

# Motor data sheet

## M3BP 315MLB 4

| Definition   | Data                          | Unit                  | Remarks                                   |
|--|-------------------------------|-----------------------|---|
| Product code   | 3GBP312420-**K                |                       | CalcId: 3GZF021031-1394                   |
| Voltage code   | D                             |                       |   |
| Type/Frame   | M3BP 315MLB 4                 |                       |   |
| Design   | CENELEC                       |                       |   |
| Efficiency class   | IE3                           |                       | IEC 60034-2-1:2014                        |
| Rated output P <sub>N</sub>                              | 160                           | kW                    |   |
| Rated voltage U <sub>N</sub>                             | 415                           | V                     | ± 5 % (IEC 60034-1)                       |
| Rated frequency f <sub>N</sub>                           | 50                            | Hz                    | ± 2 % (IEC 60034-1)                       |
| Rated speed n <sub>N</sub>                               | 1489                          | r/min                 |   |
| Rated current I <sub>N</sub>                             | 277                           | A                     |   |
| Starting current I <sub>S</sub> /I <sub>N</sub>          | 7.4                           |                       |   |
| Nominal torque T <sub>N</sub>                            | 1026                          | Nm                    |   |
| Locked rotor torque T <sub>l</sub> /T <sub>N</sub>       | 2.3                           |                       |   |
| Maximum torque T <sub>b</sub> /T <sub>N</sub>            | 3.2                           |                       |   |
| Efficiency - full load 100%                              | 95.8                          | %                     | IEC 60034-2-1:2014                        |
| Efficiency - 75%   | 96.0                          | %                     |   |
| Efficiency - 50%   | 95.6                          | %                     |   |
| Power factor - full load 100%                            | 0.84                          |                       |   |
| Bearing DE/NDE   | 6319/C3 6316/C3               |                       |   |
| Sound pressure level L <sub>pA</sub> dB                  | 71                            | dB(A)                 | +3dB(A)                                   |
| Moment of inertia J = ¼ GD <sup>2</sup> kgm <sup>2</sup> | 3.2                           | kg-m <sup>2</sup>     |   |
| Weight   | 1115                          | kg                    |   |
| Ambient temperature                                      | 40                            | °C                    |   |
| <b>Motor losses at VSD operating points</b>              | <b>losses in efficiency %</b> | <b>losses in Watt</b> | <b>losses in relative to nom. power %</b> |
| VSD Speed 90% Torque 100%                                | 95.4                          | 6943                  | 4.3                                       |
| VSD Speed 50% Torque 100%                                | 93.6                          | 5470                  | 3.4                                       |
| VSD Speed 25% Torque 100%                                | 89.0                          | 4944                  | 3.1                                       |
| VSD Speed 90% Torque 50%                                 | 94.7                          | 4030                  | 2.5                                       |
| VSD Speed 50% Torque 50%                                 | 93.7                          | 2689                  | 1.7                                       |
| VSD Speed 50% Torque 25%                                 | 91.3                          | 1906                  | 1.2                                       |
| VSD Speed 25% Torque 25%                                 | 87.3                          | 1455                  | 0.9                                       |