

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



Motor type : 1CV4312C

SIMOTICS SD - 315 M - IM B35 - 6p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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> |                                                  |      | cos φ <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)                    |       |      |          |      |        |         |       |                 |                                                  |      |                     |      |      |                                |                                |                                |       |
| 230                                                 | Δ     | 50   | 90.00    | -/-  | 280.00 | 992     | 870.0 | 95.6            | 95.9                                             | 95.7 | 0.85                | 0.81 | 0.71 | 8.2                            | 2.8                            | 3.5                            | IE4   |
| 400                                                 | Y     | 50   | 90.00    | -/-  | 160.00 | 992     | 870.0 | 95.6            | 95.9                                             | 95.7 | 0.85                | 0.81 | 0.71 | 8.2                            | 2.8                            | 3.5                            | IE4   |
| 460                                                 | Y     | 60   | 99.00    | -/-  | 153.00 | 1192    | 790.0 | 95.8            | 95.9                                             | 95.6 | 0.85                | 0.81 | 0.71 | 8.5                            | 2.7                            | 3.5                            | 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) : 22.2 s   31.5 s |      |                     |      |      |                                |                                |                                |       |

## Mechanical data

|                                                                                     |                                            |                                |                                |                                                |
|-------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------|--------------------------------|------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 62 / 76 dB(A) <sup>2) 3)</sup>             | 64 / 79 dB(A) <sup>2) 3)</sup> | External earthing terminal     | (Standard) Yes                                 |
| Moment of inertia                                                                   | 3.7700 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> : 10600                     | X <sub>0.5</sub> : 9900        | Duty type                      | S1                                             |
|                                                                                     |                                            | X <sub>max</sub> : 9200        | 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                                    | 32000 h                        | Net weight of the motor        | 956 kg                                         |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g                                | 6000 h                         | Coating (paint finish)         | Standard paint finish C2                       |
| 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 ... | 38 mm - 45 mm         |
| Type of terminal box     | TB1Q01         | 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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|     |                                                                   |     |                              |
|-----|-------------------------------------------------------------------|-----|------------------------------|
| F74 | Sheet steel fan cowl                                              | L51 | Bearing insulation NDE       |
| L19 | Regreasing device with regreasing nipple M10X1 acc.to DIN 71412-A | M11 | Stainless steel rating plate |

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|                                                                                    |                               |                               |             |                                                                                                              |                             |                                                                                       |             |
|------------------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
| 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>1LE5504-3AC22-2JB4-Z |                               |             | document number                                                                                              |                             |                                                                                       |             |
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