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# Data sheet for SINAMICS Power Module PM230

**Article No. :** **6SL3210-1NE28-8UL0**



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 ±10 % | |
| Line frequency | 47 ... 63 Hz | |
| Rated current (LO) | 84.00 A | |
| Rated current (HO) | 70.00 A | |
| **Output** | | |
| Number of phases | 3 AC | |
| **Rated voltage** | **400V IEC** | **480V NEC [1)]** |
| Rated power (LO) | 45.00 kW | 60.00 hp |
| Rated power (HO) | 37.00 kW | 50.00 hp |
| Rated current (LO) | 90.00 A | |
| Rated current (HO) | 75.00 A | |
| Max. output current | 112.00 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 × rated output current (i.e. 150 % overload) for 3 s with a cycle time of 300 s

High Overload (HO)

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

## General tech. specifications

| | |
|---|---|
| Power factor λ | 0.90 |
| Offset factor cos φ | 0.95 |
| Efficiency η | 0.97 |
| Sound pressure level (1m) | 60 dB |
| Power loss | 1.20 kW |
| Filter class (integrated) | - |

## Ambient conditions

| | |
|---|---|
| Cooling | Internal air cooling |
| Cooling air requirement | 0.080 m³/s (2.825 ft³/s) |
| Installation altitude | 1,000 m (3,280.84 ft) |
| **Ambient temperature** | |
| Operation LO | 0 ... 40 °C (32 ... 104 °F) |
| Operation HO | 0 ... 50 °C (32 ... 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 | M6 bolt |
| Conductor cross-section | 25.00 ... 50.00 mm² (AWG 4 ... AWG 1) |
| **Motor end** | |
| Version | M6 bolt |
| Conductor cross-section | 25.00 ... 50.00 mm² (AWG 4 ... AWG 1) |
| **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 | FSE |
| Net weight | 15.00 kg (33.07 lb) |
| **Dimensions** | |
| Width | 275 mm (10.83 in) |
| Height | 499 mm (19.65 in) |
| Depth | 204 mm (8.03 in) |

## Standards

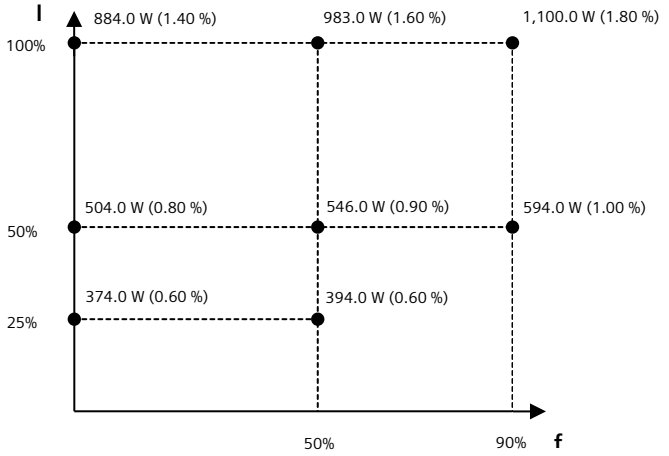
| | |
|---|---|
| Compliance with standards | CE |
| CE marking | Low-voltage directive 2006/95/EC |

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## Article No. : 6SL3210-1NE28-8UL0

| Converter losses to IEC61800-9-2* | |
|---|---|
| Efficiency class | IE2 |
| Comparison with the reference converter (90% / 100%) | 37.30 % |




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.

*calculated values

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