

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



Motor type : 1AV3094B

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<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  | $I_i/I_N$ | $T_i/T_N$ | $T_B/T_N$ |       |
| 230      | $\Delta$     | 50        | 1.50      | -/-       | 5.50     | 1445         | 9.9       | 85.3                 | 86.0 | 85.2 | 0.80                     | 0.73 | 0.60 | 7.3       | 2.9       | 3.5       | IE3   |
| 400      | Y            | 50        | 1.50      | -/-       | 3.15     | 1445         | 9.9       | 85.3                 | 86.0 | 85.2 | 0.80                     | 0.73 | 0.60 | 7.3       | 2.9       | 3.5       | IE3   |
| 460      | Y            | 60        | 1.75      | -/-       | 3.15     | 1740         | 9.6       | 86.5                 | 87.0 | 85.7 | 0.80                     | 0.74 | 0.62 | 7.7       | 2.9       | 3.7       | IE3   |
| 460      | Y            | 60        | 1.50      | -/-       | 2.85     | 1755         | 8.2       | 86.5                 | 86.2 | 84.5 | 0.77                     | 0.69 | 0.57 | 8.6       | 3.4       | 4.3       | IE3   |

|                 |         |       |      |              |                        |
|-----------------|---------|-------|------|--------------|------------------------|
| IM B3 / IM 1001 | FS 90 L | 19 kg | IP55 | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |
|-----------------|---------|-------|------|--------------|------------------------|

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

Locked rotor time (hot / cold) : 17.9 s | 21.8 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 56.0 / 68.0 dB(A) <sup>2)</sup> | 58.0 / 70.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0049 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6205 2Z C3                      | 6004 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                                                                     | Preloaded bearing DE            |                                 | Motor protection           | (A) without (Standard)                  |
| Condensate drainage holes                                                           | -/-                             |                                 | 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 ... | 9.0 mm - 17.0 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. |
| DI MC LVM        |                     | DT Configurator |             |                                                                                                              |

|                                                                                    |                    |                  |          |      |
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