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

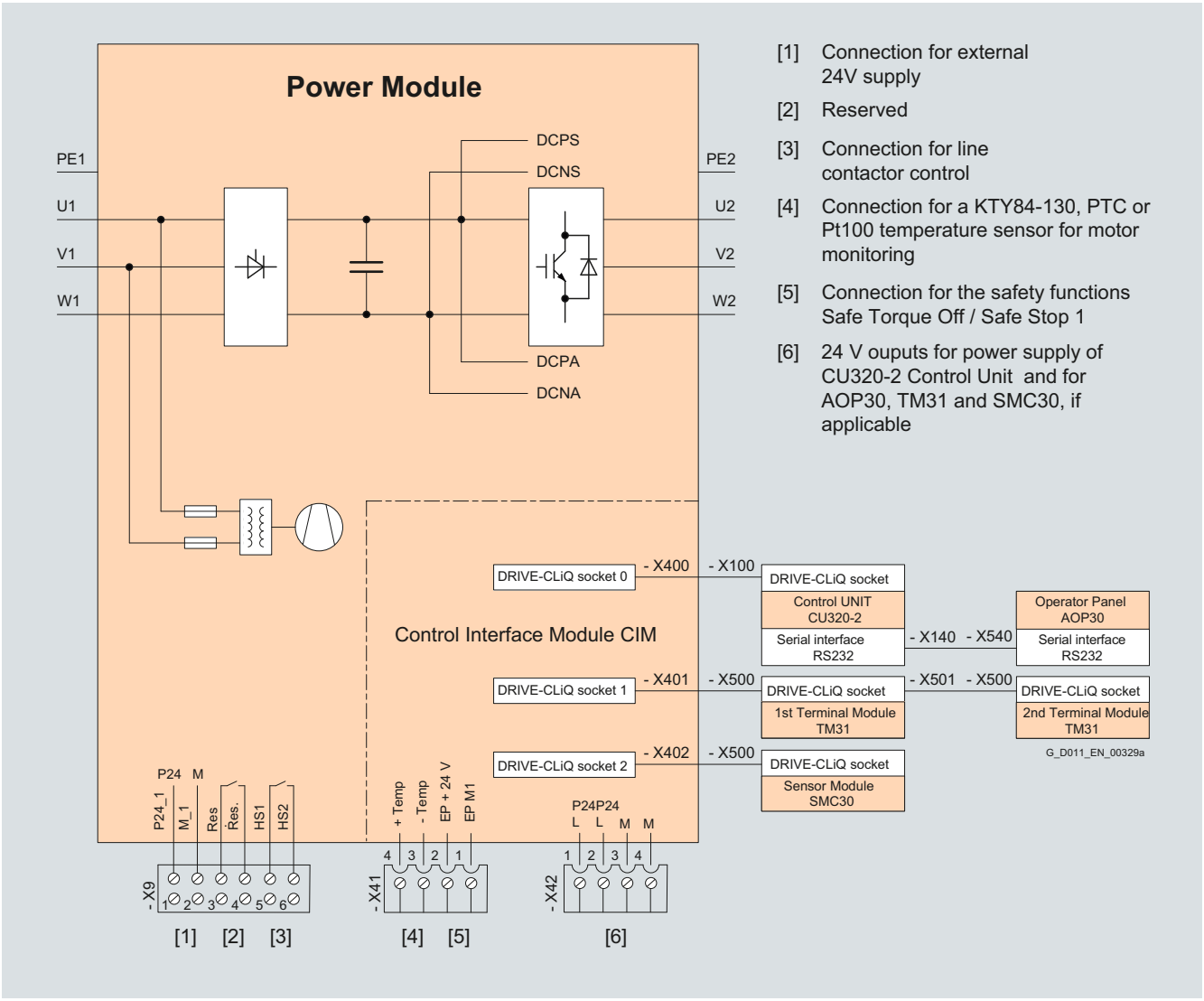
Type rating		Rated output current	Power Module
at 400 V, 500 V or 690 V	at 60 Hz/ 460 V or 575 V		
kW	hp	A	Order No.
380 ... 480 V 3 AC			
110	150	210	**6SL3310-1GE32-1AA3**
132	200	260	**6SL3310-1GE32-6AA3**
160	250	310	**6SL3310-1GE33-1AA3**
200	300	380	**6SL3310-1GE33-8AA3**
250	400	490	**6SL3310-1GE35-0AA3**
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.

