

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



Motor type : 1AV2083A

SIMOTICS GP - 80 M - IM B5 - 2p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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      | 1.10 | -/-   | 4.20 | 2835    | 3.7  | 79.6            | 81.3 | 80.9                   | 0.83               | 0.77 | 0.64 | 6.0                            | 2.7                            | 3.1                            | IE2   |
| 400             | Y     | 50      | 1.10 | -/-   | 2.40 | 2835    | 3.7  | 79.6            | 81.3 | 80.9                   | 0.83               | 0.77 | 0.64 | 6.0                            | 2.7                            | 3.1                            | IE2   |
| 460             | Y     | 60      | 1.27 | -/-   | 2.30 | 3430    | 3.5  | 82.5            | 83.9 | 83.1                   | 0.84               | 0.80 | 0.69 | 6.3                            | 2.7                            | 3.3                            | IE2   |
| 460             | Y     | 60      | 1.10 | -/-   | 2.05 | 3465    | 3.0  | 82.5            | 83.0 | 81.4                   | 0.82               | 0.75 | 0.64 | 7.2                            | 3.1                            | 3.8                            | IE2   |
| IM B5 / IM 3001 |       | FS 80 M |      | 11 kg |      | IP55    |      | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |

Environmental conditions : -30 °C - +40 °C / 1,000 m

Locked rotor time (hot / cold) : 12.8 s | 19.8 s

Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 60.0 / 71.0 dB(A) <sup>2)</sup> | 64.0 / 75.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0011 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6004 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 <sub>A</sub> /I <sub>N</sub> = locked rotor current / current nominal | 1) L10mh according to DIN ISO 281 10/2010 | 3) Value is valid only for DOL operation with motor design IC411 |
| M <sub>K</sub> /M <sub>N</sub> = locked rotor torque / torque nominal   | 2) at rated power / at full load          |                                                                  |
| M <sub>B</sub> /M <sub>N</sub> = break down torque / nominal torque     |                                           |                                                                  |

|                                                                                    |                      |                 |             |                                                                                                              |                  |          |      |
|------------------------------------------------------------------------------------|----------------------|-----------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------|----------|------|
| 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 |             |                                                                                                              |                  |          |      |
|  | document type        |                 |             | document status                                                                                              |                  | customer |      |
|                                                                                    | datasheet            |                 |             | released                                                                                                     |                  |          |      |
|                                                                                    |                      | title           |             |                                                                                                              | document number  |          |      |
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## Special design

D04 Minimum ambient temperature -30°C D47 TR CU product safety certificate EAC for the Eurasian Customs Union

## Notes:

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