

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



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 mm ²)
— Connectable conductor cross-sections, finely stranded with wire end processing	1x (0.75 ... 16 mm ²)
— 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.	1.5 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

<ul style="list-style-type: none"> • Closed delta connection (3-phase) • Star connection with neutral conductor (2-phase) • 2-pole switching 	<p>No</p> <p>Yes; Economy circuit</p> <p>Yes; Phase - neutral conductor, phase - phase</p>
Setpoint input	
<ul style="list-style-type: none"> • Percent • Watts 	<p>Yes</p> <p>Yes</p>
Heating power	
<ul style="list-style-type: none"> • Number of digital outputs • Number of heating elements per output, max. • Output voltage for heating power • 2nd output voltage for heating power • 3rd output voltage for heating power • 4th output voltage for heating power • Power carrying capacity per output, min. • Power carrying capacity per output, max. <ul style="list-style-type: none"> — for heating elements with high inrush current, max. • Output current for heating power • Melting I²t value • Design of short-circuit protection per output • Design of overvoltage protection 	<p>8</p> <p>5; Recommended, depends on tolerance of heating elements</p> <p>230 V</p> <p>277 V</p> <p>400 V</p> <p>480 V</p> <p>400 W; at 230 V AC</p> <p>4 600 W; at 230 V AC 2 700 W; at 230 V AC</p> <p>20 A; max.</p> <p>120 A²·s</p> <p>Melting fuse 25 A</p> <p>Transil Diode</p>
Connection method	
<ul style="list-style-type: none"> • Design of electrical connection at output for heating and fan <ul style="list-style-type: none"> — Connectable conductor cross-sections, solid — Connectable conductor cross-sections, finely stranded with wire end processing — Connectable conductor cross-sections for AWG cables, stranded 	<p>Plug, 4-pole, with spring-loaded connection</p> <p>1x (0.2 ... 10 mm²)</p> <p>1x (0.25 ... 6 mm²)</p> <p>1x (24 ... 8)</p>
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	
<ul style="list-style-type: none"> • Fuse blown • Load failure • Triac error 	<p>Yes</p> <p>Yes</p> <p>Yes</p>

• 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 between the outputs	Optocoupler and/or protective impedance between main circuit and PELV
	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
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Standards, approvals, certificates

CE mark	Yes
UL approval	Yes
KC approval	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
- 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: 11/28/2020