

SIPLUS HCS4300 POM4320 Busbar mounting (UL). Power output module for mounting on busbars system. With 9 outputs each max. 7200 W (for operating mode Half-wave control: depending on inrush current of the load limitation to max. 4000 W)



| General information              |                              |
|----------------------------------|------------------------------|
| Product type designation         | POM4320 BUSBAR MOUNTING (UL) |
| Installation type/mounting       |                              |
| Mounting type                    | Busbar mounting              |
| Mounting position                | vertical                     |
| Type of ventilation              | Self-ventilation             |
| Supply voltage                   |                              |
| Type of supply voltage           | AC                           |
| Rated value (AC)                 | 400 V                        |
| • Relative negative tolerance    | 10 %                         |
| • Relative positive tolerance    | 30 %                         |
| 2nd 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 %                          |

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| <b>Mains buffering</b>                                  |                                            |
| • Recovery time after power failure, typ.               | 1 s                                        |
| <b>Connection method</b>                                |                                            |
| • Design of electrical connection for supply voltage    | Busbar mounting, 3-pole + PE               |
| <b>Input voltage</b>                                    |                                            |
| Design of the power supply                              | Power supply via CIM                       |
| <b>Power</b>                                            |                                            |
| Active power input, max.                                | 8 W                                        |
| <b>Power electronics</b>                                |                                            |
| Type of load                                            | Ohmic load                                 |
| Power capacity, max.                                    | 64.8 kW; At 480 V AC                       |
| • For phase against phase with fan at 40 °C, max.       | 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                                     |
| <b>Control of heating elements</b>                      |                                            |
| • Half-wave control                                     | Yes                                        |
| • Soft start                                            | Yes                                        |
| • Phase control                                         | Yes                                        |
| <b>Load connection type</b>                             |                                            |
| • Star connection with neutral conductor (single-phase) | No                                         |
| • Open delta connection (single-phase)                  | Yes; Incoming fuse contained in the device |
| • Closed delta connection (3-phase)                     | No                                         |
| • Star connection with neutral conductor (2-phase)      | No                                         |
| • 2-pole switching                                      | No                                         |
| <b>Setpoint input</b>                                   |                                            |
| • Percent                                               | Yes                                        |
| • Watts                                                 | No                                         |
| <b>Heating power</b>                                    |                                            |
| • Number of digital outputs                             | 9                                          |
| • Number of heating elements per output, max.           | 1                                          |
| • Output voltage for heating power                      | 400 V                                      |
| • 2nd output voltage for heating power                  | 480 V                                      |
| • Power carrying capacity per output, min.              | 200 W; At 480 V AC                         |
| • Power carrying capacity per output, max.              | 7 200 W; At 480 V AC                       |
| — for heating elements with high inrush current, max.   | 4 000 W; At 480 V AC                       |
| • Output current for heating power                      | 15 A; max.                                 |
| • Melting I2t value                                     | 400 A²·s                                   |

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| <ul style="list-style-type: none"> <li>• Design of short-circuit protection per output</li> <li>• Design of overvoltage protection</li> </ul>                                                                                                                                                                                                                                                                                                                                  | Melting fuse 20 A<br>Transil Diode                                                                                                                   |
| <b>Connection method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• Design of electrical connection at output for heating and fan <ul style="list-style-type: none"> <li>— Connectable conductor cross-sections, solid</li> <li>— Connectable conductor cross-sections, finely stranded with wire end processing</li> <li>— Connectable conductor cross-sections for AWG cables, stranded</li> </ul> </li> </ul>                                                                                          | Connector, 3-pole with spring-loaded connection<br><br>1x (0.2 ... 10 mm <sup>2</sup> )<br><br>1x (0.25 ... 6 mm <sup>2</sup> )<br><br>1x (24 ... 8) |
| <b>Interfaces</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                      |
| Interfaces/bus type                                                                                                                                                                                                                                                                                                                                                                                                                                                            | system interface                                                                                                                                     |
| <b>Interrupts/diagnostics/status information</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                      |
| 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                                                                                                                                  |
| <b>Diagnostic messages</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                      |
| <ul style="list-style-type: none"> <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<br>Yes<br>Yes<br>Yes<br>No<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>Yes<br>No                                                                       |
| <b>Integrated Functions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |
| <b>Monitoring functions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• Temperature monitoring</li> <li>• Type of temperature monitoring</li> </ul>                                                                                                                                                                                                                                                                                                                                                           | Yes<br>NTC thermistor                                                                                                                                |
| <b>Measuring functions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• Voltage measurement</li> <li>• Current measurement</li> <li>• Fault current detection</li> </ul>                                                                                                                                                                                                                                                                                                                                      | Yes<br>No<br>No                                                                                                                                      |
| <b>Potential separation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                      |

|                                                                              |                                                                             |
|------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Design of electrical isolation                                               | Optocoupler and/or protective impedance between main circuit and PELV       |
| between the outputs                                                          | No                                                                          |
| <b>Isolation</b>                                                             |                                                                             |
| Overvoltage category                                                         | III                                                                         |
| Degree of pollution                                                          | 2                                                                           |
| <b>EMC</b>                                                                   |                                                                             |
| 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                    | 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)                                                      |
| <b>Degree and class of protection</b>                                        |                                                                             |
| IP degree of protection                                                      | IP20                                                                        |
| <b>Standards, approvals, certificates</b>                                    |                                                                             |
| 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                                                                           |
| <b>Ambient conditions</b>                                                    |                                                                             |
| <b>Ambient temperature during operation</b>                                  |                                                                             |
| • min.                                                                       | 0 °C                                                                        |
| • max.                                                                       | 55 °C                                                                       |
| <b>Ambient temperature during storage/transportation</b>                     |                                                                             |
| • Storage, min.                                                              | -25 °C                                                                      |
| • Storage, max.                                                              | 70 °C                                                                       |
| • Transportation, min.                                                       | -25 °C                                                                      |
| • Transportation, max.                                                       | 70 °C                                                                       |
| <b>Air pressure acc. to IEC 60068-2-13</b>                                   |                                                                             |
| • 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                                                         | 104 mm                                                    |
| Height                                                        | 340 mm                                                    |
| Depth                                                         | 250 mm                                                    |
| last modified:                                                | 03/16/2020                                                |