

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



Motor type : 1AV3164C

SIMOTICS GP - 160 L - IM B5 - 6p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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   | 11.00    | -/-  | 22.00 | 980     | 107.0 | 90.3            | 90.7                                           | 89.8         | 0.80               | 0.75                   | 0.64 | 6.8                            | 2.9                            | 2.8                            | IE3   |
| 690                                                  | Y     | 50   | 11.00    | -/-  | 12.70 | 980     | 107.0 | 90.3            | 90.7                                           | 89.8         | 0.80               | 0.75                   | 0.64 | 6.8                            | 2.9                            | 2.8                            | IE3   |
|                                                      |       |      |          |      |       |         |       |                 |                                                |              |                    |                        |      |                                |                                |                                |       |
|                                                      |       |      |          |      |       |         |       |                 |                                                |              |                    |                        |      |                                |                                |                                |       |
| IM B5 / IM 3001                                      |       |      | FS 160 L |      |       |         | IP55  |                 |                                                | IEC/EN 60034 |                    | IEC, DIN, ISO, VDE, EN |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |      |          |      |       |         |       |                 | Locked rotor time (hot / cold) : 18 s   25.6 s |              |                    |                        |      |                                |                                |                                |       |

## Mechanical data

|                                                                |                             |                             |                                 |                                         |
|----------------------------------------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                           | 67 / 79 dB(A) <sup>2)</sup> | 70 / 82 dB(A) <sup>2)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                              | 0.1640 kg m <sup>2</sup>    |                             | Insulation                      | 155(F) to 130(B)                        |
| Bearing DE   NDE                                               | 6209 2Z C3                  | 6209 2Z C3                  | Duty type                       | S1                                      |
| bearing lifetime                                               |                             |                             | Direction of rotation           | bidirectional                           |
| L <sub>10mh</sub> , F <sub>Rad min</sub> 50 60Hz <sup>1)</sup> | 40000 h                     | 32000 h                     | Frame material                  | aluminum                                |
| Lubricants                                                     | Unirex N3                   |                             | Net weight of the motor (IM B3) | 106 kg                                  |
| Regreasing device                                              | No                          |                             | Coating (paint finish)          | Standard paint finish C2                |
| Grease nipple                                                  | -/-                         |                             | Color, paint shade              | RAL7030                                 |
| Type of bearing                                                | Locating bearing NDE        |                             | 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      | 16 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 19 mm - 28 mm      |
| Type of terminal box     | TB1 J00   | Cable entry                    | 2xM40x1,5          |
| Contact screw thread     | M5        | 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.<br>DI MC LVM                                                      | technical reference         | created by<br>DT Configurator | approved by |            | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                |             |  |
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|                                                                                    |                             |                               |             |            |                                                                                                              |                |             |  |