

SINAMICS G130

Drive converter chassis units

Power Modules

Overview



The Power Module contains

- the line-side 6-pulse rectifier
- the capacitors for the voltage-source DC link
- the IGBT-based inverter
- the associated gating and monitoring electronics
- the precharging circuit for the DC link
- the control and power supply for the fans in the Power Module.

Design

The Power Module features the following interfaces as standard:

- Connecting lugs for the line supply
- Connecting lugs for the motor feeder
- Connecting lugs for the Braking Module
- Connecting lugs for dv/dt filters plus VPL
- Connecting lugs for dv/dt filters compact plus VPL
- Connection for external 24 V supply
- 3 DRIVE-CLiQ sockets
- 24 V voltage outputs (max. 2.5 A) for the supply of the
 - CU320-2 Control Unit (control module), of the
 - AOP30 operator panel
 - additional DRIVE-CLiQ components
- 1 temperature sensor input (KTY84-130, PTC or PT100)
- PE/protective conductor connection

Selection and ordering data

Type rating		Rated output current	Power Module
at 400 V, 500 V or 690 V	at 60 Hz/ 460 V or 575 V		
kW	hp	A	Order No.
380 ... 480 V 3 AC			
110	150	210	6SL3310-1GE32-1AA3
132	200	260	6SL3310-1GE32-6AA3
160	250	310	6SL3310-1GE33-1AA3
200	300	380	6SL3310-1GE33-8AA3
250	400	490	6SL3310-1GE35-0AA3
315	500	605	6SL3310-1GE36-1AA3
400	600	745	6SL3310-1GE37-5AA3
450	700	840	6SL3310-1GE38-4AA3
560	800	985	6SL3310-1GE41-0AA3
500 ... 600 V 3 AC			
110	150	175	6SL3310-1GF31-8AA3
132	200	215	6SL3310-1GF32-2AA3
160	250	260	6SL3310-1GF32-6AA3
200	300	330	6SL3310-1GF33-3AA3
250	400	410	6SL3310-1GF34-1AA3
315	450	465	6SL3310-1GF34-7AA3
400	600	575	6SL3310-1GF35-8AA3
500	700	735	6SL3310-1GF37-4AA3
560	800	810	6SL3310-1GF38-1AA3
660 ... 690 V 3 AC			
75		85	6SL3310-1GH28-5AA3
90		100	6SL3310-1GH31-0AA3
110		120	6SL3310-1GH31-2AA3
132		150	6SL3310-1GH31-5AA3
160		175	6SL3310-1GH31-8AA3
200		215	6SL3310-1GH32-2AA3
250		260	6SL3310-1GH32-6AA3
315		330	6SL3310-1GH33-3AA3
400		410	6SL3310-1GH34-1AA3
450		465	6SL3310-1GH34-7AA3
560		575	6SL3310-1GH35-8AA3
710		735	6SL3310-1GH37-4AA3
800		810	6SL3310-1GH38-1AA3

Note: The power data in hp units are based on the NEC/CEC standards for the North American market.

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Technical data (continued)

Line voltage 380 ... 480 V 3 AC		Power Modules			
		6SL3310-1GE36-1AA3	6SL3310-1GE37-5AA3	6SL3310-1GE38-4AA3	6SL3310-1GE41-0AA3
Type rating					
• at I_L at 50 Hz 400 V ¹⁾	kW	315	400	450	560
• at I_H at 50 Hz 400 V ¹⁾	kW	250	315	400	450
• at I_L at 60 Hz 460 V ²⁾	hp	500	600	700	800
• at I_H at 60 Hz 460 V ²⁾	hp	350	450	600	700
Output current					
• Rated current I_{rated}	A	605	745	840	985
• Base load current I_L ³⁾	A	590	725	820	960
• Base load current I_H ⁴⁾	A	460	570	700	860
Input current					
• Rated input current	A	629	775	873	1024
• Input current, max.	A	967	1188	1344	1573
• Current requirement, 24 V DC auxiliary power supply ⁵⁾	A	1.0	1.0	1.0	1.25
Power loss	kW	7.8	9.1	9.6	13.8
Cooling-air demand	m ³ /s	0.78	0.78	0.78	1.48
Cable length, max. between Power Module and motor ⁶⁾					
• shielded	m	300	300	300	300
• unshielded	m	450	450	450	450
Degree of protection		IP00	IP00	IP00	IP00
Sound pressure level L_{pA} (1 m) at 50/60 Hz	dB	70/73	70/73	70/73	72/75
Line connection U1, V1, W1		M12 screw	M12 screw	M12 screw	M12 screw
Conductor cross section, max. (IEC)	mm ²	4 × 240	4 × 240	4 × 240	6 × 240
Motor connection U2/T1, V2/T2, W2/T3		M12 screw	M12 screw	M12 screw	M12 screw
Conductor cross section, max. (IEC)	mm ²	4 × 240	4 × 240	4 × 240	6 × 240
PE1/GND connection		M12 screw	M12 screw	M12 screw	M12 screw
Conductor cross section, max. (IEC)	mm ²	2 × 240	2 × 240	2 × 240	4 × 240
PE2/GND connection		2 × M12 screws	2 × M12 screws	2 × M12 screws	3 × M12 screws
Conductor cross section, max. (IEC)	mm ²	4 × 240	4 × 240	4 × 240	6 × 240
Dimensions					
• Width	mm	503	503	503	909
• Height	mm	1506	1506	1506	1510
• Depth	mm	540	540	540	540
Weight, approx.	kg	294	294	294	530
Conformity		CE	CE	CE	CE
Approvals, acc. to		cULus	cULus	cULus	cULus
Frame size		HX	HX	HX	JX

Note: The power data in hp units are based on the NEC/CEC standards for the North American market.

¹⁾ Rated power of a typ. 6-pole standard induction motor based on I_L or I_H with 400 V 3 AC 50 Hz.

²⁾ Rated power of a typ. 6-pole standard induction motor based on I_L or I_H with 460 V 3 AC 60 Hz.

³⁾ The base load current I_L is based on a duty cycle of 110 % for 60 s or 150 % for 10 s with a duty cycle duration of 300 s. See technical data (→ Overload capability).

⁴⁾ The base load current I_H is based on a duty cycle of 150 % for 60 s or 160 % for 10 s with a duty cycle duration of 300 s. See technical data (→ Overload capability).

⁵⁾ If the auxiliary supply is to be fed in separately from the load supply, e.g. if the control should be able to continue communication if the line voltage fails.

⁶⁾ Longer cable lengths for specific configurations are available on request.