

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



Motor type : 1AV1164B

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<br>[V]        | $\Delta / Y$ | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[1/min] | M<br>[Nm] | $\eta$ <sup>3)</sup> |      |                        | $\cos\phi$ <sup>3)</sup> |      |      | $I_A/I_N$ | $M_A/M_N$ | $M_K/M_N$ | IE-CL |
|-----------------|--------------|-----------|-----------|-----------|----------|--------------|-----------|----------------------|------|------------------------|--------------------------|------|------|-----------|-----------|-----------|-------|
|                 |              |           |           |           |          |              |           | 4/4                  | 3/4  | 2/4                    | 4/4                      | 3/4  | 2/4  | $I_i/I_N$ | $T_i/T_N$ | $T_B/T_N$ |       |
| 400             | $\Delta$     | 50        | 15.00     | -/-       | 30.00    | 1460         | 98.0      | 88.7                 | 89.0 | 87.8                   | 0.82                     | 0.76 | 0.63 | 7.5       | 3.0       | 3.6       | IE1   |
| 690             | Y            | 50        | 15.00     | -/-       | 17.30    | 1460         | 98.0      | 88.7                 | 89.0 | 87.8                   | 0.82                     | 0.76 | 0.63 | 7.5       | 3.0       | 3.6       | IE1   |
| 460             | $\Delta$     | 60        | 17.30     | -/-       | 28.50    | 1755         | 94.0      | 90.5                 | 90.9 | 89.8                   | 0.84                     | 0.79 | 0.68 | 8.0       | 2.9       | 3.6       | IE1   |
|                 |              |           |           |           |          |              |           |                      |      |                        |                          |      |      |           |           |           |       |
| IM B3 / IM 1001 |              | FS 160 L  |           | 73 kg     |          | IP55         |           | IEC/EN 60034         |      | IEC, DIN, ISO, VDE, EN |                          |      |      |           |           |           |       |

Environmental conditions : -20 °C - +40 °C / 1,000 m

Locked rotor time (hot / cold) : 6.88 s | 14 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                                    |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|----------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 65.0 / 77.0 dB(A) <sup>2)</sup> | 69.0 / 81.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                                 |
| Moment of inertia                                                                   | 0.0560 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                  |
| Bearing DE   NDE                                                                    | 6209 2Z C3                      | 6209 2Z C3                      | Insulation                 | 155(F) to 130(B)                                   |
| <b>bearing lifetime</b>                                                             |                                 |                                 | Duty type                  | S1                                                 |
| L <sub>10mh</sub> F <sub>Rad min</sub> 50 60Hz <sup>1)</sup> for coupling operation | 40000 h                         | 32000 h                         | Direction of rotation      | bidirectional                                      |
| Lubricants                                                                          | Unirex N3                       |                                 | Frame material             | aluminum                                           |
| Regreasing device                                                                   | No                              |                                 | Coating (paint finish)     | Standard paint finish C2                           |
| Grease nipple                                                                       | -/-                             |                                 | Color, paint shade         | RAL7030                                            |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Motor protection           | (B) 3 PTC thermistors - for tripping (2 terminals) |
| Condensate drainage holes                                                           | -/-                             |                                 | Method of cooling          | IC411 - self ventilated, surface cooled            |

## Terminal box

|                          |           |                                |                      |
|--------------------------|-----------|--------------------------------|----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 16.0 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 19.0 mm - 28.0 mm    |
| Type of terminal box     | TB1 J00   | Cable entry                    | 2xM40x1,5-1xM16x1,5  |
| Contact screw thread     | M5        | Cable gland                    | 3 plugs              |

## Notes:

$I_A/I_N$  = locked rotor current / current nominal  
 $M_A/M_N$  = locked rotor torque / torque nominal  
 $M_K/M_N$  = break down torque / nominal torque

1) L10mh according to DIN ISO 281 10/2010  
2) at rated power / at full load

3) Value is valid only for DOL operation with motor design IC411

|                                                                                    |                     |                      |             |                                                                                                              |                  |          |      |
|------------------------------------------------------------------------------------|---------------------|----------------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------|----------|------|
| responsible dep.                                                                   | technical reference | created by           | approved by | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                  |          |      |
| DI MC LVM                                                                          |                     | DT Configurator      |             |                                                                                                              |                  |          |      |
|  | document type       | datasheet            |             | document status                                                                                              | released         |          |      |
|                                                                                    | title               | 1LE1002-1DB43-4AB4-Z |             | document number                                                                                              |                  |          |      |
| © Siemens AG 2021                                                                  | D22                 |                      |             | rev.                                                                                                         | creation date    | language | Page |
|                                                                                    |                     |                      |             | 01                                                                                                           | 2021-04-23 13:26 | en       | 1/2  |

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



Motor type : 1AV1164B

SIMOTICS GP - 160 L - IM B3 - 4p

### Special design

D22 motor without CE character for export outside the EEA (see EU regulation 640/2009)

### Notes:

|                                                                                    |                               |                               |                                   |  |                                                                                                              |             |  |  |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-----------------------------------|--|--------------------------------------------------------------------------------------------------------------|-------------|--|--|
| 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. |             |  |  |
|  | document type<br>datasheet    | document status<br>released   |                                   |  | customer                                                                                                     |             |  |  |
|                                                                                    | title<br>1LE1002-1DB43-4AB4-Z |                               |                                   |  |                                                                                                              |             |  |  |
| © Siemens AG 2021                                                                  | D22                           | rev.<br>01                    | creation date<br>2021-04-23 13:26 |  | language<br>en                                                                                               | Page<br>2/2 |  |  |