

MLFB-Ordering data

6SL3210-5BB17-5UV1



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data	General tech. specifications																
Input <table> <tr> <td>Number of phases</td><td>1 AC</td></tr> <tr> <td>Line voltage</td><td>200 ... 240 V -15 % +10 %</td></tr> <tr> <td>Line frequency</td><td>47 ... 63 Hz</td></tr> </table>	Number of phases	1 AC	Line voltage	200 ... 240 V -15 % +10 %	Line frequency	47 ... 63 Hz	<table> <tr> <td>Power factor λ</td><td>0.72</td></tr> <tr> <td>Offset factor $\cos \varphi$</td><td>0.95</td></tr> <tr> <td>Efficiency η</td><td>0.98</td></tr> <tr> <td>Filter class (integrated)</td><td>Unfiltered</td></tr> </table>	Power factor λ	0.72	Offset factor $\cos \varphi$	0.95	Efficiency η	0.98	Filter class (integrated)	Unfiltered		
Number of phases	1 AC																
Line voltage	200 ... 240 V -15 % +10 %																
Line frequency	47 ... 63 Hz																
Power factor λ	0.72																
Offset factor $\cos \varphi$	0.95																
Efficiency η	0.98																
Filter class (integrated)	Unfiltered																
Output <table> <tr> <td>Number of phases</td><td>3 AC</td></tr> <tr> <td>Rated voltage</td><td>230 V</td></tr> <tr> <td>Rated power (HO)</td><td>0.75 kW / 1.00 hp</td></tr> <tr> <td>Rated power (LO)</td><td>0.75 kW / 0.75 hp</td></tr> <tr> <td>Rated current (HO)</td><td>4.20 A</td></tr> <tr> <td>Rated current (LO)</td><td>4.20 A</td></tr> </table>	Number of phases	3 AC	Rated voltage	230 V	Rated power (HO)	0.75 kW / 1.00 hp	Rated power (LO)	0.75 kW / 0.75 hp	Rated current (HO)	4.20 A	Rated current (LO)	4.20 A	Ambient conditions <table> <tr> <td>Cooling</td><td>convection cooling</td></tr> <tr> <td>Installation altitude</td><td>1000 m (3281 ft)</td></tr> </table>	Cooling	convection cooling	Installation altitude	1000 m (3281 ft)
Number of phases	3 AC																
Rated voltage	230 V																
Rated power (HO)	0.75 kW / 1.00 hp																
Rated power (LO)	0.75 kW / 0.75 hp																
Rated current (HO)	4.20 A																
Rated current (LO)	4.20 A																
Cooling	convection cooling																
Installation altitude	1000 m (3281 ft)																
<table> <tr> <td>Pulse frequency</td><td>8.00 kHz</td></tr> <tr> <td>Output frequency</td><td>0 ... 550 Hz</td></tr> </table>	Pulse frequency	8.00 kHz	Output frequency	0 ... 550 Hz	Ambient temperature <table> <tr> <td>Operation</td><td>-10 ... 60 °C (14 ... 140 °F)</td></tr> <tr> <td>Storage</td><td>-40 ... 70 °C (-40 ... 158 °F)</td></tr> </table>	Operation	-10 ... 60 °C (14 ... 140 °F)	Storage	-40 ... 70 °C (-40 ... 158 °F)								
Pulse frequency	8.00 kHz																
Output frequency	0 ... 550 Hz																
Operation	-10 ... 60 °C (14 ... 140 °F)																
Storage	-40 ... 70 °C (-40 ... 158 °F)																
	Relative humidity <table> <tr> <td>Max. operation</td><td>95 %</td></tr> </table>	Max. operation	95 %														
Max. operation	95 %																
	Communication <table> <tr> <td>Communication</td><td>USS, Modbus RTU</td></tr> </table>	Communication	USS, Modbus RTU														
Communication	USS, Modbus RTU																
	Standards <table> <tr> <td>Compliance with standards</td><td>CE, cULus, C-Tick (RCM), KC</td></tr> <tr> <td>CE marking</td><td>EN 61800-5-1 /EN 60204-1 and EN 61800-3</td></tr> </table>	Compliance with standards	CE, cULus, C-Tick (RCM), KC	CE marking	EN 61800-5-1 /EN 60204-1 and EN 61800-3												
Compliance with standards	CE, cULus, C-Tick (RCM), KC																
CE marking	EN 61800-5-1 /EN 60204-1 and EN 61800-3																

