



SIPLUS HCS4300 POM4320 BUSBAR MOUNTING (IEC). POWER OUTPUT MODULE FOR MOUNTING ON POWER RAIL SYSTEM. REDESIGN WITH INCREASED EMC RESISTANCE. WITH 9 POWER OUTPUTS EACH MAX. 7680 W (WITH CONTROL MODE HALF-WAVE CONTROL: DEPENDING ON THE INRUSH CURRENT OF THE ELECTRIC LOAD THERE IS A LIMITATION OF MAX. 4000 W)

General information	
Product brand name	SIPLUS
Type of control of heat emitters	Half-wave control and soft start
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 %
Line frequency	
<ul style="list-style-type: none"> <li>• Rated value 1</li> <li>• Rated value 2</li> <li>• Relative symmetrical tolerance</li> </ul>	50 Hz 60 Hz 5 %

<b>Mains buffering</b>	
• Recovery time after power failure, typ.	1 s
<b>Resistance thermometer (RTD)</b>	
• Design of electrical connection for supply voltage	Busbar adapter, 3-pole + PE
<b>Power supply for the electronics</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.	69.1 kW
• for delta connection with fan at 40 °C, max.	69.1 kW
Switching capacity current per phase, max.	83 A
<b>Heating power</b>	
• Number of digital outputs	9
• Number of heat emitters per output, max.	1
• Output voltage for heating power	400 V
• Power carrying capacity per output, min.	200 W
• Power carrying capacity per output, max.	7 680 W
— for heating elements with high inrush current, max.	4 000 W
• Output current for heating power	16 A
• Peak current	150 A
• Melting I2t value	250 A <sup>2</sup> ·s
• Design of short-circuit protection per output	Fuse 16 A
• Design of overvoltage protection	Transil Diode
<b>Integration and conversion time/resolution per channel</b>	
• Design of electrical connection at output for heating and fan	Connector, 3-pole with spring-loaded connection
— Connectable conductor cross-sections, solid	1x (0.2 ... 10 mm <sup>2</sup> )
— Connectable conductor cross-sections, finely stranded with wire end processing	1x (0.25 ... 6 mm <sup>2</sup> )
— Connectable conductor cross-sections for AWG cables, stranded	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>	
• Wire-break	Yes
• Fuse blown	Yes
• Heat emitter defect	Yes
<b>Integrated Functions</b>	
<b>Monitoring functions</b>	
• Temperature monitoring	Yes
• Type of temperature monitoring	NTC thermistor
<b>Measuring functions</b>	
• Voltage measurement	Yes
<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>	
Overtoltage 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
Device tag according to DIN EN 81346-2	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
- 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:** 10/13/2017