

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



Motor type : 1AV3082B

SIMOTICS GP - 80 M - IM B5 - 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> |       |
| 230             | Δ     | 50      | 0.55 | -/-   | 2.20 | 1440    | 3.6  | 80.8            | 81.1 | 79.3                             | 0.78               | 0.70 | 0.57 | 5.9                            | 2.1                            | 3.1                            | IE3   |
| 400             | Y     | 50      | 0.55 | -/-   | 1.26 | 1440    | 3.6  | 80.8            | 81.1 | 79.3                             | 0.78               | 0.70 | 0.57 | 5.9                            | 2.1                            | 3.1                            | IE3   |
| 460             | Y     | 60      | 0.63 | -/-   | 1.25 | 1740    | 3.5  | 81.1            | 81.3 | 79.4                             | 0.78               | 0.70 | 0.58 | 6.4                            | 2.4                            | 3.3                            | IE3   |
| 460             | Y     | 60      | 0.55 | 0.75  | 1.15 | 1750    | 3.0  | 81.1            | 80.8 | 78.2                             | 0.74               | 0.66 | 0.53 | 6.9                            | 2.7                            | 3.8                            | MG1   |
| IM B5 / IM 3001 |       | FS 80 M |      | 11 kg |      | IP55    |      | IEC/EN 60034    |      | IEC, EN, UL, CSA, NEMA MG1-12-12 |                    |      |      | kVA Code: M                    |                                |                                |       |

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

Locked rotor time (hot / cold) : 24.6 s | 29 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 53.0 / 64.0 dB(A) <sup>2)</sup> | 55.0 / 66.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0021 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6004 2Z C3                      | 6004 2Z C3                      | Insulation                 | 155(F) to 130(B)                        |
| <b>bearing lifetime</b>                                                             |                                 |                                 | 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 E10   | 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  
M<sub>K</sub>/M<sub>N</sub> = locked rotor torque / torque nominal  
M<sub>B</sub>/M<sub>N</sub> = 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. |                                   |                |             |
|  | document type<br>datasheet    |                               |             | document status<br>released                                                                                  |                                   | customer       |             |
|                                                                                    | title<br>1LE1023-0DB22-2FA4-Z |                               |             | document number                                                                                              |                                   |                |             |
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### Special design

Y58 Non-standard cylindrical shaft extension, DE

### Notes:

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