Overload capability

Low Overload (LO)

110 % rated output current for 60 s, cycle time 300 s

High Overload (HO)

150 % rated output current for 60 s, cycle time 300 s

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Data sheet for SINAMICS V20

MLFB-Ordering data 6SL3210-5BB17-5UV1



Figure similar

Mechanical data		Connections	
Mounting position	Wall mounting / side-by-side mounting	Max. motor cable length	
Degree of protection	IP20 / UL open type	Shielded	25 m (82 ft)
Size	FSAB	Unshielded	50 m (164 ft)
Net weight	0.90 kg (1.98 lb)		
Width	68.0 mm (2.68 in)		
Height	142.0 mm (5.59 in)		
Depth	127.8 mm (5.03 in)		
Inputs / outputs			
Standard digital inputs			
Number	4		
Digital outputs			
Number as relay changeover contact	1		
Number as transistor	1		
Analog inputs			
Number	2 (Can be used as additional digital input)		
Analog outputs			
Number	1		



Figure similar

MLFB-Ordering data

6SL3210-1PB17-4UL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	1 / 3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	200 ... 240 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	62 dB
Rated current (LO)	18.10 A / 10.50 A	Power loss	0.07 kW
Rated current (HO)	15.80 A / 9.10 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	230 V	Cooling air requirement	0.009 m ³ /s (0.325 ft ³ /s)
Rated current (LO)	7.40 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	6.00 A	Ambient temperature	
Max. output current	12.00 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 230V (LO)	1.50 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 240V (LO)	2.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 230V (HO)	1.10 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 240V (HO)	1.50 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

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Data sheet for SINAMICS Power Module PM240-2



Figure similar

MLFB-Ordering data

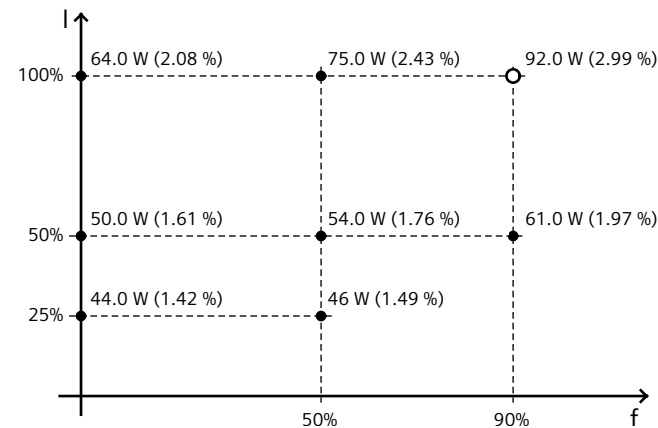
6SL3210-1PB17-4UL0

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSB
Net weight	2.90 kg (6.39 lb)
Width	100 mm (3.94 in)
Height	292 mm (11.50 in)
Depth	165 mm (6.50 in)
Converter losses to EN 50598-2*	

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)

Comparison with the reference converter (90% / 100%)

-41.51 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47

CE marking

Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PB21-0UL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	1 / 3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	200 ... 240 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	62 dB
Rated current (LO)	24.00 A / 13.90 A	Power loss	0.12 kW
Rated current (HO)	20.90 A / 12.10 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	230 V	Cooling air requirement	0.009 m ³ /s (0.325 ft ³ /s)
Rated current (LO)	10.40 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	7.40 A	Ambient temperature	
Max. output current	15.60 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 230V (LO)	2.20 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 240V (LO)	3.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 230V (HO)	1.50 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 240V (HO)	2.00 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

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Data sheet for SINAMICS Power Module PM240-2



MLFB-Ordering data

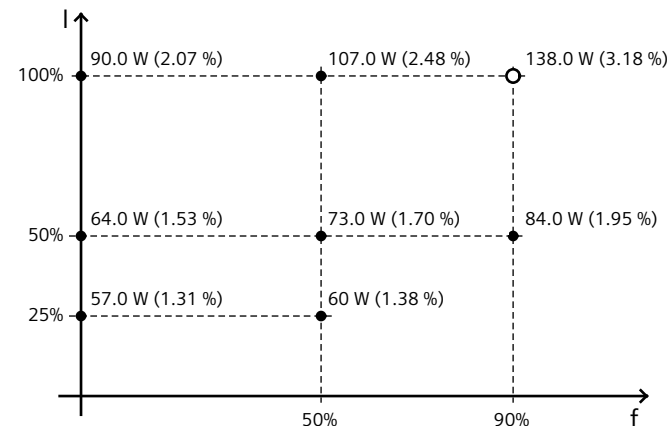
6SL3210-1PB21-0UL0

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSB
Net weight	2.90 kg (6.39 lb)
Width	100 mm (3.94 in)
Height	292 mm (11.50 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
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Comparison with the reference converter (90% / 100%)

