

## SINAMICS G120 standard inverters

0.37 kW to 250 kW (0.5 hp to 400 hp)

### Power Modules

#### Selection and ordering data (continued)

Rated power <sup>1)</sup>		Rated output current $I_{rated}$ <sup>2)</sup> A	Power based on the base-load current <sup>3)</sup>		Base-load current $I_H$ <sup>3)</sup> A	Frame size	PM240-2 Power Module standard variant without integrated line filter		PM240-2 Power Module standard variant with integrated line filter class A	
kW	hp		kW	hp			Article No.	Article No.		
<b>380 ... 480 V 3 AC <sup>4)</sup></b>										
0.55	0.75	1.7	0.37	0.5	1.3	FSA	6SL3210-1PE11-8UL1	6SL3210-1PE11-8AL1		
0.75	1	2.2	0.55	0.75	1.7	FSA	6SL3210-1PE12-3UL1	6SL3210-1PE12-3AL1		
1.1	1.5	3.1	0.75	1	2.2	FSA	6SL3210-1PE13-2UL1	6SL3210-1PE13-2AL1		
1.5	2	4.1	1.1	1.5	3.1	FSA	6SL3210-1PE14-3UL1	6SL3210-1PE14-3AL1		
2.2	3	5.9	1.5	2	4.1	FSA	6SL3210-1PE16-1UL1	6SL3210-1PE16-1AL1		
3	4	7.7	2.2	3	5.9	FSA	6SL3210-1PE18-0UL1	6SL3210-1PE18-0AL1		
4	5	10.2	3	4	7.7	FSB	6SL3210-1PE21-1UL0	6SL3210-1PE21-1AL0		
5.5	7.5	13.2	4	5	10.2	FSB	6SL3210-1PE21-4UL0	6SL3210-1PE21-4AL0		
7.5	10	18	5.5	7.5	13.2	FSB	6SL3210-1PE21-8UL0	6SL3210-1PE21-8AL0		
11	15	26	7.5	10	18	FSC	6SL3210-1PE22-7UL0	6SL3210-1PE22-7AL0		
15	20	32	11	15	26	FSC	6SL3210-1PE23-3UL0	6SL3210-1PE23-3AL0		
18.5	25	38	15	20	32	FSD	6SL3210-1PE23-8UL0	6SL3210-1PE23-8AL0		
22	30	45	18.5	25	38	FSD	6SL3210-1PE24-5UL0	6SL3210-1PE24-5AL0		
30	40	60	22	30	45	FSD	6SL3210-1PE26-0UL0	6SL3210-1PE26-0AL0		
37	50	75	30	40	60	FSD	6SL3210-1PE27-5UL0	6SL3210-1PE27-5AL0		
45	60	90	37	50	75	FSE	6SL3210-1PE28-8UL0	6SL3210-1PE28-8AL0		
55	75	110	45	60	90	FSE	6SL3210-1PE31-1UL0	6SL3210-1PE31-1AL0		
75	100	145	55	75	110	FSF	6SL3210-1PE31-5UL0	6SL3210-1PE31-5AL0		
90	125	178	75	100	145	FSF	6SL3210-1PE31-8UL0	6SL3210-1PE31-8AL0		
110	150	205	90	125	178	FSF	6SL3210-1PE32-1UL0	6SL3210-1PE32-1AL0		
132	200	250	110	150	205	FSF	6SL3210-1PE32-5UL0	6SL3210-1PE32-5AL0		
<b>500 ... 690 V 3 AC</b>										
11	10	14	7.5	7.5	11	FSD	6SL3210-1PH21-4UL0	6SL3210-1PH21-4AL0		
15	15	19	11	10	14	FSD	6SL3210-1PH22-0UL0	6SL3210-1PH22-0AL0		
18.5	20	23	15	15	19	FSD	6SL3210-1PH22-3UL0	6SL3210-1PH22-3AL0		
22	25	27	18.5	20	23	FSD	6SL3210-1PH22-7UL0	6SL3210-1PH22-7AL0		
30	30	35	22	25	27	FSD	6SL3210-1PH23-5UL0	6SL3210-1PH23-5AL0		
37	40	42	30	30	35	FSD	6SL3210-1PH24-2UL0	6SL3210-1PH24-2AL0		
45	50	52	37	40	42	FSE	6SL3210-1PH25-2UL0	6SL3210-1PH25-2AL0		
55	60	62	45	50	52	FSE	6SL3210-1PH26-2UL0	6SL3210-1PH26-2AL0		
75	75	80	55	60	62	FSF	6SL3210-1PH28-0UL0	6SL3210-1PH28-0AL0		
90	100	100	75	75	80	FSF	6SL3210-1PH31-0UL0	6SL3210-1PH31-0AL0		
110	100	115	90	100	100	FSF	6SL3210-1PH31-2UL0	6SL3210-1PH31-2AL0		
132	125	142	110	100	115	FSF	6SL3210-1PH31-4UL0	6SL3210-1PH31-4AL0		
<b>380 ... 480 V 3 AC <sup>4)</sup></b>										
160	250	302	132	200	250	FSG	<b>NEW</b> 6SL3210-1PE33-0CL0	<b>NEW</b> 6SL3210-1PE33-0AL0		
200	300	370	160	250	302	FSG	<b>NEW</b> 6SL3210-1PE33-7CL0	<b>NEW</b> 6SL3210-1PE33-7AL0		
250	400	477	200	300	370	FSG	<b>NEW</b> 6SL3210-1PE34-8CL0	<b>NEW</b> 6SL3210-1PE34-8AL0		
<b>500 ... 690 V 3 AC</b>										
160	150	171	132	150	142	FSG <sup>5)</sup>	<b>NEW</b> 6SL3210-1PH31-7CL0	–		
200	200	208	160	150	171	FSG <sup>5)</sup>	<b>NEW</b> 6SL3210-1PH32-1CL0	–		
250	250	250	200	200	208	FSG <sup>5)</sup>	<b>NEW</b> 6SL3210-1PH32-5CL0	–		

