

### MLFB-Ordering data

6SL3210-1NE23-2AL0

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | General tech. specifications                       |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|------|---------------|--------------------------|--------------------|--------------|--------------------|---------|---------------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------|------------------------------|---------------------------|-------------------|---------------------------|---------------------------|-----------------|------------|-------------------------------------|---------------------------|----------------------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--|---------|----------------------|-------------------------|----------------------------------------------------|-----------------------|---------------------|---------------------|--|--------------|-----------------------------|--------------|-----------------------------|-----------|--------------------------------|---------|--------------------------------|-------------------|--|----------------|-------------------------------------|
| <b>Input</b> <table> <tr> <td>Number of phases</td><td>3 AC</td></tr> <tr> <td>Line voltage</td><td>380 ... 480 V <math>\pm 10</math> %</td></tr> <tr> <td>Line frequency</td><td>47 ... 63 Hz</td></tr> <tr> <td>Rated current (LO)</td><td>33.00 A</td></tr> <tr> <td>Rated current (HO)</td><td>27.00 A</td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                   | Number of phases                                   | 3 AC | Line voltage  | 380 ... 480 V $\pm 10$ % | Line frequency     | 47 ... 63 Hz | Rated current (LO) | 33.00 A | Rated current (HO)  | 27.00 A | <table> <tr> <td>Power factor <math>\lambda</math></td><td>0.90</td></tr> <tr> <td>Offset factor <math>\cos \varphi</math></td><td>0.95</td></tr> <tr> <td>Efficiency <math>\eta</math></td><td>0.97</td></tr> <tr> <td>Sound pressure level (1m)</td><td>65 dB</td></tr> <tr> <td>Power loss</td><td>0.35 kW</td></tr> <tr> <td>Filter class (integrated)</td><td>Class A</td></tr> </table> | 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                          |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Number of phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3 AC                                               |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Line voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 380 ... 480 V $\pm 10$ %                           |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Line frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 47 ... 63 Hz                                       |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated current (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 33.00 A                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated current (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 27.00 A                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| 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                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| <b>Output</b> <table> <tr> <td>Number of phases</td><td>3 AC</td></tr> <tr> <td>Rated voltage</td><td>400 V</td></tr> <tr> <td>Rated current (LO)</td><td>32.00 A</td></tr> <tr> <td>Rated current (HO)</td><td>26.00 A</td></tr> <tr> <td>Max. output current</td><td>52.00 A</td></tr> <tr> <td>Rated power IEC 400V (LO)</td><td>15.00 kW</td></tr> <tr> <td>Rated power NEC 480V (LO)</td><td>20.00 hp</td></tr> <tr> <td>Rated power IEC 400V (HO)</td><td>11.00 kW</td></tr> <tr> <td>Rated power NEC 480V (HO)</td><td>15.00 hp</td></tr> <tr> <td>Pulse frequency</td><td>4 kHz</td></tr> <tr> <td>Output frequency for vector control</td><td>0 ... 200 Hz</td></tr> <tr> <td>Output frequency for V/f control</td><td>0 ... 550 Hz</td></tr> </table> | Number of phases                                   | 3 AC | Rated voltage | 400 V                    | Rated current (LO) | 32.00 A      | Rated current (HO) | 26.00 A | Max. output current | 52.00 A | Rated power IEC 400V (LO)                                                                                                                                                                                                                                                                                                                                                                     | 15.00 kW               | Rated power NEC 480V (LO) | 20.00 hp                     | Rated power IEC 400V (HO) | 11.00 kW          | Rated power NEC 480V (HO) | 15.00 hp                  | Pulse frequency | 4 kHz      | Output frequency for vector control | 0 ... 200 Hz              | Output frequency for V/f control | 0 ... 550 Hz | <table> <tr> <th colspan="2">Ambient conditions</th></tr> <tr> <td>Cooling</td><td>Internal air cooling</td></tr> <tr> <td>Cooling air requirement</td><td>0.019 m<sup>3</sup>/s (0.671 ft<sup>3</sup>/s)</td></tr> <tr> <td>Installation altitude</td><td>1000 m (3280.84 ft)</td></tr> <tr> <th colspan="2">Ambient temperature</th></tr> <tr> <td>Operation LO</td><td>0 ... 40 °C (32 ... 104 °F)</td></tr> <tr> <td>Operation HO</td><td>0 ... 50 °C (32 ... 122 °F)</td></tr> <tr> <td>Transport</td><td>-25 ... 55 °C (-13 ... 131 °F)</td></tr> <tr> <td>Storage</td><td>-25 ... 55 °C (-13 ... 131 °F)</td></tr> <tr> <th colspan="2">Relative humidity</th></tr> <tr> <td>Max. operation</td><td>95 % RH, condensation not permitted</td></tr> </table> | 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 | 1000 m (3280.84 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 |
| Number of phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3 AC                                               |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 400 V                                              |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated current (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 32.00 A                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated current (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 26.00 A                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Max. output current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 52.00 A                                            |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated power IEC 400V (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 15.00 kW                                           |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated power NEC 480V (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20.00 hp                                           |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated power IEC 400V (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 11.00 kW                                           |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Rated power NEC 480V (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 15.00 hp                                           |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Pulse frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 4 kHz                                              |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Output frequency for vector control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0 ... 200 Hz                                       |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| Output frequency for V/f control                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0 ... 550 Hz                                       |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1000 m (3280.84 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                |      |               |                          |                    |              |                    |         |                     |         |                                                                                                                                                                                                                                                                                                                                                                                               |                        |                           |                              |                           |                   |                           |                           |                 |            |                                     |                           |                                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |  |         |                      |                         |                                                    |                       |                     |                     |  |              |                             |              |                             |           |                                |         |                                |                   |  |                |                                     |

