

Data sheet for three-phase Squirrel-Cage-Motors SIMOTICS



Motor type : 1AV4164B SIMOTICS GP - 160 L - IM B3 - 4p

|                  |                 |           |
|------------------|-----------------|-----------|
| Client order no. | Item-No.        | Offer no. |
| Order no.        | Consignment no. | Project   |
| Remarks          |                 |           |

Electrical data Safe Area

| U                                                    | Δ / Y | f        | P     | P    | I     | n       | M    | η <sup>3)</sup> |                                                  |                        | cosφ <sup>3)</sup> |      |      | I <sub>A</sub> /I <sub>N</sub> | M <sub>A</sub> /M <sub>N</sub> | M <sub>K</sub> /M <sub>N</sub> | IE-CL |
|------------------------------------------------------|-------|----------|-------|------|-------|---------|------|-----------------|--------------------------------------------------|------------------------|--------------------|------|------|--------------------------------|--------------------------------|--------------------------------|-------|
| [V]                                                  |       | [Hz]     | [kW]  | [hp] | [A]   | [1/min] | [Nm] | 4/4             | 3/4                                              | 2/4                    | 4/4                | 3/4  | 2/4  | I <sub>I</sub> /I <sub>N</sub> | T <sub>I</sub> /T <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> |       |
| DOL duty (S1) - 155(F) to 130(B)                     |       |          |       |      |       |         |      |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| 400                                                  | Δ     | 50       | 15.00 | -/-  | 29.00 | 1480    | 97.0 | 93.9            | 94.0                                             | 93.3                   | 0.80               | 0.74 | 0.62 | 7.8                            | 3.7                            | 4.3                            | IE4   |
| 690                                                  | Y     | 50       | 15.00 | -/-  | 16.70 | 1480    | 97.0 | 93.9            | 94.0                                             | 93.3                   | 0.80               | 0.74 | 0.62 | 7.8                            | 3.7                            | 4.3                            | IE4   |
| 460                                                  | Δ     | 60       | 17.30 | -/-  | 28.50 | 1780    | 93.0 | 94.5            | 94.6                                             | 94.0                   | 0.81               | 0.76 | 0.64 | 7.9                            | 3.4                            | 4.2                            | IE4   |
| 460                                                  | Δ     | 60       | 15.00 | -/-  | 25.50 | 1780    | 80.0 | 94.1            | 94.0                                             | 93.0                   | 0.79               | 0.72 | 0.60 | 8.8                            | 3.9                            | 4.8                            | IE4   |
| IM B3 / IM 1001                                      |       | FS 160 L |       |      |       | IP55    | UKCA | IEC/EN 60034    |                                                  | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |          |       |      |       |         |      |                 | Locked rotor time (hot / cold) : 32.2 s   42.5 s |                        |                    |      |      |                                |                                |                                |       |

Mechanical data

|                                                                                     |                                |                                |                                 |                                         |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 63 / 76 dB(A) <sup>2) 3)</sup> | 66 / 79 dB(A) <sup>2) 3)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                                                   | 0.0990 kg m <sup>2</sup>       |                                | Thermal class                   | F                                       |
| Bearing DE   NDE                                                                    | 6209 2Z C3                     | 6209 2Z C3                     | Duty type                       | S1                                      |
| bearing lifetime                                                                    |                                |                                | Direction of rotation           | bidirectional                           |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                        | 32000 h                        | Frame material                  | aluminum                                |
| Regreasing device                                                                   | Without                        |                                | Net weight of the motor (IM B3) | 109 kg                                  |
| Grease nipple                                                                       | -/-                            |                                | Coating (paint finish)          | Standard paint finish C2                |
| Type of bearing                                                                     | Locating bearing NDE           |                                | Color, paint shade              | RAL7030                                 |
| Condensate drainage holes                                                           | Without                        |                                | Motor protection                | (A) without (Standard)                  |
| External earthing terminal                                                          | Without                        |                                | Method of cooling               | IC411 - self ventilated, surface cooled |

Terminal box

|                          |           |                                |                    |
|--------------------------|-----------|--------------------------------|--------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 16 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 19 mm - 28 mm      |
| Type of terminal box     | TB1 J00   | Cable entry                    | 2xM40x1,5          |
| Contact screw thread     | M5        | Cable gland                    | 2 plugs            |

Notes: I<sub>A</sub>/I<sub>N</sub> = locked rotor current / current nominal 1) L10mh according to DIN ISO 281 10/2010 3) Value is valid only for DOL operation with motor design IC411  
M<sub>K</sub>/M<sub>N</sub> = locked rotor torque / torque nominal 2) at rated power / at full load  
M<sub>K</sub>/M<sub>N</sub> = break down torque / nominal torque

|                                                                                    |                             |                               |             |                                                                                                              |                             |                                |                                                                                       |
|------------------------------------------------------------------------------------|-----------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|---------------------------------------------------------------------------------------|
| responsible dep.<br>DI MC LVM                                                      | technical reference         | created by<br>DT Configurator | approved by | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                             | <a href="#">Link documents</a> |                                                                                       |
|  | document type<br>datasheet  |                               |             |                                                                                                              | document status<br>released |                                |  |
|                                                                                    | title<br>1LE1004-1DB43-4AA4 |                               |             |                                                                                                              | document number             |                                |                                                                                       |
| © Siemens AG 2023                                                                  |                             |                               |             | rev.<br>943                                                                                                  | creation date<br>2023-06-15 | language<br>en                 | Page<br>1/1                                                                           |