Footnotes see page 9/43.

# SINAMICS G120 standard inverters

0.37 kW to 250 kW (0.5 hp to 400 hp)

## Power Modules

### Technical specifications

#### General technical specifications

Power Modules	PM240-2	PM250
<b>System operating voltage</b>	FSA ... FSC: 200 ... 240 V 1 AC/3 AC ±10 % 380 ... 480 V 3 AC ±10 % FSD ... FSG: 200 ... 240 V 3 AC ±10 % (in operation -20 % < 1 min) 380 ... 480 V 3 AC ±10 % (in operation -20 % < 1 min) 500 ... 690 V 3 AC ±10 % (in operation -20 % < 1 min)	380 ... 480 V 3 AC ±10 %
<b>Line supply requirements</b> <b>Short-circuit power ratio <math>R_{sc}</math></b>	200 V: >25 With $R_{sc} > 50$ it is advisable for FSA to FSC to install a line reactor, or alternatively, to select a Power Module with the next-higher power rating. 400 V: >25 With $R_{sc} > 100$ it is advisable for FSA to FSC to install a line reactor, or alternatively, to select a Power Module with the next-higher power rating. 690 V: No restriction	>100
<b>Input frequency</b>	47 ... 63 Hz	
<b>Output frequency</b>		
• Control mode V/f	0 ... 550 Hz	
• Control mode Vector	0 ... 240 Hz	
<b>Pulse frequency</b>	200 V: 4 kHz 400 V: <75 kW: 4 kHz; ≥75 kW: 2 kHz 690 V: 2 kHz For higher pulse frequencies, <a href="#">see derating data</a>	4 kHz For higher pulse frequencies, <a href="#">see derating data</a>
<b>Power factor <math>\lambda</math></b>	FSA ... FSC: 0.7 ... 0.85 FSD ... FSG: - 200 V: >0.95 - 400 V and 690 V: >0.9	0.9
<b>Offset factor <math>\cos \varphi</math></b>	FSA ... FSC: >0.96 FSD ... FSG: 0.98 ... 0.99	0.95 capacitive
<b>Inverter efficiency</b>	200 V: >96 % 400 V: >97 % 690 V: >98 %	95 ... 97 %
<b>Output voltage, max.</b> as % of input voltage	95 %	87 %
<b>Overload capability</b>		
• Low overload (LO) <u>Note:</u> No reduction in base-load current $I_L$ for use of overload	1.5 × base-load current $I_L$ (i.e. 150 % overload) for 3 s <b>plus</b> 1.1 × base-load current $I_L$ (i.e. 110 % overload) for 57 s within a cycle time of 300 s	1.5 × base-load current $I_L$ (i.e. 150 % overload) for 3 s <b>plus</b> 1.1 × base-load current $I_L$ (i.e. 110 % overload) for 57 s within a cycle time of 300 s
• High overload (HO) <u>Note:</u> No reduction in base-load current $I_H$ for use of overload	2 × base-load current $I_H$ (i.e. 200 % overload) for 3 s <b>plus</b> 1.5 × base-load current $I_H$ (i.e. 150 % overload) for 57 s within a cycle time of 300 s	2 × base-load current $I_H$ (i.e. 200 % overload) for 3 s <b>plus</b> 1.5 × base-load current $I_H$ (i.e. 150 % overload) for 57 s within a cycle time of 300 s