### 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

SIEMENS

Data sheet for SINAMICS Power Module PM230

No image  
available for this  
configuration.

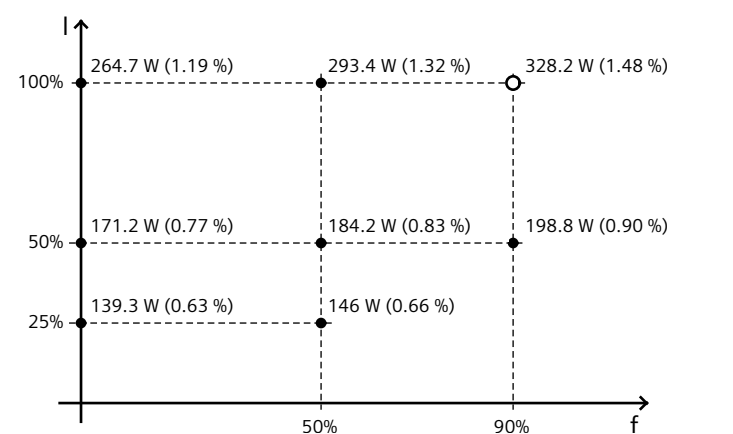
MLFB-Ordering data6SL3210-1NE23-2AL0

Figure similar

| Mechanical data         | Connections                           |
|-------------------------|---------------------------------------|
| Degree of protection    | IP20 / UL open type                   |
| Size                    | FSC                                   |
| Net weight              | 5.10 kg (11.24 lb)                    |
| Width                   | 140 mm (5.51 in)                      |
| Height                  | 355 mm (13.98 in)                     |
| Depth                   | 165 mm (6.50 in)                      |
| 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) |

Converter losses to EN 50598-2\*

|                                                      |          |
|------------------------------------------------------|----------|
| Efficiency class                                     | IE2      |
| Comparison with the reference converter (90% / 100%) | -71.54 % |



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 EN 50598) 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

|                         |                   |
|-------------------------|-------------------|
| Max. motor cable length |                   |
| Shielded                | 25 m (82.02 ft)   |
| Unshielded              | 100 m (328.08 ft) |

Standards

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