-47.39 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47

CE marking

Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE12-3UL1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	2.90 A	Power loss	0.04 kW
Rated current (HO)	2.60 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.005 m ³ /s (0.177 ft ³ /s)
Rated current (LO)	2.20 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	1.70 A	Ambient temperature	
Max. output current	3.40 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	0.75 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	1.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	0.55 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	0.75 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

SIEMENS

Data sheet for SINAMICS Power Module PM240-2

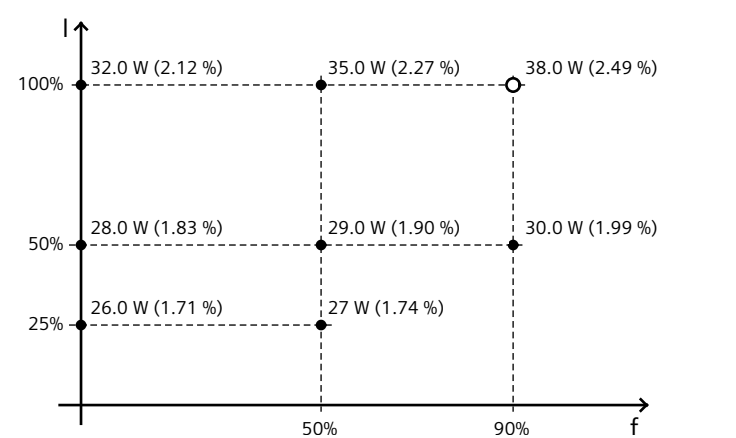


MLFB-Ordering data

6SL3210-1PE12-3UL1

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSA
Net weight	1.40 kg (3.09 lb)
Width	73 mm (2.87 in)
Height	196 mm (7.72 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-77.40 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE14-3UL1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	5.50 A	Power loss	0.07 kW
Rated current (HO)	4.70 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.005 m ³ /s (0.177 ft ³ /s)
Rated current (LO)	4.10 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	3.10 A	Ambient temperature	
Max. output current	6.20 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	1.50 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	2.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	1.10 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	1.50 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

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Data sheet for SINAMICS Power Module PM240-2



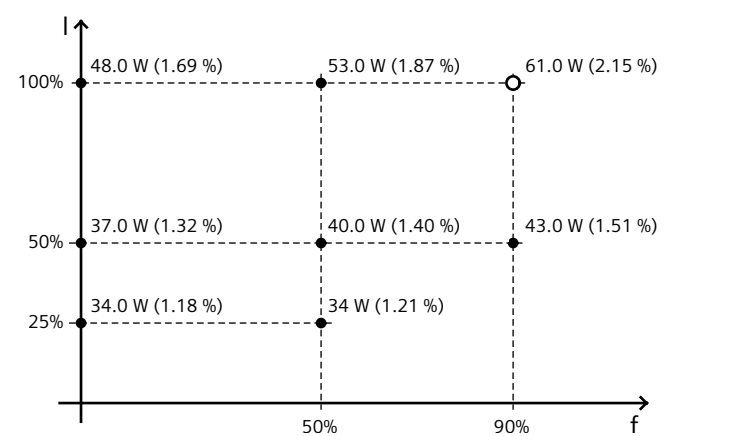
MLFB-Ordering data

6SL3210-1PE14-3UL1

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSA
Net weight	1.40 kg (3.09 lb)
Width	73 mm (2.87 in)
Height	196 mm (7.72 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
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Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-73.81 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.00 ... 2.50 mm² (AWG 18 ... AWG 14)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE16-1UL1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	7.70 A	Power loss	0.10 kW
Rated current (HO)	6.10 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.005 m ³ /s (0.177 ft ³ /s)
Rated current (LO)	5.90 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	4.10 A	Ambient temperature	
Max. output current	8.90 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	2.20 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	3.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	1.50 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	2.00 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