## Technical specifications (continued)

Power Modules	PM240-2	PM250
<b>Possible braking methods</b>	DC braking Compound braking Dynamic braking with integrated braking chopper	Energy recovery in generator operation (max. with rated power based on high overload (HO))
<b>Degree of protection</b>	IP20 (standard or push-through)	IP20
<b>Operating temperature</b>		
• Low overload (LO)	Frame sizes FSA ... FSC: -10 ... +40 °C (14 ... 104 °F) without derating >40 ... 60 °C (>104 ... 140 °F) <a href="#">see derating characteristics</a>	0 ... 40 °C (32 ... 104 °F) without derating >40 ... 60 °C (>104 ... 140 °F) <a href="#">see derating characteristics</a>
• High overload (HO)	Frame sizes FSD ... FSG: -20 ... +40 °C (-4 ... +104 °F) without derating >40 ... 60 °C (>104 ... 140 °F) <a href="#">see derating characteristics</a>	0 ... 50 °C (32 ... 122 °F) without derating >50 ... 60 °C (>122 ... 140 °F) <a href="#">see derating characteristics</a>
	Frame sizes FSA ... FSC: -10 ... +50 °C (14 ... 122 °F) without derating >50 ... 60 °C (>122 ... 140 °F) <a href="#">see derating characteristics</a>	
	Frame sizes FSD ... FSG: -20 ... +50 °C (-4 ... +122 °F) without derating >50 ... 60 °C (>122 ... 140 °F) <a href="#">see derating characteristics</a>	
<b>Relative humidity</b>	<95 % RH, condensation not permissible	
<b>Cooling</b>	Internal air cooling, power units with increased air cooling by built-in fans	Internal air cooling, power units with increased air cooling by built-in fans
<b>Installation altitude</b>	Up to 1000 m (3281 ft) above sea level without derating, > 1000 m (3281 ft) <a href="#">see derating characteristics</a>	Up to 1000 m (3281 ft) above sea level without derating, > 1000 m (3281 ft) <a href="#">see derating characteristics</a>
<b>Protection functions</b>	<ul style="list-style-type: none"> <li>• Undervoltage</li> <li>• Overvoltage</li> <li>• Overload</li> <li>• Ground fault</li> <li>• Short-circuit</li> <li>• Stall protection</li> <li>• Motor blocking protection</li> <li>• Motor overtemperature</li> <li>• Inverter overtemperature</li> <li>• Parameter locking</li> </ul>	
<b>Short-Circuit Current Rating SCCR</b> according to UL (Short Circuit Current Rating) <sup>1)</sup>	200 V: 100 kA 400 V: 100 kA 690 V: 100 kA	FSC: 40 kA FSD ... FSF: 42 kA
<b>Compliance with standards</b>	CE, cULus, RCM, SEMI F47, RoHS, EAC, KC (only with internal or external line filters Category C2)  For frame sizes FSD ... FSG also: WEEE (Waste Electrical & Electronic Equipment)	CE, UL, cUL, RCM, SEMI F47
<b>CE marking</b>	According to Low Voltage Directive 2014/35/EU, EMC Directive 2014/30/EU	

<sup>1)</sup> Applies to industrial control panel installations to NEC article 409 or UL 508A.

