## **SIEMENS**

## Data sheet for SINAMICS Power module PM240-2

Article No.: 6SL3210-1PC22-2UL0

Client order no. : Order no. : Offer no. : Remarks : Item no. : Consignment no. : Project :



Figure simila

Rated data		
Input		
Number of phases	3 AC	
Line voltage	200 240 V ±10	%
Line frequency	47 63 Hz	
Rated current (LO)	29.00 A	
Rated current (HO)	26.20 A	
Output		
Number of phases	3 AC	
Rated voltage	230V IEC	240V NEC 1)
Rated power (LO)	5.50 kW	7.50 hp
Rated power (HO)	4.00 kW	5.00 hp
Rated current (LO)	22.00 A	
Rated current (HO)	17.50 A	
Max. output current	35.00 A	
Pulse frequency	4 kHz	
Output frequency for vector control	0 200 Hz	
Output frequency for V/f control	0 550 Hz	
Overload canability		

## 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  $\times$  rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

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

General tech. specifications		
Power factor λ	0.85	
Offset factor $\cos\phi$	0.95	
Efficiency η	0.97	
Sound pressure level (1m)	65 dB	
Power loss	0.20 kW	
Filter class (integrated)	-	

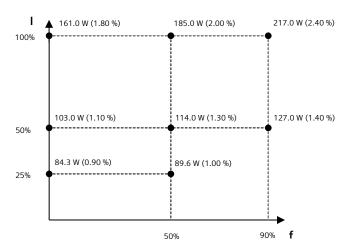
Cooling Internal air cooling Cooling air requirement 0.018 m³/s (0.653 ft²/s) Installation altitude 1,000 m (3,280.84 ft)  Ambient temperature  Operation LO -5 40 °C (23 104 °F) Operation HO -5 50 °C (23 122 °F) Transport -25 55 °C (-13 131 °F) Storage -25 55 °C (-13 131 °F)  Relative humidity  Max. operation 95 % RH, condensation not permitted  Connections  Line side  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection P20 / UL open type Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47  CE marking Low-voltage directive 2006/95/ECC	Amb	ient conditions	
Installation altitude 1,000 m (3,280.84 ft)  Ambient temperature  Operation LO -5 40 °C (23 104 °F) Operation HO -5 50 °C (23 122 °F)  Transport -25 55 °C (-13 131 °F) Storage -25 55 °C (-13 131 °F)  Relative humidity  Max. operation 95 % RH, condensation not permitted  Connections  Line side  Version Plug-in screw terminals Conductor cross-section (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals Conductor cross-section (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type Frame size FSC Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Cooling	Internal air cooling	
Ambient temperature  Operation LO	Cooling air requirement	0.018 m³/s (0.653 ft³/s)	
Operation LO Operation HO Operation Storage Operation Op	Installation altitude	1,000 m (3,280.84 ft)	
Operation HO  -5 50 °C (23 122 °F)  Transport  -25 55 °C (-13 131 °F)  Storage  -25 55 °C (-13 131 °F)  Relative humidity  Max. operation  95 % RH, condensation not permitted  Connections  Line side  Version  Plug-in screw terminals  Conductor cross-section  (AWG 10 AWG 6)  Motor end  Version  Plug-in screw terminals  Conductor cross-section  (AWG 10 AWG 6)  Max. motor cable length  Shielded  50 m (164.04 ft)  Unshielded  100 m (328.08 ft)  Mechanical data  Degree of protection  IP20 / UL open type  Frame size  FSC  Net weight  5.00 kg (11.02 lb)  Dimensions  Width  140 mm (5.51 in)  Height  355 mm (13.98 in)  Depth  165 mm (6.50 in)	Ambient temperature		
Transport  Storage  -25 55 °C (-13 131 °F)  Relative humidity  Max. operation  95 % RH, condensation not permitted  Connections  Line side  Version  Plug-in screw terminals  Conductor cross-section  6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version  Plug-in screw terminals  Conductor cross-section  6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded  50 m (164.04 ft) Unshielded  100 m (328.08 ft)  Mechanical data  Degree of protection  P20 / UL open type  Frame size  FSC  Net weight  5.00 kg (11.02 lb)  Dimensions  Width  140 mm (5.51 in)  Height  355 mm (13.98 in)  Depth  165 mm (6.50 in)  Standards  Compliance with standards  UL, cUL, CE, C-Tick (RCM), SEMI F47	Operation LO	-5 40 °C (23 104 °F)	
Storage -25 55 °C (-13 131 °F)  Relative humidity  Max. operation 95 % RH, condensation not permitted  Connections  Line side  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft)  Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Operation HO	-5 50 °C (23 122 °F)	
