

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



Motor type : 1CV3315B

SIMOTICS SD - 315 L - IM B3 - 4p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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       | 200.00 | -/-     | 340.00 | 1488    | 1280.0 | 96.0            | 96.3 | 96.1                   | 0.88               | 0.86 | 0.79 | 7.4                            | 3.2                            | 3.0                            | IE3   |
| 690             | Y     | 50       | 200.00 | -/-     | 198.00 | 1488    | 1280.0 | 96.0            | 96.3 | 96.1                   | 0.88               | 0.86 | 0.79 | 7.4                            | 3.2                            | 3.0                            | IE3   |
| 460             | Δ     | 60       | 230.00 | -/-     | 345.00 | 1788    | 1230.0 | 95.4            | 95.6 | 95.3                   | 0.88               | 0.86 | 0.80 | 7.5                            | 3.1                            | 2.8                            | IE2   |
| 460             | Δ     | 60       | 200.00 | -/-     | 300.00 | 1791    | 1070.0 | 96.2            | 96.2 | 95.5                   | 0.87               | 0.84 | 0.75 | 8.7                            | 3.5                            | 3.2                            | IE3   |
| IM B3 / IM 1001 |       | FS 315 L |        | 1190 kg |        | IP55    |        | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                | KS C IEC60034-2-1              |       |

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

Locked rotor time (hot / cold) : 25.1 s | 44.3 s

Mechanical data

|                                                                                     |                                 |                                 |                            |                                                   |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|---------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 73.0 / 87.0 dB(A) <sup>2)</sup> | 78.0 / 93.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes (standard)                                    |
| Moment of inertia                                                                   | 3.7000 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                 |
| Bearing DE   NDE                                                                    | 6319 C3                         | 6319 C3                         | Insulation                 | 180(H) to 180(H)                                  |
| 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                                     |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g                     | 6000 h                          | Frame material             | cast iron                                         |
| Lubricants                                                                          | Unirex N3                       |                                 | Coating (paint finish)     | Special paint finish C3                           |
| Regreasing device                                                                   | Yes (standard)                  |                                 | Color, paint shade         | RAL7030                                           |
| Grease nipple                                                                       | M10x1 DIN 3404 A                |                                 | Motor protection           | (G) 2 temperature sensors KTY84-130 (4 terminals) |
| Type of bearing                                                                     | Locating bearing DE             |                                 | Method of cooling          | IC411 - self ventilated, surface cooled           |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 |                            |                                                   |

Terminal box

|                          |           |                                |                       |
|--------------------------|-----------|--------------------------------|-----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 400.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 44.0 mm - 54.0 mm     |
| Type of terminal box     | TB1 R01   | Cable entry                    | 2xM63x1,5-2xM20x1,5   |
| Contact screw thread     | M16       | Cable gland                    | 2 glands, 2 plugs     |

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 |             |                                                                                                              |                  |          |      |
| SIEMENS           | document type                               |                 |             | document status                                                                                              |                  | customer |      |
|                   | datasheet                                   |                 |             | released                                                                                                     |                  |          |      |
|                   | title                                       |                 |             | document number                                                                                              |                  |          |      |
|                   | 1LE1643-3AB53-4AG4-Z                        |                 |             |                                                                                                              |                  |          |      |
|                   | B02+H70+L51+N10+Q01+Q25+R11+R18+R50+R62+Y82 |                 |             | rev.                                                                                                         | creation date    | language | Page |
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## Special design

|     |                                                                             |     |                                                        |
|-----|-----------------------------------------------------------------------------|-----|--------------------------------------------------------|
| B02 | Acceptance test certificate 3.1 acc. to EN 10204                            | R11 | Terminal box rotated through 90°, cable entry from NDE |
| H70 | Second outer earthing                                                       | R18 | Cable gland metal, max. number                         |
| L51 | Bearing insulation NDE                                                      | R50 | Larger terminal box                                    |
| N10 | Temperature class 180 (H)                                                   | R62 | Cast iron auxiliary terminal box (small)               |
| Q01 | Measuring nipple for SPM shock pulse measurement to monitor bearings        | Y82 | Auxiliary name plate with customer data                |
| Q25 | Motor temperature sensing with integrated 2x KTY 84-130 temperature sensors |     |                                                        |

## Notes:

|                                                                                    |                                             |                               |             |                                                                                                              |  |                |             |
|------------------------------------------------------------------------------------|---------------------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|--|----------------|-------------|
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|  | document type<br>datasheet                  |                               |             | document status<br>released                                                                                  |  | customer       |             |
|                                                                                    | title<br>1LE1643-3AB53-4AG4-Z               |                               |             | document number                                                                                              |  |                |             |
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