

SINAMICS G130

Drive converter chassis units

Power Modules

Overview



The Power Module contains:

- The line-side 6-pulse rectifier
- The DC-link capacitors
- The inverter in IGBT technology
- The associated control and monitoring electronics
- The precharging circuit for the DC link
- The control and power supply for the fans in the Power Module

Design

As standard, the Power Module has the following interfaces:

- 1 line supply connection
- 1 motor connection
- 1 connection for Braking Module
- 1 connection for dv/dt filter or dv/dt filter compact plus VPL
- 1 connection for external 24 V DC supply
- 24 V power supply (max. 2.5 A) for
 - CU320-2 Control Unit
 - AOP30 Advanced Operator Panel
 - Further DRIVE-CLiQ components
- 3 DRIVE-CLiQ sockets
- 1 temperature sensor input (KTY84-130, PTC or Pt100)
- 1 connection for Safe Brake Adapter
- 1 connection for Safety Integrated
- 2 PE connections

DRIVE-CLiQ cables for connections to further DRIVE-CLiQ devices can be ordered pre-assembled and cut to length as required (see [Section Supplementary system components](#) → [Signal cables](#)).

The scope of supply of the Power Modules includes:

- 1 DRIVE-CLiQ cable for connection to the Control Unit
- 1 set of warning labels in 30 languages (BG, CN, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, JP, KR, LT, LV, MT, NL, NO, PL, PT, RO, RU, SE, SI, SK, TR)

Selection and ordering data

Type rating at 50 Hz 400 V, 500 V or 690 V	at 60 Hz 460 V or 575 V	Rated output current	Power Module Article No.
kW	hp	A	
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 is based on the NEC/CEC standards for the North American market.

Technical specifications

Line voltage 380 ... 480 V 3 AC		Power Modules				
		6SL3310-1GE32-1AA3	6SL3310-1GE32-6AA3	6SL3310-1GE33-1AA3	6SL3310-1GE33-8AA3	6SL3310-1GE35-0AA3
Type rating						
• For I_L at 50 Hz 400 V ¹⁾	kW	110	132	160	200	250
• For I_H at 50 Hz 400 V ¹⁾	kW	90	110	132	160	200
• For I_L at 60 Hz 460 V ²⁾	hp	150	200	250	300	400
• For I_H at 60 Hz 460 V ²⁾	hp	150	200	200	250	350
Output current						
• Rated current I_n	A	210	260	310	380	490
• Base-load current I_L ³⁾	A	205	250	302	370	477
• Base-load current I_H ⁴⁾	A	178	233	277	340	438
Input current						
• Rated input current	A	229	284	338	395	509
• Input current, max.	A	335	410	495	606	781
• Current requirement, 24 V DC auxiliary power supply ⁵⁾	A	0.8	0.8	0.9	0.9	0.9
Minimum short-circuit current ⁶⁾	A	3000	3600	4400	4400	8000
Power loss, max. ⁷⁾						
• At 50 Hz 400 V	kW	2.4	3.2	3.9	4.3	5.6
• At 60 Hz 460 V	kW	2.6	3.3	4.4	4.9	6.1
Cooling air requirement	m ³ /s	0.17	0.23	0.36	0.36	0.36
Cable length, max. between Power Module and motor ⁸⁾						
• Shielded	m	300	300	300	300	300
• Unshielded	m	450	450	450	450	450
Degree of protection		IP20	IP20	IP20	IP20	IP20
Sound pressure level L_{pA} (1 m) at 50/60 Hz	dB	64/67	64/67	69/73	69/73	69/73
Line connection U1, V1, W1		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
• Conductor cross section, max. (IEC)	mm ²	2 × 185	2 × 185	2 × 240	2 × 240	2 × 240
Motor connection U2/T1, V2/T2, W2/T3		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
• Conductor cross section, max. (IEC)	mm ²	2 × 185	2 × 185	2 × 240	2 × 240	2 × 240
PE1/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
• Conductor cross section, max. (IEC)	mm ²	2 × 185	2 × 185	2 × 240	2 × 240	2 × 240
PE2/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
• Conductor cross section, max. (IEC)	mm ²	2 × 185	2 × 185	2 × 240	2 × 240	2 × 240
Dimensions						
• Width	mm	326	326	326	326	326
• Height	mm	1400	1400	1533	1533	1533
• Depth	mm	356	356	545	545	545
Weight, approx.	kg	104	104	176	176	176
Frame size		FX	FX	GX	GX	GX

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

¹⁾ Rated output of a typical 6-pole standard induction motor based on I_L or I_H for 3 AC 50 Hz 400 V.

²⁾ Rated output of a typical 6-pole standard induction motor based on I_L or I_H for 3 AC 60 Hz 460 V.

³⁾ The base-load current I_L is based on a load cycle of 110% for 60 s or 150% for 10 s with a load cycle duration of 300 s (see [Technical specifications → Overload capability](#)).

⁴⁾ The base-load current I_H is based on a load cycle of 150% for 60 s or 160% for 10 s with a load cycle duration of 300 s (see [Technical specifications → 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 when the line voltage fails.

⁶⁾ The minimum current required to reliably trigger 3NE1 protective devices.

⁷⁾ The specified power losses are the maximum values for a utilization of 100%. The values are lower under normal operating condition.

⁸⁾ Longer cable lengths for specific configurations are available on request.