Integration

The Power Module communicates with the CU320-2 Control Unit via DRIVE-CLiQ (a fast serial interface) and receives its control information via this route. The DRIVE-CLiQ cable required for this is included in the scope of delivery of the Power Module.

DRIVE-CLiQ cables for establishing connections with other DRIVE-CLiQ devices can be ordered pre-assembled and cut to length as required (→ Signal cables).



Connection diagram for Power Module

Technical data

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						
• at I_L at 50 Hz 400 V [1]	kW	**110**	**132**	**160**	**200**	**250**
• at I_H at 50 Hz 400 V [1]	kW	90	110	132	160	200
• at I_L at 60 Hz 460 V [2]	hp	150	200	250	300	400
• at I_H at 60 Hz 460 V [2]	hp	150	200	200	250	350
Output current						
• Rated current I_{rated}	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
Power loss	kW	2.46	3.27	4.00	4.54	5.78
Cooling-air demand	m^3/s	0.17	0.23	0.36	0.36	0.36
Cable length, max. between Power Module and motor [6]						
• 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
Conformity		CE	CE	CE	CE	CE
Approvals, acc. to		cULus	cULus	cULus	cULus	cULus
Frame size		FX	FX	GX	GX	GX

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.

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 x M12 screws	2 x M12 screws	2 x M12 screws	3 x 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.

Technical data (continued)

Line voltage 500 … 600 V 3 AC		Power Modules				
		6SL3310-1GF31-8AA3	6SL3310-1GF32-2AA3	6SL3310-1GF32-6AA3	6SL3310-1GF33-3AA3	6SL3310-1GF34-1AA3
Type rating						
• at I_L at 50 Hz 500 V [1]	kW	**110**	**132**	**160**	**200**	**250**
• at I_H at 50 Hz 500 V [1]	kW	90	110	132	160	200
• at I_L at 60 Hz 575 V [2]	hp	150	200	250	300	400
• at I_H at 60 Hz 575 V [2]	hp	150	200	200	250	350
Output current						
• Rated current I_{rated}	A	175	215	260	330	410
• Base load current I_L [3]	A	171	208	250	320	400
• Base load current I_H [4]	A	157	192	233	280	367
Input current						
• Rated input current	A	191	224	270	343	426
• Input current, max.	A	279	341	410	525	655
• Current requirement, 24 V DC auxiliary power supply [5]	A	0.9	0.9	0.9	0.9	1.0
Power loss	kW	3	3.4	3.9	4.9	6.4
Cooling-air demand	m^3/s	0.36	0.36	0.36	0.36	0.78
Cable length, max. between Power Module and motor [6]						
• shielded	m	300	300	300	300	300
• unshielded	m	450	450	450	450	450
Degree of protection		IP20	IP20	IP20	IP20	IP00
Sound pressure level L_{pA} (1 m) at 50/60 Hz	dB	69/73	69/73	69/73	69/73	70/73
Line connection U1, V1, W1		M10 screw	M10 screw	M10 screw	M10 screw	M12 screw
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	2 x 240	2 x 240	4 x 240
Motor connection U2/T1, V2/T2, W2/T3		M10 screw	M10 screw	M10 screw	M10 screw	M12 screw
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	2 x 240	2 x 240	4 x 240
PE1/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	M12 screw
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	2 x 240	2 x 240	2 x 240
PE2/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	2 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	2 x 240	2 x 240	4 x 240
Dimensions						
• Width	mm	326	326	326	326	503
• Height	mm	1533	1533	1533	1533	1506
• Depth	mm	545	545	545	545	540
Weight, approx.	kg	176	176	176	176	294
Conformity		CE	CE	CE	CE	CE
Approvals, acc. to		cULus	cULus	cULus	cULus	cULus
Frame size		GX	GX	GX	GX	HX

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 500 V 3 AC 50 Hz.

[2] Rated power of a typ. 6-pole standard induction motor based on I_L or I_H with 575 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.