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## Power Modules

### Technical specifications (continued)

Line voltage 380 ... 480 V 3 AC		PM240-2 Power Modules standard variant					
Without integrated line filter		6SL3210-1PE23-8U0L0	6SL3210-1PE24-5U0L0	6SL3210-1PE26-0U0L0	6SL3210-1PE27-5U0L0	6SL3210-1PE28-8U0L0	6SL3210-1PE31-1U0L0
With integrated line filter class A		6SL3210-1PE23-8AL0	6SL3210-1PE24-5AL0	6SL3210-1PE26-0AL0	6SL3210-1PE27-5AL0	6SL3210-1PE28-8AL0	6SL3210-1PE31-1AL0
<b>Output current</b> at 50 Hz 400 V 3 AC							
• Rated current $I_{rated}^{1)}$	A	38	45	60	75	90	110
• Base-load current $I_L^{1)}$	A	38	45	60	75	90	110
• Base-load current $I_H^{2)}$	A	32	38	45	60	75	90
• Maximum current $I_{max}$	A	64	76	90	120	150	180
<b>Rated power</b>							
• Based on $I_L$	kW (hp)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)
• Based on $I_H$	kW (hp)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)
<b>Rated pulse frequency</b>	kHz	4	4	4	4	4	4
<b>Efficiency <math>\eta</math></b>	%	>97	>97	>97	>97	>97	>97
<b>Power loss <sup>3)</sup></b> At rated current							
• Without integrated line filter	kW	0.57	0.7	0.82	1.09	1.29	1.65
• With integrated line filter	kW	0.58	0.71	0.83	1.1	1.3	1.67
<b>Cooling air requirement</b>	m <sup>3</sup> /s (ft <sup>3</sup> /s)	0.055 (1.94)	0.055 (1.94)	0.055 (1.94)	0.055 (1.94)	0.083 (2.93)	0.083 (2.93)
<b>Sound pressure level</b> $L_{pA}$ (1 m)	dB	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	44 ... 62 <sup>4)</sup>	44 ... 62 <sup>4)</sup>
<b>Input current <sup>5)</sup></b>							
• Rated input current	A	36	42	57	70	86	104
• Based on $I_H$	A	33	38	47	62	78	94
<b>Line supply connection</b> U1/L1, V1/L2, W1/L3		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
• Conductor cross-section	mm <sup>2</sup>	10 ... 35	10 ... 35	10 ... 35	10 ... 35	25 ... 70	25 ... 70
<b>Motor connection</b> U2, V2, W2		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
• Conductor cross-section	mm <sup>2</sup>	10 ... 35	10 ... 35	10 ... 35	10 ... 35	25 ... 70	25 ... 70
<b>PE connection</b>		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
<b>Motor cable length, max.</b>							
• Shielded	m (ft)	200 (656)	200 (656)	200 (656)	200 (656)	200 (656)	200 (656)
• Unshielded	m (ft)	300 (984)	300 (984)	300 (984)	300 (984)	300 (984)	300 (984)
<b>Degree of protection</b>		IP20	IP20	IP20	IP20	IP20	IP20
<b>Dimensions</b>							
• Width	mm (in)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	275 (10.83)	275 (10.83)
• Height	mm (in)	472 (18.58)	472 (18.58)	472 (18.58)	472 (18.58)	551 (21.69)	551 (21.69)
• Depth							
- Without operator panel	mm (in)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)
- With operator panel, max.	mm (in)	268 (10.55)	268 (10.55)	268 (10.55)	268 (10.55)	268 (10.55)	268 (10.55)
<b>Frame size</b>		FSD	FSD	FSD	FSD	FSE	FSE
<b>Weight, approx.</b>							
• Without integrated line filter	kg (lb)	16 (35.3)	16 (35.3)	17 (37.5)	17 (37.5)	26 (57.3)	26 (57.3)
• With integrated line filter	kg (lb)	17.5 (38.6)	17.5 (38.6)	18.5 (40.8)	18.5 (40.8)	28 (61.7)	28 (61.7)

<sup>1)</sup> The rated output current  $I_{rated}$  and the base-load current  $I_L$  are based on the duty cycle for low overload (LO).

