

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                                                    | 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> |       |
| 400                                                  | Δ     | 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                                                  | Δ     | 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)                                   |
| bearing lifetime                                                                    |                                 |                                 | 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    | right     | 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 <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>B</sub> /M <sub>N</sub> = break down torque / nominal torque     |                                           |                                                                  |

|                                                                                    |                     |                      |             |                                                                                                              |                  |          |          |      |
|------------------------------------------------------------------------------------|---------------------|----------------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------|----------|----------|------|
| 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                                                                                              |                  | customer |          |      |
|                                                                                    |                     |                      |             | released                                                                                                     |                  |          |          |      |
|                                                                                    | title               | 1LE1002-1DB43-4AB5-Z |             | document number                                                                                              |                  |          |          |      |
|                                                                                    |                     |                      |             |                                                                                                              |                  |          |          |      |
| © Siemens AG 2021                                                                  | D22+D47+L05         |                      | rev.        |                                                                                                              | creation date    |          | language | Page |
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|     |                                                                                    |     |                                 |
|-----|------------------------------------------------------------------------------------|-----|---------------------------------|
| D22 | motor without CE character for export outside the EEA (see EU regulation 640/2009) | L05 | Second standard shaft extension |
| D47 | TR CU product safety certificate EAC for the Eurasian Customs Union                |     |                                 |

|        |
|--------|
| Notes: |
|        |

|                                                                                    |                            |                               |             |                                                                                                              |                                   |                |             |
|------------------------------------------------------------------------------------|----------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------|-------------|
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