Technical data (continued)

Line voltage 500 … 600 V 3 AC		Power Modules			
		6SL3310-1GF34-7AA3	6SL3310-1GF35-8AA3	6SL3310-1GF37-4AA3	6SL3310-1GF38-1AA3
Type rating					
• at I_L at 50 Hz 500 V [1]	kW	**315**	**400**	**500**	**560**
• at I_H at 50 Hz 500 V [1]	kW	250	315	450	500
• at I_L at 60 Hz 575 V [2]	hp	450	600	700	800
• at I_H at 60 Hz 575 V [2]	hp	450	500	700	700
Output current					
• Rated current I_{rated}	A	465	575	735	810
• Base load current I_L [3]	A	452	560	710	790
• Base load current I_H [4]	A	416	514	657	724
Input current					
• Rated input current	A	483	598	764	842
• Input current, max.	A	740	918	1164	1295
• Current requirement, 24 V DC auxiliary power supply [5]	A	1.0	1.0	1.25	1.25
Power loss	kW	7.3	8.1	12.0	13.3
Cooling-air demand	m^3/s	0.78	0.78	1.48	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	73/75	73/75
Line connection U1, V1, W1		M12 screw	M12 screw	M12 screw	M12 screw
Conductor cross section, max. (IEC)	mm^2	4 x 240	4 x 240	6 x 240	6 x 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 x 240	4 x 240	6 x 240	6 x 240
PE1/GND connection		M12 screw	M12 screw	2 x M12 screws	2 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	4 x 240	4 x 240
PE2/GND connection		2 x M12 screws	2 x M12 screws	3 x M12 screws	3 x M12 screws
Conductor cross section, max. (IEC)	mm^2	4 x 240	4 x 240	6 x 240	6 x 240
Dimensions					
• Width	mm	503	503	909	909
• Height	mm	1506	1506	1510	1510
• Depth	mm	540	540	540	540
Weight, approx.	kg	294	294	530	530
Conformity		CE	CE	CE	CE
Approvals, acc. to		cULus	cULus	cULus	cULus
Frame size		HX	HX	JX	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 500 V 3 AC 50 Hz.

[2] Rated power of a typ. 6-pole standard induction motor based on I_L or I_H with 575 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.

Technical data (continued)

Line voltage 660 … 690 V 3 AC		Power Modules					
		6SL3310-1GH28-5AA3	6SL3310-1GH31-0AA3	6SL3310-1GH31-2AA3	6SL3310-1GH31-5AA3	6SL3310-1GH31-8AA3	6SL3310-1GH32-2AA3
Type rating							
• at I_L at 50 Hz 690 V [1]	kW	**75**	**90**	**110**	**132**	**160**	**200**
• at I_H at 50 Hz 690 V [1]	kW	55	75	90	110	132	160
Output current							
• Rated current I_{rated}	A	85	100	120	150	175	215
• Base load current I_L [2]	A	80	95	115	142	171	208
• Base load current I_H [3]	A	76	89	107	134	157	192
Input current							
• Rated input current	A	93	109	131	164	191	224
• Input current, max.	A	131	155	188	232	279	341
• Current requirement, 24 V DC auxiliary power supply [4]	A	0.8	0.8	0.8	0.8	0.9	0.9
Power loss	kW	1.5	1.8	2.4	2.5	3.8	4.8
Cooling-air demand	m^3/s	0.17	0.17	0.17	0.17	0.36	0.36
Cable length, max. between Power Module and motor [5]							
• shielded	m	300	300	300	300	300	300
• unshielded	m	450	450	450	450	450	450
Degree of protection		IP20	IP20	IP20	IP20	IP20	IP20
Sound pressure level L_{pA} (1 m) at 50/60 Hz	dB	64/67	64/67	64/67	64/67	69/73	69/73
Line connection U1, V1, W1		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
Conductor cross section, max. (IEC)	mm^2	2 x 185	2 x 185	2 x 185	2 x 185	2 x 240	2 x 240
Motor connection U2/T1, V2/T2, W2/T3		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
Conductor cross section, max. (IEC)	mm^2	2 x 185	2 x 185	2 x 185	2 x 185	2 x 240	2 x 240
PE1/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
Conductor cross section, max. (IEC)	mm^2	2 x 185	2 x 185	2 x 185	2 x 185	2 x 240	2 x 240
PE2/GND connection		M10 screw	M10 screw	M10 screw	M10 screw	M10 screw	M10 screw
Conductor cross section, max. (IEC)	mm^2	2 x 185	2 x 185	2 x 185	2 x 185	2 x 240	2 x 240
Dimensions							
• Width	mm	326	326	326	326	326	326
• Height	mm	1400	1400	1400	1400	1533	1533
• Depth	mm	356	356	356	356	545	545
Weight, approx.	kg	104	104	104	104	176	176
Conformity		CE	CE	CE	CE	CE	CE
Approvals, acc. to		-	-	-	-	-	-
Frame size		FX	FX	FX	FX	GX	GX