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Data sheet for SINAMICS Power Module PM240-2

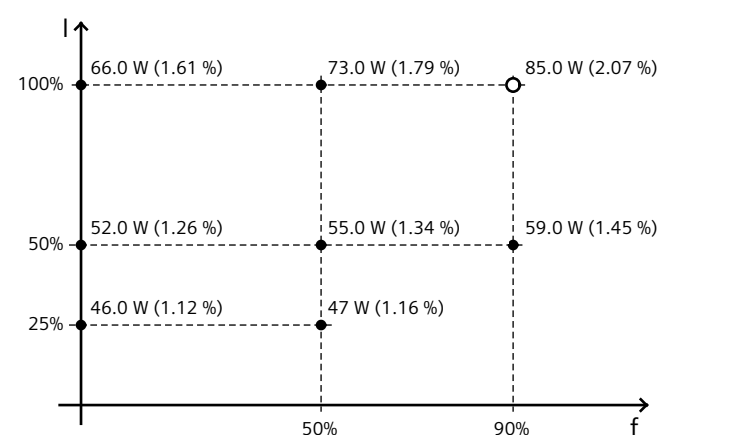


MLFB-Ordering data

6SL3210-1PE16-1UL1

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSA
Net weight	1.40 kg (3.09 lb)
Width	73 mm (2.87 in)
Height	196 mm (7.72 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-71.25 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 2.50 mm² (AWG 16 ... AWG 14)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 2.50 mm² (AWG 16 ... AWG 14)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE18-0UL1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.96
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	10.10 A	Power loss	0.12 kW
Rated current (HO)	8.80 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.005 m ³ /s (0.177 ft ³ /s)
Rated current (LO)	7.70 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	5.90 A	Ambient temperature	
Max. output current	11.80 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	3.00 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	4.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	2.20 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	3.00 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

SIEMENS

Data sheet for SINAMICS Power Module PM240-2



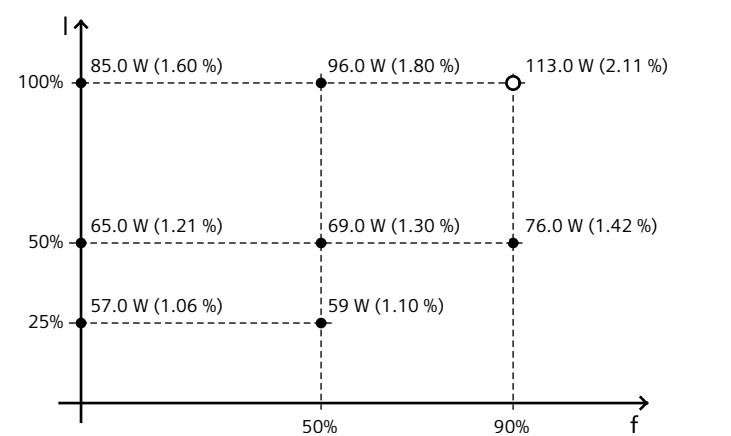
MLFB-Ordering data

6SL3210-1PE18-0UL1

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSA
Net weight	1.40 kg (3.09 lb)
Width	73 mm (2.87 in)
Height	196 mm (7.72 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
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Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-68.60 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 2.50 mm² (AWG 16 ... AWG 14)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 2.50 mm² (AWG 16 ... AWG 14)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE21-4UL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.97
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	17.20 A	Power loss	0.15 kW
Rated current (HO)	15.30 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.009 m ³ /s (0.325 ft ³ /s)
Rated current (LO)	13.20 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	10.20 A	Ambient temperature	
Max. output current	20.40 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	5.50 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	7.50 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	4.00 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	5.00 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

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Data sheet for SINAMICS Power Module PM240-2

