Data sheet for SINAMICS Power module PM230
Article No.: 6SL3210-1NE13-1AG1


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

| Rated data |  |  |
| :---: | :---: | :---: |
| Input |  |  |
| Number of phases | 3 AC |  |
| Line voltage | 380 ... 48 |  |
| Line frequency | $47 . . .63 \mathrm{~Hz}$ |  |
| Rated current (LO) | 3.20 A |  |
| Rated current (HO) | 2.30 A |  |
| Output |  |  |
| Number of phases | 3 AC |  |
| Rated voltage | 400 V IEC | 480 V NEC ${ }^{1)}$ |
| Rated power (LO) | 1.10 kW | 1.50 hp |
| Rated power (HO) | 0.75 kW | 1.00 hp |
| Rated current (LO) | 3.10 A |  |
| Rated current (HO) | 2.20 A |  |
| Max. output current | 4.70 A |  |
| Pulse frequency | 4 kHz |  |
| Output frequency for vector control | $0 . . .200 \mathrm{~Hz}$ |  |
| Output frequency for V/f control | $0 \ldots 550 \mathrm{~Hz}$ |  |

Overload capability
Low Overload (LO)
$1.1 \times$ 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 $\lambda$ | 0.90 |
| Offset factor $\cos \varphi$ | 0.95 |
| Efficiency $\eta$ | 0.94 |
| Sound pressure level (1m) | 50 dB |
| Power loss | 0.06 kW |
| Filter class (integrated) | Class A |

Item no. :
Consignment no.
Project :

| Ambient conditions |  |
| :--- | :--- |
| Cooling | Internal air cooling |
| Cooling air requirement | $0.005 \mathrm{~m}^{3} / \mathrm{s}\left(0.177 \mathrm{ft}^{3} / \mathrm{s}\right)$ |
| Installation altitude | $1,000 \mathrm{~m}(3,280.84 \mathrm{ft})$ |
| Ambient temperature |  |
| Operation LO | $-10 \ldots 40^{\circ} \mathrm{C}\left(14 \ldots 104{ }^{\circ} \mathrm{F}\right)$ |
| Operation HO | $-10 \ldots 50^{\circ} \mathrm{C}\left(14 \ldots 122^{\circ} \mathrm{F}\right)$ |
| Transport | $-40 \ldots 70^{\circ} \mathrm{C}\left(-40 \ldots 158^{\circ} \mathrm{F}\right)$ |
| Storage | $-40 \ldots 70^{\circ} \mathrm{C}\left(-40 \ldots 158{ }^{\circ} \mathrm{F}\right)$ |


| Relative humidity |
| :---: |
| Max. operation $95 \%$ RH, condensation not permitted |


| Connections |  |
| :--- | :--- |
| Line side |  |
| Version | Plug-in screw terminals |
| Conductor cross-section | $1.00 \ldots 2.50 \mathrm{~mm}^{2}$ <br> (AWG $18 \ldots$ AWG 14) |
| Motor end |  |
| Version | Plug-in screw terminals |
| Conductor cross-section | $1.00 \ldots 2.50 \mathrm{~mm}^{2}$ <br>  <br> (AWG 18 ... AWG 14) |

Max. motor cable length

| Shielded | $25 \mathrm{~m}(82.02 \mathrm{ft})$ |
| :--- | :--- |
| Unshielded | $100 \mathrm{~m}(328.08 \mathrm{ft})$ |


|  | Mechanical data |
| :--- | :--- |
| Degree of protection | IP20 / UL open type |
| Frame size | FSA |
| Net weight | $1.60 \mathrm{~kg}(3.53 \mathrm{lb})$ |
| Dimensions |  |
| Width | $73 \mathrm{~mm}(2.87 \mathrm{in})$ |
| Height | $196 \mathrm{~mm}(7.72 \mathrm{in})$ |
| Depth | $165 \mathrm{~mm}(6.50 \mathrm{in})$ |


| 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 <br> converter $(90 \% / 100 \%)$ | $27.90 \%$ |



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 $(\mathrm{I})$ over the relative motor stator frequency (f). The values are valid for the basic version of the converter without options/components.
*converted values

