

## Data sheet for SINAMICS Power module PM230

Article No. : 6SL3210-1NE23-2AG1



Figure similar

Client order no. :  
Order no. :  
Offer no. :  
Remarks :

Item no. :  
Consignment no. :  
Project :

### Rated data

#### Input

Number of phases	3 AC
Line voltage	380 ... 480 V $\pm$ 10 %
Line frequency	47 ... 63 Hz
Rated current (LO)	33.10 A
Rated current (HO)	27.00 A

#### Output

Number of phases	3 AC	
<b>Rated voltage</b>	<b>400V IEC</b>	<b>480V NEC <sup>1)</sup></b>
Rated power (LO)	15.00 kW	20.00 hp
Rated power (HO)	11.00 kW	15.00 hp
Rated current (LO)	32.00 A	
Rated current (HO)	26.00 A	
Max. output current	52.00 A	
Pulse frequency	4 kHz	
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

### General tech. specifications

Power factor $\lambda$	0.90
Offset factor $\cos \varphi$	0.95
Efficiency $\eta$	0.97
Sound pressure level (1m)	65 dB
Power loss	0.35 kW
Filter class (integrated)	Class A

### Ambient conditions

Cooling	Internal air cooling
Cooling air requirement	0.019 m <sup>3</sup> /s (0.671 ft <sup>3</sup> /s)
Installation altitude	1,000 m (3,280.84 ft)
<b>Ambient temperature</b>	
Operation LO	-10 ... 40 °C (14 ... 104 °F)
Operation HO	-10 ... 50 °C (14 ... 122 °F)
Transport	-40 ... 70 °C (-40 ... 158 °F)
Storage	-40 ... 70 °C (-40 ... 158 °F)

#### Relative humidity

Max. operation	95 % RH, condensation not permitted
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### Connections

#### Line side

Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (AWG 10 ... AWG 6)

#### Motor end

Version	Plug-in screw terminals
Conductor cross-section	6.00 ... 16.00 mm <sup>2</sup> (AWG 10 ... AWG 6)

#### Max. motor cable length

Shielded	25 m (82.02 ft)
Unshielded	100 m (328.08 ft)

### Mechanical data

Degree of protection	IP20 / UL open type
Frame size	F5C
Net weight	5.10 kg (11.24 lb)
<b>Dimensions</b>	
Width	140 mm (5.51 in)
Height	355 mm (13.98 in)
Depth	165 mm (6.50 in)

### Standards

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

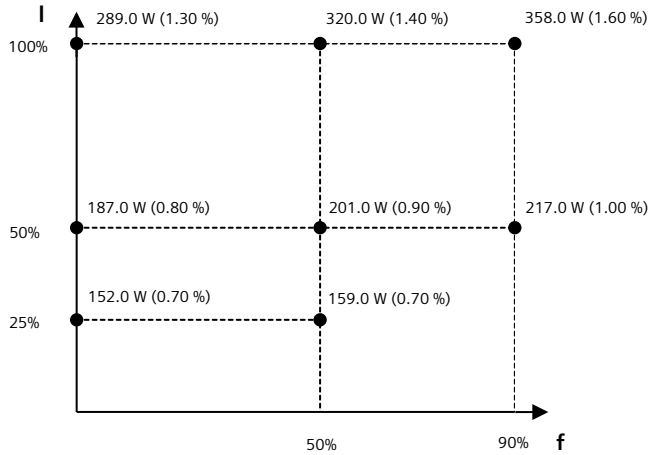
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### Converter losses to IEC61800-9-2\*

Efficiency class IE2

Comparison with the reference converter (90% / 100%) 31.90 %



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.

\*converted values

<sup>1)</sup>The output current and HP ratings are valid for the voltage range 440V-480V