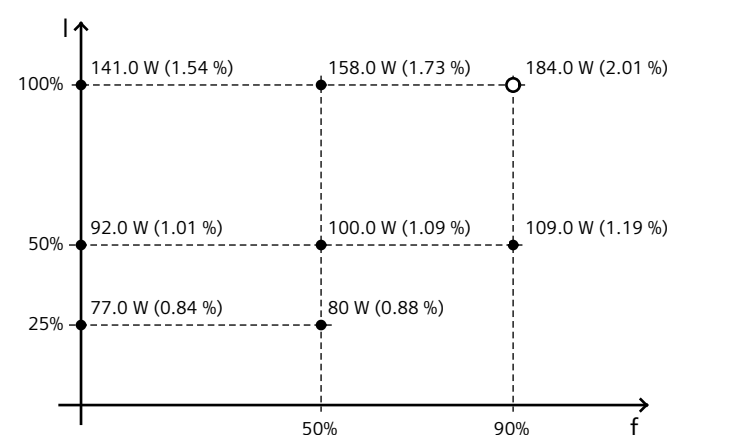


MLFB-Ordering data

6SL3210-1PE21-4UL0

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSB
Net weight	2.90 kg (6.39 lb)
Width	100 mm (3.94 in)
Height	292 mm (11.50 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-66.56 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE21-8UL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.97
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	22.20 A	Power loss	0.20 kW
Rated current (HO)	19.80 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.009 m ³ /s (0.325 ft ³ /s)
Rated current (LO)	18.00 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	13.20 A	Ambient temperature	
Max. output current	27.00 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	7.50 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	10.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	5.50 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	7.50 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

SIEMENS

Data sheet for SINAMICS Power Module PM240-2



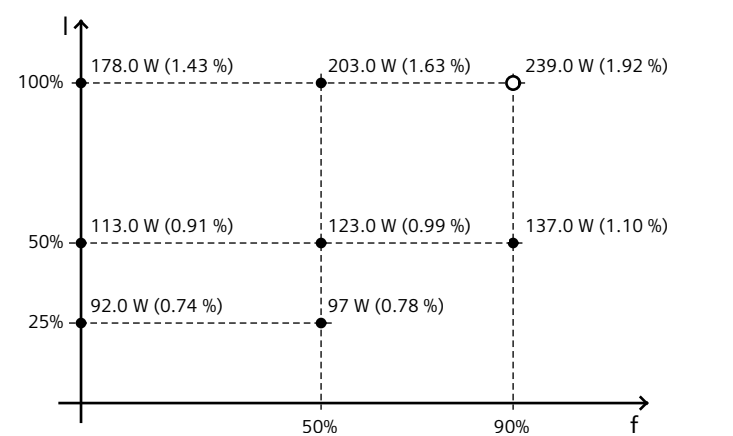
MLFB-Ordering data

6SL3210-1PE21-8UL0

Mechanical data	
Degree of protection	IP20 / UL open type
Size	FSB
Net weight	3.00 kg (6.61 lb)
Width	100 mm (3.94 in)
Height	292 mm (11.50 in)
Depth	165 mm (6.50 in)

Converter losses to EN 50598-2*	
---------------------------------	--

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-67.12 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Connections	
Line side	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)
Motor end	
Version	Plug-in screw terminals
Conductor cross-section	1.50 ... 6.00 mm² (AWG 16 ... AWG 10)

Max. motor cable length	
Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards	
Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3210-1PE22-7UL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Rated data		General tech. specifications	
Input		Power factor λ	0.85
Number of phases	3 AC	Offset factor $\cos \varphi$	0.95
Line voltage	380 ... 480 V ± 10 %	Efficiency η	0.97
Line frequency	47 ... 63 Hz	Sound pressure level (1m)	72 dB
Rated current (LO)	32.60 A	Power loss	0.30 kW
Rated current (HO)	27.00 A	Filter class (integrated)	-
Output		Ambient conditions	
Number of phases	3 AC	Cooling	Internal air cooling
Rated voltage	400 V	Cooling air requirement	0.018 m ³ /s (0.653 ft ³ /s)
Rated current (LO)	26.00 A	Installation altitude	1000 m (3280.84 ft)
Rated current (HO)	18.00 A	Ambient temperature	
Max. output current	39.00 A	Operation LO	-5 ... 40 °C (23 ... 104 °F)
Rated power IEC 400V (LO)	11.00 kW	Operation HO	-5 ... 50 °C (23 ... 122 °F)
Rated power NEC 480V (LO)	15.00 hp	Transport	-25 ... 55 °C (-13 ... 131 °F)
Rated power IEC 400V (HO)	7.50 kW	Storage	-25 ... 55 °C (-13 ... 131 °F)
Rated power NEC 480V (HO)	10.00 hp	Relative humidity	
Pulse frequency	4 kHz	Max. operation	95 % RH, condensation not permitted
Output frequency for vector control	0 ... 200 Hz		
Output frequency for V/f control	0 ... 550 Hz		