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 690 V 3 AC 50 Hz.

[2] 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.

[3] 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).

[4] 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.

[5] Longer cable lengths for specific configurations are available on request.

Technical data (continued)

Line voltage 660 … 690 V 3 AC		Power Modules						
		6SL3310-1GH32-6AA3	6SL3310-1GH33-3AA3	6SL3310-1GH34-1AA3	6SL3310-1GH34-7AA3	6SL3310-1GH35-8AA3	6SL3310-1GH37-4AA3	6SL3310-1GH38-1AA3
Type rating								
• at I_L at 50 Hz 690 V [1]	kW	**250**	**315**	**400**	**450**	**560**	**710**	**800**
• at I_H at 50 Hz 690 V [1]	kW	200	250	315	400	500	560	710
Output current								
• Rated current I_{rated}	A	260	330	410	465	575	735	810
• Base load current I_L [2]	A	250	320	400	452	560	710	790
• Base load current I_H [3]	A	233	280	367	416	514	657	724
Input current								
• Rated input current	A	270	343	426	483	598	764	842
• Input current, max.	A	410	525	655	740	918	1164	1295
• Current requirement, 24 V DC auxiliary power supply [4]	A	0.9	0.9	1.0	1.0	1.0	1.25	1.25
Power loss	kW	5	5.8	7.5	8.5	10.3	12.8	13.9
Cooling-air demand	m^3/s	0.36	0.36	0.78	0.78	0.78	1.48	1.48
Cable length, max. between Power Module and motor [5]								
• shielded	m	300	300	300	300	300	300	300
• unshielded	m	450	450	450	450	450	450	450
Degree of protection		IP20	IP20	IP00	IP00	IP00	IP00	IP00
Sound pressure level L_{pA} (1 m) at 50/60 Hz	dB	69/73	69/73	70/73	70/73	70/73	73/75	73/75
Line connection U1, V1, W1		M10 screw	M10 screw	2 x M12 screws	2 x M12 screws	2 x M12 screws	3 x M12 screws	3 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	4 x 240	4 x 240	4 x 240	6 x 240	6 x 240
Motor connection U2/T1, V2/T2, W2/T3		M10 screw	M10 screw	2 x M12 screws	2 x M12 screws	2 x M12 screws	3 x M12 screws	3 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	4 x 240	4 x 240	4 x 240	6 x 240	6 x 240
PE1/GND connection		M10 screw	M10 screw	M12 screw	M12 screw	M12 screw	2 x M12 screws	2 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	2 x 240	2 x 240	2 x 240	4 x 240	4 x 240
PE2/GND connection		M10 screw	M10 screw	2 x M12 screws	2 x M12 screws	2 x M12 screws	3 x M12 screws	3 x M12 screws
Conductor cross section, max. (IEC)	mm^2	2 x 240	2 x 240	4 x 240	4 x 240	4 x 240	6 x 240	6 x 240
Dimensions								
• Width	mm	326	326	503	503	503	909	909
• Height	mm	1533	1533	1506	1506	1506	1510	1510
• Depth	mm	545	545	540	540	540	540	540
Weight, approx.	kg	176	176	294	294	294	530	530
Conformity		CE	CE	CE	CE	CE	CE	CE
Approvals, acc. to		-	-	-	-	-	-	-
Frame size		GX	GX	HX	HX	HX	JX	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 690 V 3 AC 50 Hz.

[2] 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.

[3] 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).

[4] 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.

[5] Longer cable lengths for specific configurations are available on request.