

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



Motor type : 1CV3105B

SIMOTICS SD - 100 L - IM B3 - 4p

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

Remarks

## Electrical data

## Safe Area

| U<br>[V] | $\Delta$ / Y | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[1/min] | M<br>[Nm] | $\eta$ <sup>3)</sup> |      |      | $\cos\phi$ <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 |
|----------|--------------|-----------|-----------|-----------|----------|--------------|-----------|----------------------|------|------|--------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|-------|
|          |              |           |           |           |          |              |           | 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      | $\Delta$     | 50        | 3.00      | -/-       | 5.90     | 1460         | 19.6      | 87.7                 | 88.4 | 88.2 | 0.83                     | 0.78 | 0.69 | 7.3                            | 2.3                            | 3.7                            | IE3   |
| 690      | Y            | 50        | 3.00      | -/-       | 3.45     | 1460         | 19.6      | 87.7                 | 88.4 | 88.2 | 0.83                     | 0.78 | 0.69 | 7.3                            | 2.3                            | 3.7                            | IE3   |
| 460      | $\Delta$     | 60        | 3.45      | -/-       | 5.80     | 1760         | 18.7      | 89.5                 | 90.1 | 89.4 | 0.84                     | 0.79 | 0.68 | 7.6                            | 2.2                            | 3.8                            | IE3   |
| 460      | $\Delta$     | 60        | 3.00      | -/-       | 5.20     | 1765         | 16.2      | 89.5                 | 89.6 | 88.9 | 0.81                     | 0.76 | 0.68 | 8.6                            | 2.6                            | 4.3                            | IE3   |

|                 |  |          |       |      |  |              |                        |  |  |
|-----------------|--|----------|-------|------|--|--------------|------------------------|--|--|
| IM B3 / IM 1001 |  | FS 100 L | 40 kg | IP65 |  | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |  |  |
|-----------------|--|----------|-------|------|--|--------------|------------------------|--|--|

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

Locked rotor time (hot / cold) : 13.9 s | 18.5 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 60.0 / 72.0 dB(A) <sup>2)</sup> | 62.0 / 74.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0140 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6206 2Z C3                      | 6206 2Z C3                      | Insulation                 | 155(F) to 155(F)                        |
| <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             | cast iron                               |
| Regreasing device                                                                   | No                              |                                 | Coating (paint finish)     | Special paint finish C3                 |
| Grease nipple                                                                       | -/-                             |                                 | Color, paint shade         | RAL7030                                 |
| Type of bearing                                                                     | Preloaded bearing DE            |                                 | Motor protection           | (A) without (Standard)                  |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 | 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 | cast iron | Cable diameter from ... to ... | 11.0 mm - 21.0 mm   |
| Type of terminal box     | TB1 F01   | 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 |             |                                                                                                              |

|                                                                                    |                                         |                 |                  |                 |
|------------------------------------------------------------------------------------|-----------------------------------------|-----------------|------------------|-----------------|
|  | document type                           | document status | customer         |                 |
|                                                                                    | datasheet                               | released        |                  |                 |
|                                                                                    | title                                   | document number |                  |                 |
|                                                                                    | 1LE1503-1AB53-4AA4-Z<br>F76+H20+N03+S02 |                 |                  |                 |
| © Siemens AG 2021                                                                  |                                         | rev.            | creation date    | language   Page |
|                                                                                    |                                         | 01              | 2021-04-21 21:23 | en   1/2        |

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### Special design

|     |                            |     |                                                                                           |
|-----|----------------------------|-----|-------------------------------------------------------------------------------------------|
| F76 | Metal external fan         | N03 | Temperature class 155 (F), utilised to 155 (F), with increased cooling medium temperature |
| H20 | IP 65 degree of protection | S02 | Special paint finish C3                                                                   |

### Notes:

|                                                                                    |  |                               |                               |             |                                                                                                              |                                   |                |             |
|------------------------------------------------------------------------------------|--|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------------|----------------|-------------|
| 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>1LE1503-1AB53-4AA4-Z |                               |             | document number                                                                                              |                                   |                |             |
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