

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



Motor type : 1AV3163A

SIMOTICS GP - 160 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> |       |
| 230             | Δ     | 50       | 15.00 | -/-   | 47.00 | 2960    | 48.5 | 91.9            | 91.8 | 90.5                   | 0.87               | 0.83 | 0.74 | 8.8                            | 2.8                            | 4.3                            | IE3   |
| 400             | Y     | 50       | 15.00 | -/-   | 27.00 | 2960    | 48.5 | 91.9            | 91.8 | 90.5                   | 0.87               | 0.83 | 0.74 | 8.8                            | 2.8                            | 4.3                            | IE3   |
| 460             | Y     | 60       | 17.30 | -/-   | 27.00 | 3560    | 46.5 | 91.7            | 91.3 | 89.7                   | 0.88               | 0.85 | 0.77 | 8.7                            | 2.7                            | 4.2                            | IE3   |
| 460             | Y     | 60       | 15.00 | -/-   | 24.00 | 3565    | 40.0 | 91.0            | 90.0 | 87.6                   | 0.86               | 0.82 | 0.73 | 9.7                            | 3.1                            | 4.8                            | IE3   |
| IM B3 / IM 1001 |       | FS 160 M |       | 84 kg |       | IP55    |      | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |

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

Locked rotor time (hot / cold) : 12.8 s | 19.9 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                                  |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|--------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 70.0 / 82.0 dB(A) <sup>2)</sup> | 77.0 / 89.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes                                              |
| Moment of inertia                                                                   | 0.0610 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                |
| Bearing DE   NDE                                                                    | 6309 Z C3                       | 6209 Z C3                       | Insulation                 | 155(F) to 130(B)                                 |
| <b>bearing lifetime</b>                                                             |                                 |                                 | Duty type                  | S1                                               |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                         | 32000 h                         | Direction of rotation      | bidirectional                                    |
| Relubrication interval/quantity DE   NDE                                            | 10 g   10 g                     | 8000 h                          | Frame material             | aluminum                                         |
| Lubricants                                                                          | Unirex N3                       |                                 | Coating (paint finish)     | Standard paint finish C2                         |
| Regreasing device                                                                   | Yes                             |                                 | Color, paint shade         | RAL7030                                          |
| Grease nipple                                                                       | M8x1 DIN 71412                  |                                 | Motor protection           | (K) 1 Pt1000 resistance thermometer(2 terminals) |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Method of cooling          | IC411 - self ventilated, surface cooled          |
| Condensate drainage holes                                                           | -/-                             |                                 |                            |                                                  |

## Terminal box

|                          |           |                                |                      |
|--------------------------|-----------|--------------------------------|----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 16.0 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 19.0 mm - 28.0 mm    |
| Type of terminal box     | TB1 J00   | Cable entry                    | 2xM40x1,5-1xM16x1,5  |
| Contact screw thread     | M5        | Cable gland                    | 3 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      |             |                                                                                                              |                  |          |      |
|  | document type       | datasheet            |             | document status                                                                                              | released         |          |      |
|                                                                                    | title               | 1LE1003-1DA32-2AK4-Z |             | document number                                                                                              |                  |          |      |
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### Special design

|     |                                                |     |                   |
|-----|------------------------------------------------|-----|-------------------|
| H04 | External grounding at housing                  | L23 | Regreasing system |
| L22 | Bearing design for increased cantilever forces |     |                   |

### Notes:

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