<sup>2)</sup> The base-load current  $I_H$  is based on the duty cycle for high overload (HO).

<sup>3)</sup> Typical values. You can find more information on the Internet at: <https://support.industry.siemens.com/cs/document/94059311>

<sup>4)</sup> Values dependent on ambient temperature and utilization.

<sup>5)</sup> The input current depends on the motor load and line impedance. The input currents apply for a load at rated power (based on  $I_{rated}$ ) for a line impedance corresponding to  $u_K = 1\%$ . The current values are specified on the rating plate of the Power Module.

## SINAMICS S110 servo drives

0.55 kW to 132 kW (0.75 hp to 150 hp)

### Air-cooled PM240-2 Power Modules in blocksize format

#### Selection and ordering data

To ensure that a suitable Power Module is selected, the following currents should be used for applications:

- Rated output current for applications with low overload (LO)
- Base-load current for applications with high overload (HO)

With reference to the rated output current, the modules support at least 2-pole to 6-pole low-voltage motors, e.g. the SIMOTICS 1LE1 motor series. The type rating is merely a guide value. For a description of the overload performance, please refer to the general technical specifications of the Power Modules.

#### PM240-2 Power Modules standard variant

Type rating <sup>1)</sup>		Rated output current $I_{rated}^{2)}$ A	Power based on the base-load current <sup>3)</sup>		Base-load current $I_H^{3)}$ A	Frame size	PM240-2 Power Module standard variant without integrated line filter	PM240-2 Power Module standard variant with integrated line filter class A
kW	hp		kW	hp			Article No.	Article No.
<b>200 ... 240 V 1 AC/3 AC</b>								
<b>0.55</b>	0.75	3.2	<b>0.37</b>	0.5	2.3	FSA	<b>6SL3210-1PB13-0UL0</b>	<b>6SL3210-1PB13-0AL0</b>
<b>0.75</b>	1	4.2	<b>0.55</b>	0.75	3.2	FSA	<b>6SL3210-1PB13-8UL0</b>	<b>6SL3210-1PB13-8AL0</b>
<b>1.1</b>	1.5	6	<b>0.75</b>	1	4.2	FSB	<b>6SL3210-1PB15-5UL0</b>	<b>6SL3210-1PB15-5AL0</b>
<b>1.5</b>	2	7.4	<b>1.1</b>	1.5	6	FSB	<b>6SL3210-1PB17-4UL0</b>	<b>6SL3210-1PB17-4AL0</b>
<b>2.2</b>	3	10.4	<b>1.5</b>	2	7.4	FSB	<b>6SL3210-1PB21-0UL0</b>	<b>6SL3210-1PB21-0AL0</b>
