

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



Motor type : 1AV3094A

SIMOTICS GP - 90 L - IM B14 - 2p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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  | $I_i/I_N$ | $T_i/T_N$ | $T_B/T_N$ |       |
| DOL duty (S1) - 155(F) to 130(B) |              |         |      |      |      |         |      |              |      |                        |                    |      |      |           |           |           |       |
| 230                              | $\Delta$     | 50      | 2.20 | -/-  | 7.30 | 2910    | 7.2  | 85.9         | 86.8 | 86.1                   | 0.88               | 0.83 | 0.73 | 8.3       | 2.6       | 4.0       | IE3   |
| 400                              | Y            | 50      | 2.20 | -/-  | 4.20 | 2910    | 7.2  | 85.9         | 86.8 | 86.1                   | 0.88               | 0.83 | 0.73 | 8.3       | 2.6       | 4.0       | IE3   |
| 460                              | Y            | 60      | 2.55 | -/-  | 4.25 | 3510    | 6.9  | 85.5         | 86.0 | 84.9                   | 0.88               | 0.84 | 0.75 | 8.3       | 2.6       | 4.2       | IE2   |
| 460                              | Y            | 60      | 2.20 | -/-  | 3.65 | 3530    | 6.0  | 86.5         | 86.4 | 84.5                   | 0.87               | 0.82 | 0.71 | 9.6       | 3.0       | 4.9       | IE3   |
| IM B14 / IM 3601                 |              | FS 90 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) : 5.9 s | 8.5 s

## Mechanical data

|                                                                                     |                                |                                |                                 |                                         |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 65 / 77 dB(A) <sup>2) 3)</sup> | 69 / 81 dB(A) <sup>2) 3)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                                                   | 0.0031 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                                |
| Regreasing device                                                                   | No                             |                                | Net weight of the motor (IM B3) | 19 kg                                   |
| Grease nipple                                                                       | -/-                            |                                | Coating (paint finish)          | Standard paint finish C2                |
| Type of bearing                                                                     | Preloaded bearing DE           |                                | Color, paint shade              | RAL7030                                 |
| Condensate drainage holes                                                           | No                             |                                | Motor protection                | (A) without (Standard)                  |
| External earthing terminal                                                          | No                             |                                | Method of cooling               | IC411 - self ventilated, surface cooled |

## 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:

$I_A/I_N$  = 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. |                 | <a href="#">Link documents</a> |  |
| DI MC LVM         |                     | DT Configurator    |               |                                                                                                              |                 |                                |  |
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