Overload capability

Low Overload (LO)

1.1 x rated output current (i.e. 110 % overload) for 57 s with a cycle time of 300 s 1.5 x rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

1.5 x output current rating (i.e., 150 % overload) for 57 s with a cycle time of 300 s 2 x output current rating (i.e., 200 % overload) for 3 s with a cycle time of 300 s

SIEMENS

Data sheet for SINAMICS Power Module PM240-2



Figure similar

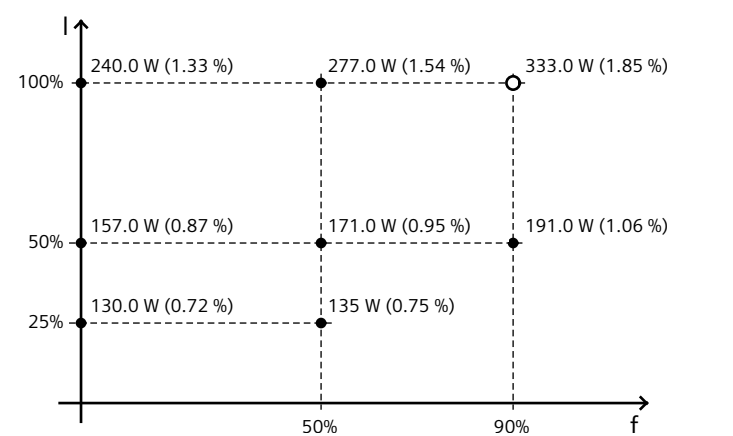
MLFB-Ordering data

6SL3210-1PE22-7UL0

Mechanical data		Connections	
Degree of protection	IP20 / UL open type	Line side	
Size	FSC	Version	Plug-in screw terminals
Net weight	4.70 kg (10.36 lb)	Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)
Width	140 mm (5.51 in)	Motor end	
Height	355 mm (13.98 in)	Version	Plug-in screw terminals
Depth	165 mm (6.50 in)	Conductor cross-section	6.00 ... 16.00 mm² (AWG 10 ... AWG 6)

Converter losses to EN 50598-2*

Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	-65.93 %



The percentage values show the losses in relation to the rated apparent power of the converter.

The diagram shows the losses for the points (as per standard EN 50598) of the relative torque generating current (I) over the relative motor stator frequency(f). The values are valid for the basic version of the converter without options/components.

*converted values

Max. motor cable length

Shielded	50 m (164.04 ft)
Unshielded	100 m (328.08 ft)

Standards

Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47
CE marking	Low-voltage directive 2006/95/EC



Figure similar

MLFB-Ordering data

6SL3244-0BB12-1BA1

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

Electrical data

Operating voltage via

The Power Module DC 24 V

External power supply DC 20 ... 29 V

Max. power consumption 0.50 A

Power loss 5.50 W

Inputs / outputs

Standard digital inputs

Number 6

Switching level: 0 → 1 11 V

Switching level: 1 → 0 5 V

Fail-safe digital inputs

Number 1 (Use of 2 × DI Standard)

Digital outputs

Number as relay changeover contact 2

Analog / digital inputs

Number 2 (Differential input)

Analog outputs

Number 2 (Non-isolated output)

Connections

Signal cable

Conductor cross-section 0.05 ... 1.50 mm² (AWG 28 ... AWG 16)

Ambient conditions

Ambient temperature

Operation -10 ... 55 °C (14 ... 131 °F)

Storage -40 ... 70 °C (-40 ... 158 °F)

Relative humidity

Max. operation 95 %

Communication

Communication RS485

Closed-loop control techniques

V/f linear / square-law / parameterizable Yes

V/f with flux current control (FCC) Yes

V/f ECO linear / square-law Yes

Sensorless vector control Yes

Vector control, with sensor No

Encoderless torque control Yes

Torque control, with encoder No

Standards

Compliance with standards CE, UL, cUL, RCM, SEMI F47

CE marking Low-voltage directive 2014/35/EC

Mechanical data

Degree of protection IP20 / UL open type

Net weight 0.49 kg (1.08 lb)

Width 73.0 mm (2.87 in)

Height 199.0 mm (7.83 in)

Depth 46.0 mm (1.81 in)