

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



Motor type : 1CV4282B

SIMOTICS SD - 280 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> |       |
| DOL duty (S1) - 155(F) to 130(B)                    |       |          |        |      |        |         |       |                 |                                                |      |                        |      |      |                                |                                |                                |       |
| 500                                                 | Δ     | 50       | 90.00  | -/-  | 126.00 | 1488    | 580.0 | 96.1            | 96.3                                           | 96.1 | 0.86                   | 0.82 | 0.73 | 9.0                            | 3.2                            | 3.4                            | IE4   |
|                                                     |       |          |        |      |        |         |       |                 |                                                |      |                        |      |      |                                |                                |                                |       |
| 575                                                 | Δ     | 60       | 104.00 | -/-  | 126.00 | 1790    | 550.0 | 96.2            | 96.2                                           | 95.6 | 0.86                   | 0.82 | 0.72 | 9.0                            | 3.2                            | 3.4                            | IE4   |
| 575                                                 | Δ     | 60       | 90.00  | -/-  | 109.00 | 1788    | 480.0 | 96.2            | 96.3                                           | 95.8 | 0.86                   | 0.82 | 0.74 | 9.5                            | 3.5                            | 3.7                            | IE4   |
| IM B3 / IM 1001                                     |       | FS 280 M |        |      |        | IP55    | UKCA  | IEC/EN 60034    |                                                |      | IEC, DIN, ISO, VDE, EN |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |          |        |      |        |         |       |                 | Locked rotor time (hot / cold) : 29 s   40.9 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                                                               | 2.0000 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                    | 8000 h                         | Frame material                  | cast iron                                                     |
| Lubricants                                                                      | Unirex N3                      |                                | Net weight of the motor (IM B3) | 730 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.<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. |                             | <a href="#">Link documents</a><br> |                |             |
|  | document type<br>datasheet    |                               |             |                                                                                                              | document status<br>released |                                                                                                                         |                |             |
|                                                                                    | title<br>1LE1604-2DB24-0AB4-Z |                               |             |                                                                                                              | document number             |                                                                                                                         |                |             |
| © Siemens AG 2023                                                                  | H01+L19+R52                   |                               |             |                                                                                                              | rev.<br>943                 | creation date<br>2023-06-26                                                                                             | language<br>en | Page<br>1/2 |



**SIMOTICS SD - 280 M - IM B3 - 4p**

|     |                                                                   |     |                               |
|-----|-------------------------------------------------------------------|-----|-------------------------------|
| 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:

|                                                                                    |                               |                               |             |                                                                                                              |                                                                                       |                                |             |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------|-------------|
| 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. |                                                                                       | <a href="#">Link documents</a> |             |
|  | document type<br>datasheet    | document status<br>released   |             |                                                                                                              |  |                                |             |
|                                                                                    | title<br>1LE1604-2DB24-0AB4-Z |                               |             |                                                                                                              |                                                                                       |                                |             |
| © Siemens AG 2023                                                                  | H01+L19+R52                   | rev.<br>943                   |             | creation date<br>2023-06-26                                                                                  |                                                                                       | language<br>en                 | Page<br>2/2 |