SIEMENS

Data sheet 6BK1942-2CA00-0AA1



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

General information	
Product type designation	POM4220 mid-range phase control
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 %
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 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	
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
● For phase against neutral with fan at 40 °C, max.	29.4 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.	64 A
Short-time withstand current (SCCR) acc. to UL 508A	100 kA
Control of heating elements	

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● 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)	No
● closed delta connection (2-phase)	No
● Closed delta connection (3-phase)	No
● Star connection with neutral conductor (2-phase)	No
● star connection without neutral conductor (3-phase)	No
● 2-pole switching	No
Setpoint input	
● Percent	Yes
● Watts	No
Heating power	
● Number of digital outputs	12
● Number of heating elements per output, max.	1
● Output voltage for heating power	230 V
● 2nd output voltage for heating power	277 V
● Power carrying capacity per output, min.	60 W; at 230 V AC
● Power carrying capacity per output, max.	3 680 W; at 230 V AC
— for heating elements with high inrush current, max.	1 600 W; at 230 V AC
● Output current for heating power	16 A; max.
● Melting I2t value	20 A²·s
● Design of short-circuit protection per output	Fuse 16 A
● Design of overvoltage protection	Transil Diode
Connection method	
● Design of electrical connection at output for heating and fan	plug, 6-pole with spring-type terminal, push-in
— 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	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	
● Fuse blown	Yes
● Load failure	Yes
● Triac error	Yes
● Switch-off threshold for internal device temperature	Yes
● Parallel-connected heating elements	No
● 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

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● 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

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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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