

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



Motor type : 1CV4315B

SIMOTICS SD Pro - 315 L - IM B3 - 4p

|                  |                 |           |
|------------------|-----------------|-----------|
| Client order no. | Item-No.        | Offer no. |
| Order no.        | Consignment no. | Project   |
| Remarks          |                 |           |

| Safe Area                                            |       |      |          |      |        |         |        |                 |                                                  |              |                    |                               |      |                                |                                |                                |       |
|------------------------------------------------------|-------|------|----------|------|--------|---------|--------|-----------------|--------------------------------------------------|--------------|--------------------|-------------------------------|------|--------------------------------|--------------------------------|--------------------------------|-------|
| Electrical data                                      |       |      |          |      |        |         |        | -/-             |                                                  |              |                    |                               |      |                                |                                |                                |       |
| 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)                     |       |      |          |      |        |         |        |                 |                                                  |              |                    |                               |      |                                |                                |                                |       |
| 380                                                  | Δ     | 50   | 200.00   | -/-  | 375.00 | 1492    | 1280.0 | 96.7            | 96.8                                             | 96.5         | 0.84               | 0.80                          | 0.71 | 8.7                            | 3.7                            | 3.3                            | IE4   |
| 660                                                  | Y     | 50   | 200.00   | -/-  | 215.00 | 1492    | 1280.0 | 96.7            | 96.8                                             | 96.5         | 0.84               | 0.80                          | 0.71 | 8.7                            | 3.7                            | 3.3                            | IE4   |
| 440                                                  | Δ     | 60   | 200.00   | -/-  | 330.00 | 1793    | 1070.0 | 96.5            | 96.4                                             | 95.8         | 0.83               | 0.78                          | 0.68 | 9.5                            | 4.4                            | 3.5                            | IE4   |
| 440                                                  | Δ     | 60   | 230.00   | -/-  | 365.00 | 1791    | 1230.0 | 96.8            | 96.9                                             | 96.5         | 0.85               | 0.82                          | 0.73 | 8.5                            | 3.8                            | 3.1                            | IE4   |
| 440                                                  | Δ     | 60   |          | 250  | 308.41 | 1794    | 980.0  | 96.5            | 96.3                                             | 95.7         | 0.83               | 0.78                          | 0.68 | 10.0                           | 4.8                            | 3.8                            | MG1   |
| IM B3 / IM1001                                       |       |      | FS 315 L |      |        |         | IP55   | UKCA            |                                                  | IEC/EN 60034 |                    | IEC, EN, UL, CSA, NEMA MG1-12 |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |      |          |      |        |         |        |                 | Locked rotor time (hot / cold) : 32.6 s   48.7 s |              |                    |                               |      |                                |                                |                                |       |

Mechanical data

|                                                                                     |                                |                                |                            |                                                |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|----------------------------|------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 69 / 84 dB(A) <sup>2) 3)</sup> | 75 / 90 dB(A) <sup>2) 3)</sup> | Condensate drainage holes  | (Standard) Yes                                 |
| Moment of inertia                                                                   | 4.6200 kg m <sup>2</sup>       |                                | External earthing terminal | (Standard) Yes                                 |
| Bearing DE   NDE                                                                    | 6319 C3                        | 6319 C3                        | Vibration severity grade   | Grade A                                        |
| permissible lateral force on (N) (N)                                                | X <sub>0</sub> : 9300          | X <sub>0.5</sub> : 8650        | Thermal class              | F                                              |
| bearing lifetime                                                                    |                                |                                | Duty type                  | S1                                             |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                        | 32000 h                        | Direction of rotation      | bidirectional                                  |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g<br>6000 h          |                                | Frame material             | cast iron                                      |
| Lubricants                                                                          | UNIREX N3                      |                                | Net weight of the motor    | 1350 kg                                        |
| Regreasing device                                                                   | -/-                            |                                | Coating (paint finish)     | Standard paint finish C2                       |
| Grease nipple                                                                       | -/-                            |                                | Color, paint shade         | RAL7030                                        |
| Type of bearing                                                                     | Locating bearing DE            |                                | Motor protection           | 3 PTC thermistors - for tripping (2 terminals) |
| Bearing insulation DE / Bearing insulation NDE                                      | Yes (Non-drive end)            |                                | Method of cooling          | IC416 - separately ventilated, surface cooled  |

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     | TB1Q01         | Cable entry                    | 2xM63x1,5 - 2xM20x1,5 |
| Contact screw thread     | 6xM12          | Cable gland                    | 2 glands              |

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) L<sub>10mh</sub> 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>                                                        |      |
| IN LVM            |                     | SPC                  |             |                                                                                                              |                 |  |      |
| SIEMENS           | document type       | datasheet            |             |                                                                                                              | document status |                                                                                       |      |
|                   |                     |                      |             |                                                                                                              | released        |                                                                                       |      |
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|                   |                     |                      |             | 951                                                                                                          | 2023-12-14      | en                                                                                    | 1/2  |



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|     |                                                 |     |                                |
|-----|-------------------------------------------------|-----|--------------------------------|
| F70 | Mounting of separately driven fan               | L51 | Bearing insulation NDE         |
| G06 | Mounting a rotary pulse encoder HOG 10 D 1024 I | R18 | Cable gland metal, max. number |

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|                                                                                    |                               |                   |             |                                                                                                              |                             |                                                                                       |             |
|------------------------------------------------------------------------------------|-------------------------------|-------------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------------------|---------------------------------------------------------------------------------------|-------------|
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|  | document type<br>datasheet    |                   |             | document status<br>released                                                                                  |                             |  |             |
|                                                                                    | title<br>1LE5584-3AB53-3AB4-Z |                   |             | document number                                                                                              |                             |                                                                                       |             |
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