

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



Motor type : 1AV2096B

SIMOTICS GP - 90 L - IM B3 - 4p

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

Remarks

## Electrical data

## Safe Area

| U   | $\Delta / Y$ | f    | P    | P    | I   | n       | M    | $\eta^{3)}$ |     |     | $\cos\varphi^{3)}$ |     |     | $I_A/I_N$ | $M_A/M_N$ | $M_K/M_N$ | IE-CL |
|-----|--------------|------|------|------|-----|---------|------|-------------|-----|-----|--------------------|-----|-----|-----------|-----------|-----------|-------|
| [V] |              | [Hz] | [kW] | [hp] | [A] | [1/min] | [Nm] | 4/4         | 3/4 | 2/4 | 4/4                | 3/4 | 2/4 | $I_A/I_N$ | $T_A/T_N$ | $T_B/T_N$ |       |

DOL duty (S1) - 155(F) to 130(B)

|                 |  |         |  |      |  |              |                        |  |  |  |  |
|-----------------|--|---------|--|------|--|--------------|------------------------|--|--|--|--|
| IM B3 / IM 1001 |  | FS 90 L |  | IP55 |  | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |  |  |  |  |
|-----------------|--|---------|--|------|--|--------------|------------------------|--|--|--|--|

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

Locked rotor time (hot / cold) : 13.8 s | 20 s

## Mechanical data

|                                               |                             |                             |                                 |                                                  |
|-----------------------------------------------|-----------------------------|-----------------------------|---------------------------------|--------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz          | 58 / 62 dB(A) <sup>2)</sup> | 58 / 62 dB(A) <sup>2)</sup> | Vibration severity grade        | A                                                |
| Moment of inertia                             | 0.0049 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                                    |
| $L_{10mh} F_{Rad min}$ for coupling operation | 40000 h                     | 32000 h                     | Frame material                  | aluminum                                         |
| Lubricants                                    | Unirex N3                   |                             | Net weight of the motor (IM B3) | 21 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                | (F) 1 temperature sensor KTY84-130 (2 terminals) |
| Condensate drainage holes                     | No                          |                             | Method of cooling               | IC416 - separately ventilated, surface cooled    |
| External earthing terminal                    | No                          |                             |                                 |                                                  |

## Terminal box

|                          |           |                                |                     |
|--------------------------|-----------|--------------------------------|---------------------|
| Terminal box position    | left      | 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                    | 1xM25x1,5-1xM16x1,5 |
| Contact screw thread     | M4        | Cable gland                    | 2 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. |                 | Link documents |      |
| DI MC LVM         |                     | DT Configurator      |             |                                                                                                              |                 |                |      |
|                   | document type       | datasheet            |             |                                                                                                              | document status | released       |      |
|                   | title               | 1LE1001-0EB69-0AF6-Z |             |                                                                                                              | document number |                |      |
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Special design

|     |                                        |     |                       |
|-----|----------------------------------------|-----|-----------------------|
| F70 | Mounting of separately driven fan      | M1Y | Non-standard winding: |
| G11 | Rotary pulse encoder Sendix 5020 (HTL) |     |                       |

Notes:

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