

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



Motor type : 1CV3162B

SIMOTICS SD - 160 M - 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       | 11.00 | -/-    | 20.50 | 1475    | 71.0 | 91.4            | 91.9 | 91.4                   | 0.84               | 0.80 | 0.70 | 6.8                            | 2.2                            | 3.2                            | IE3   |
| 690             | Y     | 50       | 11.00 | -/-    | 12.00 | 1475    | 71.0 | 91.4            | 91.9 | 91.4                   | 0.84               | 0.80 | 0.70 | 6.8                            | 2.2                            | 3.2                            | IE3   |
| 460             | Δ     | 60       | 12.60 | -/-    | 20.00 | 1775    | 68.0 | 92.4            | 92.7 | 92.1                   | 0.85               | 0.81 | 0.73 | 7.1                            | 2.0                            | 3.2                            | IE3   |
| 460             | Δ     | 60       | 11.00 | -/-    | 18.00 | 1780    | 59.0 | 92.4            | 92.4 | 91.3                   | 0.83               | 0.78 | 0.68 | 7.9                            | 2.3                            | 3.7                            | IE3   |
| IM B3 / IM 1001 |       | FS 160 M |       | 109 kg |       | IP55    |      | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |

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

Locked rotor time (hot / cold) : 22.9 s | 32.3 s

Mechanical data

|                                                                                     |                                 |                                 |                            |                                                  |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|--------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 65.0 / 77.0 dB(A) <sup>2)</sup> | 69.0 / 81.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                               |
| Moment of inertia                                                                   | 0.0710 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                |
| Bearing DE   NDE                                                                    | 6209 2Z C3                      | 6209 2Z C3 INS                  | 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             | cast iron                                        |
| Regreasing device                                                                   | No                              |                                 | Coating (paint finish)     | Standard paint finish C2                         |
| Grease nipple                                                                       | -/-                             |                                 | Color, paint shade         | RAL7030                                          |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Motor protection           | (F) 1 temperature sensor KTY84-130 (2 terminals) |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 | Method of cooling          | IC411 - self ventilated, surface cooled          |

Terminal box

|                          |           |                                |                      |
|--------------------------|-----------|--------------------------------|----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 16.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 19.0 mm - 28.0 mm    |
| Type of terminal box     | TB1 J01   | 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 | 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                                                                                              |      |                  |          |      |
|                                                                                    | 1LE1503-1DB23-4AF4-Z |                 |             |                                                                                                              |      |                  |          |      |
|                                                                                    | G04+L51              |                 |             |                                                                                                              | rev. | creation date    | language | Page |
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### Special design

G04 Mounted rotary pulse encoder LL 861 900 220 L51 Bearing insulation NDE

### Notes:

|                                                                                    |                               |                               |                                   |  |                                                                                                              |             |  |  |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-----------------------------------|--|--------------------------------------------------------------------------------------------------------------|-------------|--|--|
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|                                                                                    | title<br>1LE1503-1DB23-4AF4-Z |                               |                                   |  |                                                                                                              |             |  |  |
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