



spare part SIPLUS HCS4200 POM4220 Flexible with 12 outputs each max.
3680 W (at 230 V AC)

General information	
Product type designation	POM4220 Flexible
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)	110 V; phase - neutral conductor
• Relative negative tolerance	10 %
• Relative positive tolerance	50 %
4th rated value (AC)	70 V; phase - neutral conductor
• Relative negative tolerance	10 %
• Relative positive tolerance	15 %
5th rated value (AC)	45 V; phase - neutral conductor
• Relative negative tolerance	10 %
• Relative positive tolerance	15 %
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 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	
device version of the power supply for electronics	Power supply via rack
Power	

Active power input, max.	1 W
Power electronics	
Type of load	Ohmic load
Power capacity, max.	29.4 kW; at 230 V AC
<ul style="list-style-type: none"> For phase against neutral with fan at 40 °C, max. 	29.4 kW; at 230 V AC
<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> Half-wave control 	Yes
<ul style="list-style-type: none"> Soft start 	No
<ul style="list-style-type: none"> Phase control 	No
Load connection type	
<ul style="list-style-type: none"> Star connection with neutral conductor (single-phase) 	Yes
<ul style="list-style-type: none"> Open delta connection (single-phase) 	No
<ul style="list-style-type: none"> closed delta connection (2-phase) 	No
<ul style="list-style-type: none"> Closed delta connection (3-phase) 	No
<ul style="list-style-type: none"> Star connection with neutral conductor (2-phase) 	No
<ul style="list-style-type: none"> star connection without neutral conductor (3-phase) 	No
<ul style="list-style-type: none"> 2-pole switching 	No
Setpoint input	
<ul style="list-style-type: none"> Percent 	Yes
<ul style="list-style-type: none"> Watts 	No
Heating power	
<ul style="list-style-type: none"> Number of digital outputs 	12
<ul style="list-style-type: none"> Number of heating elements per output, max. 	1
<ul style="list-style-type: none"> Output voltage for heating power 	230 V
<ul style="list-style-type: none"> 2nd output voltage for heating power 	277 V
<ul style="list-style-type: none"> 3rd output voltage for heating power 	110 V
<ul style="list-style-type: none"> 4th output voltage for heating power 	70 V
<ul style="list-style-type: none"> 5th output voltage for heating power 	45 V
<ul style="list-style-type: none"> Power carrying capacity per output, min. 	100 W; at 230 V AC
<ul style="list-style-type: none"> Power carrying capacity per output, max. 	3 680 W; at 230 V AC
<ul style="list-style-type: none"> — for heating elements with high inrush current, max. 	1 600 W; at 230 V AC
<ul style="list-style-type: none"> Output current for heating power 	16 A; max.
<ul style="list-style-type: none"> Melting I₂t value 	20 A ² ·s
<ul style="list-style-type: none"> Design of short-circuit protection per output 	Fuse 16 A
<ul style="list-style-type: none"> Design of overvoltage protection 	Transil Diode
Connection method	
<ul style="list-style-type: none"> Design of electrical connection at output for heating and fan 	plug, 6-pole with spring-type terminal, push-in
<ul style="list-style-type: none"> — Connectable conductor cross-sections, solid 	1x (0.2 ... 10 mm ²)
<ul style="list-style-type: none"> — Connectable conductor cross-sections, finely stranded with wire end processing 	1x (0.25 ... 6 mm ²)
<ul style="list-style-type: none"> — 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	15
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	
<ul style="list-style-type: none"> Fuse blown 	Yes
<ul style="list-style-type: none"> Load failure 	Yes
<ul style="list-style-type: none"> Triac error 	Yes
<ul style="list-style-type: none"> Switch-off threshold for internal device temperature 	Yes
<ul style="list-style-type: none"> Parallel-connected heating elements 	No
<ul style="list-style-type: none"> Rotating field fault 	No

• Communication error	Yes
• Supply voltage not connected	Yes
• Line voltage outside the permissible range	No
• Frequency outside the permissible range	Yes
• Fault current too high	No
Integrated Functions	
Monitoring functions	
• Temperature monitoring	Yes
• Type of temperature monitoring	NTC thermistor
Measuring functions	
• Voltage measurement	No
• Current measurement	No
• Fault current detection	No
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 60068-2-27	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

Classifications			
		Version	Classification
	eClass	16	27-24-40-06
	eClass	14	27-24-40-06
	eClass	12	27-24-40-06
	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

Approvals / Certificates	
General Product Approval	EMV



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