 6BK1943-2DA00-0AA2

**Data sheet** 



\*\*\*spare part\*\*\* SIPLUS HCS4300 POM4320 rear panel mounting (UL) with 9 outputs each max. 6000 W (at 400 V AC)

| General information  |  |  |  |
|--|--|--|--|
| Product type designation   | POM4320 rear panel mounting (UL)           |  |  |
| Installation type/mounting   |  |  |  |
| Mounting type  | Backplane mounting                         |  |  |
| Mounting position  | vertical                                   |  |  |
| Type of ventilation  | Self-ventilation                           |  |  |
| Supply voltage   |  |  |  |
| Type of supply voltage   | AC   |  |  |
| Rated value (AC)   | 400 V; Phase - phase                       |  |  |
| Relative negative tolerance  | 10 %                                       |  |  |
| Relative positive tolerance  | 30 %                                       |  |  |
| 2nd rated value (AC)   | 480 V; Phase - phase                       |  |  |
| <ul> <li>Relative negative tolerance</li> </ul>                        | 25 %                                       |  |  |
| Relative positive tolerance  | 8 %  |  |  |
| Line frequency   |  |  |  |
| Rated value 50 Hz  | Yes  |  |  |
| Rated value 60 Hz  | Yes  |  |  |
| <ul> <li>Relative symmetrical tolerance</li> </ul>                     | 5 %  |  |  |
| Mains buffering  |  |  |  |
| <ul> <li>Recovery time after power failure, typ.</li> </ul>            | 1 s  |  |  |
| Connection method  |  |  |  |
| <ul> <li>Design of electrical connection for supply voltage</li> </ul> | Busbar mounting, 3-pole + PE               |  |  |
| Input voltage  |  |  |  |
| device version of the power supply for electronics                     | Power supply via CIM                       |  |  |
| Power  |  |  |  |
| Active power input, max.   | 8 W  |  |  |
| Power electronics  |  |  |  |
| Type of load   | Ohmic load                                 |  |  |
| Power capacity, max.   | 64.8 kW; At 480 V AC                       |  |  |
| <ul> <li>For phase against phase with fan at 40 °C, max.</li> </ul>    | 64.8 kW; At 480 V AC                       |  |  |
| Switching capacity current per phase, max.                             | 80 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)                | No   |  |  |
| <ul> <li>Open delta connection (single-phase)</li> </ul>               | Yes; Incoming fuse contained in the device |  |  |
| <ul> <li>closed delta connection (2-phase)</li> </ul>                  | No   |  |  |

