

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



Motor type : 1CV4280B

SIMOTICS SD - 280 S - IM B35 - 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> |       |
| DOL duty (S1) - 155(F) to 130(B)                    |       |          |       |      |        |         |       |                 |                                                |      |                        |      |      |                                |                                |                                |       |
| 500                                                 | Δ     | 50       | 75.00 | -/-  | 106.00 | 1490    | 480.0 | 96.0            | 96.1                                           | 95.6 | 0.85                   | 0.81 | 0.70 | 9.2                            | 3.4                            | 3.8                            | IE4   |
| 575                                                 | Δ     | 60       | 86.00 | -/-  | 106.00 | 1788    | 460.0 | 96.2            | 96.2                                           | 95.6 | 0.85                   | 0.81 | 0.72 | 9.1                            | 3.4                            | 3.6                            | IE4   |
| 575                                                 | Δ     | 60       | 75.00 | -/-  | 93.00  | 1791    | 400.0 | 96.2            | 96.0                                           | 95.2 | 0.84                   | 0.79 | 0.68 | 10.0                           | 4.0                            | 4.2                            | IE4   |
| IM B35 / IM 2001                                    |       | FS 280 S |       |      |        | IP55    | UKCA  | IEC/EN 60034    |                                                |      | IEC, DIN, ISO, VDE, EN |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |          |       |      |        |         |       |                 | Locked rotor time (hot / cold) : 34 s   45.6 s |      |                        |      |      |                                |                                |                                |       |

Mechanical data

|                                                                                 |                                |                                |                                 |                                                               |
|---------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|---------------------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                            | 69 / 83 dB(A) <sup>2) 3)</sup> | 74 / 88 dB(A) <sup>2) 3)</sup> | External earthing terminal      | With (standard)                                               |
| Moment of inertia                                                               | 1.7000 kg m <sup>2</sup>       |                                | Vibration severity grade        | A                                                             |
| Bearing DE   NDE                                                                | 6317 C3                        | 6317 C3                        | Thermal class                   | F                                                             |
| bearing lifetime                                                                |                                |                                | Duty type                       | S1                                                            |
| L <sub>10mh</sub> F <sub>Rad</sub> <sup>1)</sup> for coupling operation 50 60Hz | 40000 h                        | 32000 h                        | Direction of rotation           | bidirectional                                                 |
| Relubrication interval/quantity DE   NDE                                        | 30 g   30 g<br>8000 h          |                                | Frame material                  | cast iron                                                     |
| Lubricants                                                                      | Unirex N3                      |                                | Net weight of the motor (IM B3) | 670 kg                                                        |
| Regreasing device                                                               | With regreasing nipple         |                                | Coating (paint finish)          | Special paint finish C3                                       |
| Grease nipple                                                                   | M10x1 DIN 71412 A              |                                | Color, paint shade              | RAL7030                                                       |
| Type of bearing                                                                 | Locating bearing NDE           |                                | Motor protection                | (B) 3 PTC thermistors - for tripping (standard) (2 terminals) |
| Condensate drainage holes                                                       | With (standard)                |                                | Method of cooling               | IC411 - self ventilated, surface cooled                       |

Terminal box

|                          |           |                                |                     |
|--------------------------|-----------|--------------------------------|---------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 120 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 34 mm - 45 mm       |
| Type of terminal box     | TB1 N61   | Cable entry                    | 2xM63x1,5-2xM20x1,5 |
| Contact screw thread     | M10       | Cable gland                    | 4 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. |                 | <a href="#">Link documents</a>                                                        |          |      |
| DI MC LVM                                                                          |                     | DT Configurator      |             |                                                                                                              |                 |  |          |      |
|  | document type       |                      |             |                                                                                                              | document status |                                                                                       |          |      |
|                                                                                    | datasheet           |                      |             |                                                                                                              | released        |                                                                                       |          |      |
|                                                                                    | title               | 1LE1604-2DB04-0JB4-Z |             |                                                                                                              | document number |                                                                                       |          |      |
|                                                                                    |                     |                      |             |                                                                                                              |                 |                                                                                       |          |      |
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|                                                                                    |                     |                      |             |                                                                                                              | 943             | 2023-06-26                                                                            | en       | 1/2  |

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Special design

|     |                                                                   |     |                               |
|-----|-------------------------------------------------------------------|-----|-------------------------------|
| H01 | Bolted on mounting feet (instead of cast)                         | R52 | Drilled removable entry plate |
| L19 | Regreasing device with regreasing nipple M10X1 acc.to DIN 71412-A |     |                               |

Notes:

|                               |                               |                               |             |                                                                                                              |                             |                                                                                       |             |
|-------------------------------|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
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| SIEMENS                       | document type<br>datasheet    |                               |             | document status<br>released                                                                                  |                             |  |             |
|                               | title<br>1LE1604-2DB04-0JB4-Z |                               |             | document number                                                                                              |                             |                                                                                       |             |
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