

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



Motor type : 1AV2112A

SIMOTICS GP - 112 M - IM B3 - 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> |       |
| 400             | Δ     | 50       | 4.00 | -/-   | 7.90 | 2945    | 13.0 | 85.8            | 86.2 | 85.1                   | 0.85               | 0.79 | 0.68 | 8.0                            | 2.1                            | 3.6                            | IE2   |
| 690             | Y     | 50       | 4.00 | -/-   | 4.60 | 2945    | 13.0 | 85.8            | 86.2 | 85.1                   | 0.85               | 0.79 | 0.68 | 8.0                            | 2.1                            | 3.6                            | IE2   |
| 460             | Δ     | 60       | 4.55 | -/-   | 7.60 | 3540    | 12.3 | 87.5            | 87.7 | 86.4                   | 0.86               | 0.82 | 0.72 | 8.3                            | 2.2                            | 3.6                            | IE2   |
| 460             | Δ     | 60       | 3.70 | -/-   | 6.40 | 3555    | 9.9  | 87.5            | 86.9 | 84.6                   | 0.83               | 0.77 | 0.66 | 9.9                            | 2.7                            | 4.5                            | IE2   |
| IM B3 / IM 1001 |       | FS 112 M |      | 27 kg |      | IP55    |      | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |

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

Locked rotor time (hot / cold) : 5.98 s | 10.8 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 69.0 / 81.0 dB(A) <sup>2)</sup> | 73.0 / 85.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0092 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6206 2Z C3                      | 6206 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      | 4.0 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 11.0 mm - 21.0 mm   |
| Type of terminal box     | TB1 F00   | Cable entry                    | 2xM32x1,5           |
| Contact screw thread     | M4        | Cable gland                    | 2 plugs             |

## 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>K</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.                                                                   | 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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