| <ul> <li>Closed delta connection (3-phase)</li> </ul>  | No   |  |  |  |
|--|--|--|--|--|
| <ul> <li>Star connection with neutral conductor (2-phase)</li> </ul>   | No   |  |  |  |
| <ul> <li>star connection without neutral conductor (3-phase)</li> </ul>  | No   |  |  |  |
| 2-pole switching   | No   |  |  |  |
| Setpoint input   |  |  |  |  |
| <ul><li>Percent</li></ul>  | Yes  |  |  |  |
| Watts  | No   |  |  |  |
| Heating power  |  |  |  |  |
| <ul> <li>Number of digital outputs</li> </ul>  | 9  |  |  |  |
| <ul> <li>Number of heating elements per output, max.</li> </ul>  | 1  |  |  |  |
| <ul> <li>Output voltage for heating power</li> </ul>   | 400 V  |  |  |  |
| <ul> <li>2nd output voltage for heating power</li> </ul>   | 480 V  |  |  |  |
| <ul> <li>Power carrying capacity per output, min.</li> </ul>   | 240 W; At 480 V AC   |  |  |  |
| <ul> <li>Power carrying capacity per output, max.</li> </ul>   | 7 200 W; At 480 V AC   |  |  |  |
| — for heating elements with high inrush current, max.  | 4 000 W; At 480 V AC   |  |  |  |
| <ul> <li>Output current for heating power</li> </ul>   | 15 A; max.   |  |  |  |
| Melting I2t value  | 400 A²-s   |  |  |  |
| Design of short-circuit protection per output  | Melting fuse 20 A  |  |  |  |
| Design of overvoltage protection   | Transil Diode  |  |  |  |
| Connection method  |  |  |  |  |
| Design of electrical connection at output for heating and fan  | plug, 3-pole with spring-type terminal, push-in  |  |  |  |
| <ul> <li>Connectable conductor cross-sections, solid</li> </ul>  | 1x (0.2 10 mm²)  |  |  |  |
| <ul> <li>Connectable conductor cross-sections, finely stranded with wire end processing</li> </ul>   | 1x (0.25 6 mm²)  |  |  |  |
| <ul> <li>Connectable conductor cross-sections for AWG cables, stranded</li> </ul>  | 1x (24 8)  |  |  |  |
| Interfaces   |  |  |  |  |
| Interfaces/bus type  | system interface   |  |  |  |
| Interrupts/diagnostics/status information  |  |  |  |  |
| Number of status displays  | 12   |  |  |  |
| LED status display   | LED green = ready, LED yellow = heating on/off, LED red = error display, LED red = error for each channel                    |  |  |  |
| Diagnostics function   | Voltage diagnostics  |  |  |  |
|  |  |  |  |  |
| Diagnoses  |  |  |  |  |
| Diagnoses  • Fuse blown  | Yes  |  |  |  |
| -  | Yes<br>Yes   |  |  |  |
| • Fuse blown   |  |  |  |  |
| Fuse blown     Load failure  | Yes  |  |  |  |
| <ul><li>Fuse blown</li><li>Load failure</li><li>Triac error</li></ul>  | Yes<br>Yes   |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> </ul>  | Yes<br>Yes<br>Yes  |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> </ul>   | Yes<br>Yes<br>Yes<br>No  |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> <li>Rotating field fault</li> </ul>   | Yes Yes Yes No Yes   |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> <li>Rotating field fault</li> <li>Communication error</li> </ul>  | Yes Yes Yes No Yes Yes   |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> <li>Rotating field fault</li> <li>Communication error</li> <li>Supply voltage not connected</li> </ul>  | Yes Yes Yes No Yes Yes Yes Yes   |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> <li>Rotating field fault</li> <li>Communication error</li> <li>Supply voltage not connected</li> <li>Line voltage outside the permissible range</li> </ul>  | Yes Yes Yes No Yes Yes Yes Yes Yes   |  |  |  |
| <ul> <li>Fuse blown</li> <li>Load failure</li> <li>Triac error</li> <li>Switch-off threshold for internal device temperature</li> <li>Parallel-connected heating elements</li> <li>Rotating field fault</li> <li>Communication error</li> <li>Supply voltage not connected</li> <li>Line voltage outside the permissible range</li> <li>Frequency outside the permissible range</li> <li>Fault current too high</li> </ul>   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes   |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes   |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions   | Yes Yes Yes No Yes Yes Yes Yes Yes Yos Yes Yos No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Temperature monitoring  | Yes Yes Yes No Yes Yes Yes Yes Yes Yos No Yes  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Type of temperature monitoring  | Yes Yes Yes No Yes Yes Yes Yes Yes Yos Yes Yos No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Yes No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions Voltage measurement   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Yes No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Type of temperature monitoring Voltage measurement Current measurement  | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Yes No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Type of temperature monitoring Measuring functions Voltage measurement Current measurement Fault current detection  | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Yes No  |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Frault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions Voltage measurement Current measurement Fault current detection Potential separation   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes No No   |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Frault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation  | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No No  Optocoupler and/or protective impedance between main circuit and PELV      |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation between the outputs   | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes Yes No No   |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Frault current too high Integrated Functions Monitoring functions Type of temperature monitoring Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation between the outputs  Isolation  | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Optocoupler and/or protective impedance between main circuit and PELV No      |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Fault current too high Integrated Functions Monitoring functions Type of temperature monitoring Type of temperature monitoring  Measuring functions Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation between the outputs  Isolation Overvoltage category            | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Optocoupler and/or protective impedance between main circuit and PELV No  III |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Frault current too high Integrated Functions Monitoring functions Temperature monitoring Type of temperature monitoring Measuring functions Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation between the outputs Isolation Overvoltage category Degree of pollution | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Optocoupler and/or protective impedance between main circuit and PELV No      |  |  |  |
| Fuse blown Load failure Triac error Switch-off threshold for internal device temperature Parallel-connected heating elements Rotating field fault Communication error Supply voltage not connected Line voltage outside the permissible range Frequency outside the permissible range Frault current too high Integrated Functions Monitoring functions Type of temperature monitoring Type of temperature monitoring  Voltage measurement Current measurement Fault current detection  Potential separation  Design of electrical isolation between the outputs  Isolation Overvoltage category                               | Yes Yes Yes No Yes Yes Yes Yes Yes Yes Yes No  Optocoupler and/or protective impedance between main circuit and PELV No  III |  |  |  |

| Electrostatic discharge acc. to IEC 61000-4-2  | 4 kV contact discharge / 8 kV a                            | ir 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 | 1 (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                            | on supply and load lines: 1 kV symmetric, 2 kV unsymmetric |                        |                 |  |  |
| 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 IEC 81346-2 (2009)                                | 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  |                        |                 |  |  |
| <ul> <li>Transportation, min.</li> </ul>   | -25 °C   |                        |                 |  |  |
| Transportation, max.   | 70 °C  |                        |                 |  |  |
| Air pressure acc. to IEC 60068-2-13  |  |                        |                 |  |  |
| Operation, min.  | 860 hPa  |                        |                 |  |  |
| <ul><li>Operation, max.</li></ul>  | 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  |  |                        |                 |  |  |
| <ul> <li>Operation at 25 °C, max.</li> </ul>   | 95 %   |                        |                 |  |  |
| • Operation at 50 °C, max.   | 50 %; 95 % at 25 °C, decreasing linearly to 50 % at 50 °C  |                        |                 |  |  |
| Vibrations   |  |                        |                 |  |  |
| <ul> <li>Vibration resistance during operation acc. to IEC 60068-<br/>2-6</li> </ul> | 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  |  |                        |                 |  |  |
| <ul> <li>Shock resistance during operation acc. to IEC 60068-2-<br/>27</li> </ul>    | 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   | 20 g / 0 mo / 1 000 snooks/axis                            |                        |                 |  |  |
| Width  | 104 mm   |                        |                 |  |  |
| Height   | 344 mm   |                        |                 |  |  |
| Depth  | 217 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   | 9                      | EC002982        |  |  |
|  | ETIM   | 8                      | EC002982        |  |  |
|  | ETIM   | 7                      | EC002982        |  |  |

IDEA 4 3567 UNSPSC 15 32-15-17-05

Approvals / Certificates

General Product Approval EMV







<u>KC</u>



last modified: 3/12/2024 🖸