<b>3</b>	4	13.6	<b>2.2</b>	3	10.4	FSC	<b>6SL3210-1PB21-4UL0</b>	<b>6SL3210-1PB21-4AL0</b>
<b>4</b>	5	17.5	<b>3</b>	4	13.6	FSC	<b>6SL3210-1PB21-8UL0</b>	<b>6SL3210-1PB21-8AL0</b>
<b>380 ... 480 V 3 AC <sup>4)</sup></b>								
<b>0.55</b>	0.75	1.7	<b>0.37</b>	0.5	1.3	FSA	<b>6SL3210-1PE11-8UL1</b>	<b>6SL3210-1PE11-8AL1</b>
<b>0.75</b>	1	2.2	<b>0.55</b>	0.75	1.7	FSA	<b>6SL3210-1PE12-3UL1</b>	<b>6SL3210-1PE12-3AL1</b>
<b>1.1</b>	1.5	3.1	<b>0.75</b>	1	2.2	FSA	<b>6SL3210-1PE13-2UL1</b>	<b>6SL3210-1PE13-2AL1</b>
<b>1.5</b>	2	4.1	<b>1.1</b>	1.5	3.1	FSA	<b>6SL3210-1PE14-3UL1</b>	<b>6SL3210-1PE14-3AL1</b>
<b>2.2</b>	3	5.9	<b>1.5</b>	2	4.1	FSA	<b>6SL3210-1PE16-1UL1</b>	<b>6SL3210-1PE16-1AL1</b>
<b>3</b>	4	7.7	<b>2.2</b>	3	5.9	FSA	<b>6SL3210-1PE18-0UL1</b>	<b>6SL3210-1PE18-0AL1</b>
<b>4</b>	5	10.2	<b>3</b>	4	7.7	FSB	<b>6SL3210-1PE21-1UL0</b>	<b>6SL3210-1PE21-1AL0</b>
<b>5.5</b>	7.5	13.2	<b>4</b>	5	10.2	FSB	<b>6SL3210-1PE21-4UL0</b>	<b>6SL3210-1PE21-4AL0</b>
<b>7.5</b>	10	18	<b>5.5</b>	7.5	13.2	FSB	<b>6SL3210-1PE21-8UL0</b>	<b>6SL3210-1PE21-8AL0</b>
<b>11</b>	15	26	<b>7.5</b>	10	18	FSC	<b>6SL3210-1PE22-7UL0</b>	<b>6SL3210-1PE22-7AL0</b>
<b>15</b>	20	32	<b>11</b>	15	26	FSC	<b>6SL3210-1PE23-3UL0</b>	<b>6SL3210-1PE23-3AL0</b>
<b>18.5</b>	25	38	<b>15</b>	20	32	FSD	<b>6SL3210-1PE23-8UL0</b>	<b>6SL3210-1PE23-8AL0</b>
<b>22</b>	30	45	<b>18.5</b>	25	38	FSD	<b>6SL3210-1PE24-5UL0</b>	<b>6SL3210-1PE24-5AL0</b>
<b>30</b>	40	60	<b>22</b>	30	45	FSD	<b>6SL3210-1PE26-0UL0</b>	<b>6SL3210-1PE26-0AL0</b>
<b>37</b>	50	75	<b>30</b>	40	60	FSD	<b>6SL3210-1PE27-5UL0</b>	<b>6SL3210-1PE27-5AL0</b>
<b>45</b>	60	90	<b>37</b>	50	75	FSE	<b>6SL3210-1PE28-8UL0</b>	<b>6SL3210-1PE28-8AL0</b>
<b>55</b>	75	110	<b>45</b>	60	90	FSE	<b>6SL3210-1PE31-1UL0</b>	<b>6SL3210-1PE31-1AL0</b>
<b>75</b>	100	145	<b>55</b>	75	110	FSF	<b>6SL3210-1PE31-5UL0</b>	<b>6SL3210-1PE31-5AL0</b>
<b>90</b>	125	178	<b>75</b>	100	145	FSF	<b>6SL3210-1PE31-8UL0</b>	<b>6SL3210-1PE31-8AL0</b>
<b>110</b>	150	205	<b>90</b>	125	178	FSF	<b>6SL3210-1PE32-1UL0</b>	<b>6SL3210-1PE32-1AL0</b>
<b>132</b>	200	250	<b>110</b>	150	205	FSF	<b>6SL3210-1PE32-5UL0</b>	<b>6SL3210-1PE32-5AL0</b>