Relative humidity  Max. operation  Connections  Line side  Version Plug-in screw terminals 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection Plag-in screw terminals 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection Plag-in screw terminals 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) 100 m (328.08 ft)  Mechanical data  Degree of protection Plag-in screw terminals 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 100 m (328.08 ft)  100 m (328.08 ft)  100 m (328.08 ft)  101 m (328.08 ft)  102 m (328.08 ft)  103 m (328.08 ft)  104 m (5.51 in) 105 mm (5.51 in) 105 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Transport	-25 55 °C (-13 131 °F)	
Connections  Line side  Version Plug-in screw terminals Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type Frame size FSC Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Storage	-25 55 °C (-13 131 °F)	
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Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 50 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Max. operation	95 % RH, condensation not permitted	
Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Connections		
Conductor cross-section  Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Line side		
Motor end  Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Version	Plug-in screw terminals	
Version Plug-in screw terminals  Conductor cross-section 6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Conductor cross-section		
Conductor cross-section  6.00 16.00 mm² (AWG 10 AWG 6)  Max. motor cable length  Shielded  50 m (164.04 ft)  Unshielded  100 m (328.08 ft)   Mechanical data  Degree of protection  IP20 / UL open type  Frame size  FSC  Net weight  5.00 kg (11.02 lb)  Dimensions  Width  140 mm (5.51 in)  Height  355 mm (13.98 in)  Depth  165 mm (6.50 in)   Standards  Compliance with standards  UL, cUL, CE, C-Tick (RCM), SEMI F47	Motor end		
Conductor cross-section  (AWG 10 AWG 6)  Max. motor cable length  Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Version	Plug-in screw terminals	
Shielded 50 m (164.04 ft) Unshielded 100 m (328.08 ft)  Mechanical data  Degree of protection IP20 / UL open type Frame size FSC Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in) Height 355 mm (13.98 in) Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Conductor cross-section		
Unshielded  Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Max. motor cable length		
Mechanical data  Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Shielded	50 m (164.04 ft)	
Degree of protection IP20 / UL open type  Frame size FSC  Net weight 5.00 kg (11.02 lb)  Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Unshielded	100 m (328.08 ft)	
Frame size  FSC  Net weight  5.00 kg (11.02 lb)  Dimensions  Width  140 mm (5.51 in)  Height  355 mm (13.98 in)  Depth  165 mm (6.50 in)  Standards  Compliance with standards  UL, cUL, CE, C-Tick (RCM), SEMI F47	Me	chanical data	
Net weight         5.00 kg (11.02 lb)           Dimensions           Width         140 mm (5.51 in)           Height         355 mm (13.98 in)           Depth         165 mm (6.50 in)           Standards           Compliance with standards         UL, cUL, CE, C-Tick (RCM), SEMI F47	Degree of protection	IP20 / UL open type	
Dimensions  Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Frame size	FSC	
Width 140 mm (5.51 in)  Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Net weight	5.00 kg (11.02 lb)	
Height 355 mm (13.98 in)  Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Dimensions		
Depth 165 mm (6.50 in)  Standards  Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Width	140 mm (5.51 in)	
Standards  Compliance with standards  UL, cUL, CE, C-Tick (RCM), SEMI F47	Height	355 mm (13.98 in)	
Compliance with standards UL, cUL, CE, C-Tick (RCM), SEMI F47	Depth	165 mm (6.50 in)	
	Standards		
CE marking Low-voltage directive 2006/95/EC	Compliance with standards	UL, cUL, CE, C-Tick (RCM), SEMI F47	
	CE marking	Low-voltage directive 2006/95/EC	



## Data sheet for SINAMICS Power module PM240-2

Article No.: 6SL3210-1PC22-2UL0

Converter losses to IEC61800-9-2*	
Efficiency class	IE2
Comparison with the reference converter (90% / 100%)	40.60 %



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 IEC61800-9-2) 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.

\*calculated values

<sup>1)</sup> The output current and HP ratings are valid for the voltage range 220V-240V