

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



Motor type : 1AV3090B

SIMOTICS GP - 90 S - IM B35 - 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)                     |       |      |         |      |      |         |      |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| 230                                                  | Δ     | 50   | 1.10    | -/-  | 4.20 | 1440    | 7.3  | 84.1            | 84.7                                             | 83.4                   | 0.78               | 0.70 | 0.58 | 6.9                            | 2.9                            | 3.6                            | IE3   |
| 400                                                  | Y     | 50   | 1.10    | -/-  | 2.40 | 1440    | 7.3  | 84.1            | 84.7                                             | 83.4                   | 0.78               | 0.70 | 0.58 | 6.9                            | 2.9                            | 3.6                            | IE3   |
| 460                                                  | Y     | 60   | 1.27    | -/-  | 2.40 | 1740    | 7.0  | 84.0            | 84.4                                             | 83.1                   | 0.79               | 0.72 | 0.60 | 7.4                            | 2.9                            | 3.8                            | IE2   |
| 460                                                  | Y     | 60   | 1.10    | -/-  | 2.15 | 1750    | 6.0  | 86.5            | 86.4                                             | 84.2                   | 0.75               | 0.67 | 0.54 | 8.2                            | 3.4                            | 4.4                            | IE3   |
| IM B35 / IM 2001                                     |       |      | FS 90 S |      |      | IP55    |      | IEC/EN 60034    |                                                  | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1.000 m |       |      |         |      |      |         |      |                 | Locked rotor time (hot / cold) : 21.4 s   25.8 s |                        |                    |      |      |                                |                                |                                |       |

## Mechanical data

|                                                                                     |                             |                             |                                 |                                         |
|-------------------------------------------------------------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 56 / 68 dB(A) <sup>2)</sup> | 58 / 70 dB(A) <sup>2)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                                                   | 0.0036 kg m <sup>2</sup>    |                             | Thermal class                   | F                                       |
| Bearing DE   NDE                                                                    | 6205 2Z C3                  | 6004 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                                |
| Lubricants                                                                          | Unirex N3                   |                             | Net weight of the motor (IM B3) | 16 kg                                   |
| Regreasing device                                                                   | No                          |                             | Coating (paint finish)          | Standard paint finish C2                |
| Grease nipple                                                                       | -/-                         |                             | Color, paint shade              | RAL7030                                 |
| Type of bearing                                                                     | Preloaded bearing DE        |                             | Motor protection                | (A) without (Standard)                  |
| Condensate drainage holes                                                           | No                          |                             | Method of cooling               | IC411 - self ventilated, surface cooled |
| External earthing terminal                                                          | No                          |                             |                                 |                                         |

## Terminal box

|                          |           |                                |                     |
|--------------------------|-----------|--------------------------------|---------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 1.5 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 9 mm - 17 mm        |
| Type of terminal box     | TB1 E00   | Cable entry                    | 1xM25x1,5           |
| Contact screw thread     | M4        | Cable gland                    | 1 plug              |

## 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. |               | <a href="#">Link documents</a>                                                        |      |
| DI MC LVM                                                                          |                      | DT Configurator |             |                                                                                                              |               |  |      |
|  | document type        |                 |             | document status                                                                                              |               |                                                                                       |      |
|                                                                                    | datasheet            |                 |             | released                                                                                                     |               |                                                                                       |      |
|                                                                                    | title                |                 |             | document number                                                                                              |               |                                                                                       |      |
|                                                                                    | 1LE1003-0EB02-2JA4-Z |                 |             |                                                                                                              |               |                                                                                       |      |
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### Special design

H01 Bolted on mounting feet (instead of cast)

### Notes:

|                                                                                    |                               |                               |             |                                                                                                              |                                |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|--------------------------------|
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|  | document type<br>datasheet    |                               |             |                                                                                                              | document status<br>released    |
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