

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



Motor type : 1AV2083B

SIMOTICS GP - 80 M - IM B3 - 4p

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

Remarks

Safe Area

Electrical data -/-

| 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> |       |
| DOL duty (S1) - 155(F) to 130(B)                    |       |         |      |      |      |         |      |                 |                                                |                        |                    |      |      |                                |                                |                                |       |
| 230                                                 | Δ     | 50      | 0.75 | -/-  | 3.10 | 1440    | 5.0  | 79.6            | 79.5                                           | 77.0                   | 0.76               | 0.66 | 0.52 | 5.6                            | 2.2                            | 3.1                            | IE2   |
| 400                                                 | Y     | 50      | 0.75 | -/-  | 1.79 | 1440    | 5.0  | 79.6            | 79.5                                           | 77.0                   | 0.76               | 0.66 | 0.52 | 5.6                            | 2.2                            | 3.1                            | IE2   |
| 460                                                 | Y     | 60      | 0.86 | -/-  | 1.82 | 1740    | 4.7  | 78.0            | 77.8                                           | 75.7                   | 0.76               | 0.67 | 0.54 | 6.2                            | 2.2                            | 3.3                            | IE2   |
| 460                                                 | Y     | 60      | 0.75 | -/-  | 1.68 | 1750    | 4.1  | 78.0            | 77.3                                           | 74.4                   | 0.72               | 0.63 | 0.49 | 6.8                            | 2.5                            | 3.8                            | IE2   |
| IM B3 / IM 1001                                     |       | FS 80 M |      |      |      | IP55    | UKCA | IEC/EN 60034    |                                                | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |         |      |      |      |         |      |                 | Locked rotor time (hot / cold) : 19.9 s   26 s |                        |                    |      |      |                                |                                |                                |       |

Mechanical data

|                                                                                     |                                |                                |                                 |                                         |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 53 / 64 dB(A) <sup>2) 3)</sup> | 55 / 66 dB(A) <sup>2) 3)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                                                   | 0.0021 kg m <sup>2</sup>       |                                | Thermal class                   | F                                       |
| Bearing DE   NDE                                                                    | 6004 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                                                                   | Without                        |                                | Net weight of the motor (IM B3) | 11 kg                                   |
| Grease nipple                                                                       | -/-                            |                                | Coating (paint finish)          | Standard paint finish C2                |
| Type of bearing                                                                     | Preloaded bearing DE           |                                | Color, paint shade              | RAL7030                                 |
| Condensate drainage holes                                                           | Without                        |                                | Motor protection                | (A) without (Standard)                  |
| External earthing terminal                                                          | Without                        |                                | 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              |

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) L<sub>10mh</sub> 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

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|                                  |                                       |                   |                                      |                                                                                                              |                             |                                                                                       |             |
|----------------------------------|---------------------------------------|-------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
| Responsible department<br>IN LVM | Technical reference                   | Created by<br>SPC | Approved by<br>Created automatically | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                             | <a href="#">Link documents</a>                                                        |             |
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