

### MLFB-Ordering data

6SL3210-5BB23-0BV1



Figure similar

Client order no. :

Order no. :

Offer no. :

Remarks :

Item no. :

Consignment no. :

Project :

| Rated data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | General tech. specifications            |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
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| <b>Input</b> <table> <tr> <td>Number of phases</td><td>1 AC</td></tr> <tr> <td>Line voltage</td><td>200 ... 240 V -15 % +10 %</td></tr> <tr> <td>Line frequency</td><td>47 ... 63 Hz</td></tr> </table> <b>Output</b> <table> <tr> <td>Number of phases</td><td>3 AC</td></tr> <tr> <td>Rated voltage</td><td>230 V</td></tr> <tr> <td>Rated power (HO)</td><td>3.00 kW / 4.00 hp</td></tr> <tr> <td>Rated power (LO)</td><td>3.00 kW / 4.00 hp</td></tr> <tr> <td>Rated current (HO)</td><td>13.60 A</td></tr> <tr> <td>Rated current (LO)</td><td>13.60 A</td></tr> <tr> <td>Pulse frequency</td><td>8.00 kHz</td></tr> <tr> <td>Output frequency</td><td>0 ... 550 Hz</td></tr> </table> | Number of phases                        | 1 AC | Line voltage | 200 ... 240 V -15 % +10 % | Line frequency | 47 ... 63 Hz | Number of phases | 3 AC | Rated voltage | 230 V | Rated power (HO) | 3.00 kW / 4.00 hp | Rated power (LO) | 3.00 kW / 4.00 hp | Rated current (HO) | 13.60 A | Rated current (LO) | 13.60 A | Pulse frequency | 8.00 kHz | Output frequency | 0 ... 550 Hz | <table> <tr> <td>Power factor <math>\lambda</math></td><td>0.72</td></tr> <tr> <td>Offset factor <math>\cos \varphi</math></td><td>0.95</td></tr> <tr> <td>Efficiency <math>\eta</math></td><td>0.98</td></tr> <tr> <td>Filter class (integrated)</td><td>Class B</td></tr> </table> <b>Ambient conditions</b> <table> <tr> <td>Cooling</td><td>External fan</td></tr> <tr> <td>Installation altitude</td><td>1000 m (3281 ft)</td></tr> </table> <b>Ambient temperature</b> <table> <tr> <td>Operation</td><td>-10 ... 60 °C (14 ... 140 °F)</td></tr> <tr> <td>Storage</td><td>-40 ... 70 °C (-40 ... 158 °F)</td></tr> </table> <b>Relative humidity</b> <table> <tr> <td>Max. operation</td><td>95 %</td></tr> </table> <b>Communication</b> <table> <tr> <td>Communication</td><td>USS, Modbus RTU</td></tr> </table> <b>Standards</b> <table> <tr> <td>Compliance with standards</td><td>CE, cULus, C-Tick (RCM)</td></tr> <tr> <td>CE marking</td><td>EN 61800-5-1 /EN 60204-1 and EN 61800-3</td></tr> </table> | Power factor $\lambda$ | 0.72 | Offset factor $\cos \varphi$ | 0.95 | Efficiency $\eta$ | 0.98 | Filter class (integrated) | Class B | Cooling | External fan | Installation altitude | 1000 m (3281 ft) | Operation | -10 ... 60 °C (14 ... 140 °F) | Storage | -40 ... 70 °C (-40 ... 158 °F) | Max. operation | 95 % | Communication | USS, Modbus RTU | Compliance with standards | CE, cULus, C-Tick (RCM) | CE marking | EN 61800-5-1 /EN 60204-1 and EN 61800-3 |
| Number of phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1 AC                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Line voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 200 ... 240 V -15 % +10 %               |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Line frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 47 ... 63 Hz                            |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Number of phases                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3 AC                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Rated voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 230 V                                   |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Rated power (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.00 kW / 4.00 hp                       |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Rated power (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.00 kW / 4.00 hp                       |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Rated current (HO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 13.60 A                                 |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Rated current (LO)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 13.60 A                                 |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Pulse frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8.00 kHz                                |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Output frequency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 ... 550 Hz                            |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Power factor $\lambda$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.72                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Offset factor $\cos \varphi$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.95                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Efficiency $\eta$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.98                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Filter class (integrated)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Class B                                 |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Cooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | External fan                            |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Installation altitude                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1000 m (3281 ft)                        |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -10 ... 60 °C (14 ... 140 °F)           |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Storage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40 ... 70 °C (-40 ... 158 °F)          |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Max. operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 95 %                                    |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Communication                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | USS, Modbus RTU                         |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| Compliance with standards                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | CE, cULus, C-Tick (RCM)                 |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |
| CE marking                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | EN 61800-5-1 /EN 60204-1 and EN 61800-3 |      |              |                           |                |              |                  |      |               |       |                  |                   |                  |                   |                    |         |                    |         |                 |          |                  |              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                        |      |                              |      |                   |      |                           |         |         |              |                       |                  |           |                               |         |                                |                |      |               |                 |                           |                         |            |                                         |

### Overload capability

#### Low Overload (LO)

110 % rated output current for 60 s, cycle time 300 s

#### High Overload (HO)

150 % rated output current for 60 s, cycle time 300 s



Figure similar

### Mechanical data

|                      |                                       |
|----------------------|---------------------------------------|
| Mounting position    | Wall mounting / side-by-side mounting |
| Degree of protection | IP20                                  |
| Size                 | FSAD                                  |
| Net weight           | 2.20 kg ( 4.85 lb )                   |
| Width                | 136.6 mm ( 5.38 in )                  |
| Height               | 176.5 mm ( 6.95 in )                  |
| Depth                | 158.8 mm ( 6.25 in )                  |

### Inputs / outputs

#### Standard digital inputs

|        |   |
|--------|---|
| Number | 4 |
|--------|---|

#### Digital outputs

|                                    |   |
|------------------------------------|---|
| Number as relay changeover contact | 1 |
| Number as transistor               | 1 |

#### Analog inputs

|        |                                             |
|--------|---------------------------------------------|
| Number | 2 (Can be used as additional digital input) |
|--------|---------------------------------------------|

#### Analog outputs

|        |   |
|--------|---|
| Number | 1 |
|--------|---|

### Connections

#### Max. motor cable length

|            |               |
|------------|---------------|
| Shielded   | 25 m (82 ft)  |
| Unshielded | 50 m (164 ft) |