<sup>1)</sup> Type rating based on the rated output current  $I_{rated}$ . The rated output current  $I_{rated}$  is based on the duty cycle for low overload (LO).

<sup>2)</sup> The rated output current  $I_{rated}$  is based on the duty cycle for low overload (LO). These current values are valid for 200 V or 400 V and are specified on the rating plate of the Power Module.

<sup>3)</sup> The base-load current  $I_H$  is based on the duty cycle for high overload (HO).

<sup>4)</sup> SIPLUS components for extreme requirements are available. Additional information is available on the Internet at [www.siemens.com/siplus-drives](http://www.siemens.com/siplus-drives)

# SINAMICS S110 servo drives

0.55 kW to 132 kW (0.75 hp to 150 hp)

## Air-cooled PM240-2 Power Modules in blocksize format

### Technical specifications (continued)

Line voltage 380 ... 480 V 3 AC		PM240-2 Power Modules standard variant					
Without integrated line filter		6SL3210-1PE23-8UULO	6SL3210-1PE24-5UULO	6SL3210-1PE26-0UULO	6SL3210-1PE27-5UULO	6SL3210-1PE28-8UULO	6SL3210-1PE31-1UULO
With integrated line filter class A		6SL3210-1PE23-8AL0	6SL3210-1PE24-5AL0	6SL3210-1PE26-0AL0	6SL3210-1PE27-5AL0	6SL3210-1PE28-8AL0	6SL3210-1PE31-1AL0
<b>Output current</b> at 50 Hz 400 V 3 AC							
• Rated current $I_{rated}^{1)}$	A	38	45	60	75	90	110
• For S6 duty (40 %) $I_{S6}$	A	45	54	72	90	108	132
• Base-load current $I_H^{2)}$	A	32	38	45	60	75	90
• Maximum current $I_{max}$	A	64	76	90	120	150	180
<b>Type rating</b>							
• Based on $I_{rated}$	kW (hp)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)
• Based on $I_H$	kW (hp)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)
<b>Rated pulse frequency</b>	kHz	4	4	4	4	4	4
<b>Efficiency <math>\eta</math></b>	%	>97	>97	>97	>97	>97	>97
<b>Power loss <sup>3)</sup></b> at rated current							
• Without integrated line filter	kW	0.57	0.7	0.82	1.09	1.29	1.65
• With integrated line filter	kW	0.58	0.71	0.83	1.1	1.3	1.67
<b>Cooling air requirement</b>	m <sup>3</sup> /s (ft <sup>3</sup> /s)	0.055 (1.94)	0.055 (1.94)	0.055 (1.94)	0.055 (1.94)	0.083 (2.93)	0.083 (2.93)
<b>Sound pressure level</b> $L_{pA}$ (1 m)	dB	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	45 ... 65 <sup>4)</sup>	44 ... 62 <sup>4)</sup>	44 ... 62 <sup>4)</sup>
<b>Input current <sup>5)</sup></b>							
• Rated current	A	36	42	57	70	86	104
• Based on $I_H$	A	33	38	47	62	78	94
<b>Line supply connection</b> U1/L1, V1/L2, W1/L3		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
• Conductor cross-section	mm <sup>2</sup>	10 ... 35	10 ... 35	10 ... 35	10 ... 35	25 ... 70	25 ... 70
<b>Motor connection</b> U2, V2, W2		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
• Conductor cross-section	mm <sup>2</sup>	10 ... 35	10 ... 35	10 ... 35	10 ... 35	25 ... 70	25 ... 70
<b>PE connection</b>		Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals
<b>Motor cable length, max.</b>							
• Shielded	m (ft)	200 (656)	200 (656)	200 (656)	200 (656)	200 (656)	200 (656)
• Unshielded	m (ft)	300 (984)	300 (984)	300 (984)	300 (984)	300 (984)	300 (984)
<b>Degree of protection</b>		IP20	IP20	IP20	IP20	IP20	IP20
<b>Dimensions</b>							
• Width	mm (in)	200 (7.87)	200 (7.87)	200 (7.87)	200 (7.87)	275 (10.83)	275 (10.83)
• Height	mm (in)	472 (18.58)	472 (18.58)	472 (18.58)	472 (18.58)	551 (21.69)	551 (21.69)
• Depth without operator panel	mm (in)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)	237 (9.33)
<b>Frame size</b>		FSD	FSD	FSD	FSD	FSE	FSE
<b>Weight, approx.</b>							
• Without integrated line filter	kg (lb)	16 (35.3)	16 (35.3)	17 (37.5)	17 (37.5)	26 (57.3)	26 (57.3)
• With integrated line filter	kg (lb)	17.5 (38.6)	17.5 (38.6)	18.5 (40.8)	18.5 (40.8)	28 (61.7)	28 (61.7)

<sup>1)</sup> The rated output current  $I_{rated}$  is based on the duty cycle for low overload (LO).

<sup>2)</sup> The base-load current  $I_H$  is based on the duty cycle for high overload (HO).

<sup>3)</sup> Typical values. More information can be found on the Internet at <https://support.industry.siemens.com/cs/document/94059311>

<sup>4)</sup> Values dependent on ambient temperature and utilization.

<sup>5)</sup> The input current depends on the motor load and line impedance. The input currents apply for a load with the type rating (based on  $I_{rated}$ ) for a line impedance corresponding to  $u_k = 1\%$ . The current values are specified on the rating plate of the Power Module.