

Data sheet for SINAMICS Power module PM240-2

Article No. : 6SL3210-1PE31-5AL0



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) | 140.00 A |
| Rated current (HO) | 117.00 A |

Output

| | |
|-------------------------------------|-----------------------------------------------|
| Number of phases | 3 AC |
| Rated voltage | 400V IEC 480V NEC ¹⁾ |
| Rated power (LO) | 75.00 kW 100.00 hp |
| Rated power (HO) | 55.00 kW 75.00 hp |
| Rated current (LO) | 145.00 A |
| Rated current (HO) | 110.00 A |
| Max. output current | 220.00 A |
| Pulse frequency | 2 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 λ | 0.95 |
| Offset factor $\cos \varphi$ | 0.99 |
| Efficiency η | 0.98 |
| Sound pressure level (1m) | 68 dB |
| Power loss | 1.79 kW |
| Filter class (integrated) | Class A |

Ambient conditions

| | |
|----------------------------|----------------------------------------------------|
| Cooling | Internal air cooling |
| Cooling air requirement | 0.153 m ³ /s (5.403 ft ³ /s) |
| Installation altitude | 1,000 m (3,280.84 ft) |
| Ambient temperature | |
| Operation LO | -20 ... 40 °C (-4 ... 104 °F) |
| Operation HO | -20 ... 50 °C (-4 ... 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 |
|----------------|-------------------------------------|

Connections

Line side

| | |
|-------------------------|--------------------------------------------------------|
| Version | M10 bolt |
| Conductor cross-section | 35.00 ... 120.00 mm ² (AWG 2 ... AWG -3) |

Motor end

| | |
|-------------------------|--------------------------------------------------------|
| Version | M10 bolt |
| Conductor cross-section | 35.00 ... 120.00 mm ² (AWG 2 ... AWG -3) |

DC link (for braking resistor)

| | |
|-------------------------|-------------------------------------------------------|
| Version | Screw-type terminals |
| Conductor cross-section | 25.00 ... 70.00 mm ² (AWG 4 ... AWG -1) |
| Cable length | 10 m (32.81 ft) |
| PE connection | M10 screw studs |

Max. motor cable length

| | |
|------------|---------------------|
| Shielded | 300 m (984.25 ft) |
| Unshielded | 450 m (1,476.38 ft) |

Mechanical data

| | |
|----------------------|----------------------|
| Degree of protection | IP20 / UL open type |
| Frame size | FSF |
| Net weight | 63.00 kg (138.89 lb) |
| Dimensions | |
| Width | 305 mm (12.01 in) |
| Height | 708 mm (27.87 in) |
| Depth | 357 mm (14.06 in) |

Standards

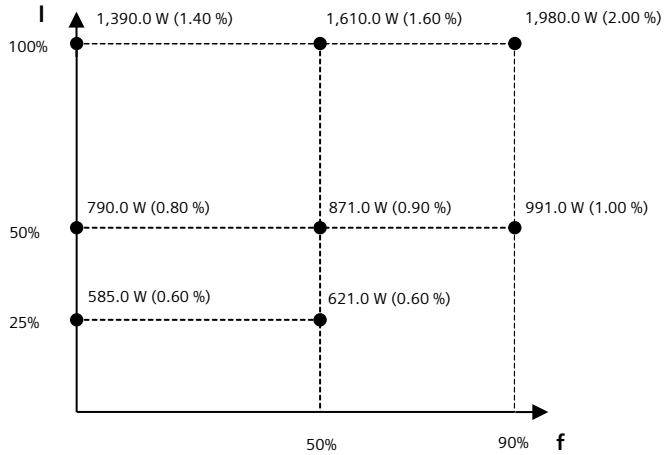
| | |
|---------------------------|-------------------------------------|
| Compliance with standards | UL, cUL, CE, C-Tick (RCM), SEMI F47 |
| CE marking | Low-voltage directive 2006/95/EC |

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Converter losses to IEC61800-9-2*

| | |
|------------------------------------------------------|---------|
| Efficiency class | IE2 |
| Comparison with the reference converter (90% / 100%) | 42.30 % |



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

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