

# Technical Information

PrimeSTACK™

# 6PS04512E43G37986



Preliminary data

## Controller interface

Driver and interface board	ref. to separate Application Note		DR210			
			min.	typ.	max.	
Auxiliary voltage		$V_{aux}$	18	24	30	V
Auxiliary power requirement	$V_{aux} = 24\text{ V}$	$P_{aux}$			40	W
Digital input level	resistor to GND 10 k $\Omega$ , capacitor to GND 1 nF, logic high = on	$V_{in\ low}$	0		1.5	V
		$V_{in\ high}$	11		15	V
Digital output level	open collector, logic low = no fault, max. 15 mA	$V_{out\ low}$	0		1.5	V
		$V_{out\ high}$		15		V
Analog current sensor output inverter section	load max 5 mA, @ 217 $A_{RMS}$	$V_{IU\ ana2}$ $V_{IV\ ana2}$ $V_{IW\ ana2}$	3.3	3.5	3.7	V
Analog DC link voltage sensor output	load max 5 mA, @ 850 V	$V_{DC\ ana}$	8.3	8.5	8.7	V
Analog temperature sensor output unit 1 (NTC)	load max 5 mA, @ $T_{NTC} = 85\text{ }^{\circ}\text{C}$ , corresponds to $T_j = 115\text{ }^{\circ}\text{C}$ at rated conditions	$V_{Theta\ NTC1}$	10.7	10.9	11.1	V
Over temperature shutdown inverter section	load max 5 mA, @ $T_{NTC} = 87\text{ }^{\circ}\text{C}$	$V_{Error\ OT2}$		11		V

## System data

			min.	typ.	max.	
EMC robustness	according to EN 61800-3 at named interfaces	power	$V_{Burst}$	2		kV
		control	$V_{Burst}$	1		kV
		aux (24V)	$V_{surge}$	1		kV
Storage temperature		$T_{stor}$	-40		80	$^{\circ}\text{C}$
Operational ambient temperature	PCB, DC link capacitor, bus bar, excluding cooling medium	$T_{op\ amb}$	-25		55	$^{\circ}\text{C}$
Cooling air velocity	PCB, DC link capacitor, bus bar, standard atmosphere	$V_{air}$	2			m/s
Humidity	no condensation	Rel. F	0		85	%
Vibration	according to IEC 60721				5	$\text{m/s}^2$
Shock	according to IEC 60721				40	$\text{m/s}^2$
Protection degree			IP00			
Pollution degree			2			
Dimensions	width x depth x height		216	335	376	mm
Weight				18		kg

### Notes

Dimension "depth" does not include the data cables

## Heatsink air cooled

			min.	typ.	max.	
Air flow	$T_{air} = 25\text{ }^{\circ}\text{C}$ , $P_{air} = 1013\text{ hPa}$ , dry and dust free, measured at the side of the heat sink according to DIN 41882	$\Delta V/\Delta t$		500		$\text{m}^3/\text{h}$
Air pressure drop	at min. air flow	$\Delta p$		190		Pa
Air inlet temperature		$T_{inlet}$	-40		55	$^{\circ}\text{C}$

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### Overview of optional components

	Unit 1	Inverter Section	Unit 3
Parallel interface board			
Optical interface board			
Chopper controller			
Voltage sensor		x	
Current sensor		x	
Temperature sensor		x	
Temperature simulation			
DC link capacitors		x	
Data cable for control signals			
Fan			
Collector-emitter Active Clamping		x	

#### Notes

Setting of Active Clamping TVS-Diodes:  $V_Z = 824 \text{ V}$

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