

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



Motor type : 1CV4312B

SIMOTICS SD - 315 M - 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   | 132.00   | -/-  | 186.00 | 1490    | 850.0 | 96.4            | 96.6                                             | 96.3         | 0.85               | 0.81 | 0.73 | 8.2                            | 3.3                            | 3.2                            | IE4   |
|                                                     |       |      |          |      |        |         |       |                 |                                                  |              |                    |      |      |                                |                                |                                |       |
|                                                     |       |      |          |      |        |         |       |                 |                                                  |              |                    |      |      |                                |                                |                                |       |
|                                                     |       |      |          |      |        |         |       |                 |                                                  |              |                    |      |      |                                |                                |                                |       |
| IM B35 / IM2001                                     |       |      | FS 315 M |      |        |         | IP55  | UKCA            |                                                  | IEC/EN 60034 |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1000 m |       |      |          |      |        |         |       |                 | Locked rotor time (hot / cold) : 25.5 s   39.7 s |              |                    |      |      |                                |                                |                                |       |

## Mechanical data

|                                                                                     |                                            |                                |                                |                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|--------------------------------|------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 67 / 81 dB(A) <sup>2) 3)</sup>             | 72 / 86 dB(A) <sup>2) 3)</sup> | External earthing terminal     | (Standard) Yes                                 |
| Moment of inertia                                                                   | 2.9100 kg m <sup>2</sup>                   |                                | Vibration severity grade       | Grade A                                        |
| Bearing DE   NDE                                                                    | 6319 C3                                    | 6319 C3                        | Thermal class                  | F                                              |
| permissible lateral force on (N)                                                    | X <sub>0</sub> : 9300                      | X <sub>0.5</sub> : 8650        | Duty type                      | S1                                             |
|                                                                                     |                                            | X <sub>max</sub> : 8000        | Direction of rotation          | bidirectional                                  |
| bearing lifetime                                                                    |                                            |                                | Frame material                 | cast iron                                      |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                                    | -/-                            | Net weight of the motor        | 998 kg                                         |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g                                | 6000 h                         | Coating (paint finish)         | Special paint finish C3                        |
| Lubricants                                                                          | UNIREX N3                                  |                                | Color, paint shade             | RAL7030                                        |
| Regreasing device                                                                   | with conical grease nipple acc. DIN 71412A |                                | Motor protection               | 3 PTC thermistors - for tripping (2 terminals) |
| Grease nipple                                                                       | M10x1 DIN 71412 A                          |                                | Method of cooling              | IC411 - self ventilated, surface cooled        |
| Type of bearing                                                                     | Locating bearing DE                        |                                | 'SIMOTICS Connect 400' in IP65 | No                                             |
| Bearing insulation DE / Bearing insulation NDE                                      | Yes (Non-drive end)                        |                                |                                |                                                |
| Condensate drainage holes                                                           | (Standard) Yes                             |                                |                                |                                                |

## Terminal box

|                          |                |                                |                       |
|--------------------------|----------------|--------------------------------|-----------------------|
| Terminal box position    | box at the top | Max. cross-sectional area      | 240 mm <sup>2</sup>   |
| Material of terminal box | cast iron      | Cable diameter from ... to ... | 34 mm - 45 mm         |
| Type of terminal box     | TB1Q61         | Cable entry                    | 2xM63x1,5 - 2xM20x1,5 |
| Contact screw thread     | 6xM12          | Cable gland                    | 4 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. | <a href="#">Link documents</a> |
| DI MC LVM         |                         | DT Configurator |             |                                                                                                              |                                |
|                   | document type           |                 |             |                                                                                                              | document status                |
|                   | datasheet               |                 |             |                                                                                                              | released                       |
|                   | title                   |                 |             |                                                                                                              | document number                |
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|                   |                         |                 |             |                                                                                                              | 943                            |
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|                   |                         | 2023-06-26      |             | en                                                                                                           | 1/2                            |



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|     |                                                                   |     |                               |
|-----|-------------------------------------------------------------------|-----|-------------------------------|
| F74 | Sheet steel fan cowl                                              | M11 | Stainless steel rating plate  |
| L19 | Regreasing device with regreasing nipple M10X1 acc.to DIN 71412-A | R52 | Drilled removable entry plate |
| L51 | Bearing insulation NDE                                            | S02 | Special paint finish C3       |

Notes:

|                                                                                    |                               |                               |             |                                                                                                              |                             |                                                                                       |             |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
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|  | document type<br>datasheet    |                               |             | document status<br>released                                                                                  |                             |  |             |
|                                                                                    | title<br>1LE5504-3AB24-OJB4-Z |                               |             | document number                                                                                              |                             |                                                                                       |             |
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