

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



Motor type : 1CV3316B

SIMOTICS SD - 315 L - 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)                     |       |      |          |      |        |         |        |                 |                                                  |              |                    |                        |      |                                |                                |                                |       |
| 400                                                  | Δ     | 50   | 250.00   | -/-  | 440.00 | 1490    | 1600.0 | 96.0            | 96.1                                             | 95.7         | 0.85               | 0.82                   | 0.74 | 7.9                            | 2.8                            | 3.2                            | IE3   |
| 690                                                  | Y     | 50   | 250.00   | -/-  | 255.00 | 1490    | 1600.0 | 96.0            | 96.1                                             | 95.7         | 0.85               | 0.82                   | 0.74 | 7.9                            | 2.8                            | 3.2                            | IE3   |
| 460                                                  | Δ     | 60   | 250.00   | -/-  | 385.00 | 1791    | 1330.0 | 96.2            | 96.1                                             | 95.3         | 0.85               | 0.81                   | 0.73 | 8.6                            | 3.1                            | 3.5                            | IE3   |
| 460                                                  | Δ     | 60   | 290.00   | -/-  | 440.00 | 1788    | 1550.0 | 96.2            | 96.3                                             | 95.7         | 0.86               | 0.83                   | 0.76 | 7.6                            | 2.7                            | 3.0                            | IE3   |
|                                                      |       |      |          |      |        |         |        |                 |                                                  |              |                    |                        |      |                                |                                |                                |       |
| IM B3 / IM1001                                       |       |      | FS 315 L |      |        |         | IP55   | UKCA            |                                                  | IEC/EN 60034 |                    | IEC, DIN, ISO, VDE, EN |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |      |          |      |        |         |        |                 | Locked rotor time (hot / cold) : 24.9 s   47.1 s |              |                    |                        |      |                                |                                |                                |       |

Mechanical data

|                                                                                     |                                                       |                                |                            |                                         |
|-------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 75 / 91 dB(A) <sup>2) 3)</sup>                        | 82 / 97 dB(A) <sup>2) 3)</sup> | External earthing terminal | (Standard) Yes                          |
| Moment of inertia                                                                   | 4.2700 kg m <sup>2</sup>                              |                                | Vibration severity grade   | Grade A                                 |
| Bearing DE   NDE                                                                    | 6319 C4                                               | 6319 C4                        | Thermal class              | F                                       |
| permissible lateral force on (N)                                                    | X <sub>0</sub> : 9300                                 | X <sub>0.5</sub> : 8650        | Duty type                  | S1                                      |
| bearing lifetime                                                                    |                                                       |                                | Direction of rotation      | bidirectional                           |
| L <sub>10mh</sub> F <sub>Rad min</sub> for coupling operation 50 60Hz <sup>1)</sup> | 40000 h                                               | 32000 h                        | Frame material             | cast iron                               |
| Relubrication interval/quantity DE   NDE                                            | 40 g   40 g<br>6000 h                                 |                                | Net weight of the motor    | 1290 kg                                 |
| Lubricants                                                                          | UNIREX N3                                             |                                | Coating (paint finish)     | Standard paint finish C2                |
| Regreasing device                                                                   | (Standard) Flat type lubricating nipple acc. DIN 3404 |                                | Color, paint shade         | RAL7030                                 |
| Grease nipple                                                                       | M10x1 DIN 3404 A                                      |                                | Motor protection           | without (Standard)                      |
| Type of bearing                                                                     | Locating bearing NDE                                  |                                | Method of cooling          | IC411 - self ventilated, surface cooled |
| Condensate drainage holes                                                           | (Standard) Yes                                        |                                |                            |                                         |

Terminal box

|                          |                                    |                                |                     |
|--------------------------|------------------------------------|--------------------------------|---------------------|
| Terminal box position    | box at the angle 45°, socket right | Max. cross-sectional area      | 240 mm <sup>2</sup> |
| Material of terminal box | cast iron                          | Cable diameter from ... to ... | 42 mm - 54 mm       |
| Type of terminal box     | TB3Q61                             | Cable entry                    | 2xM63x1,5           |
| Contact screw thread     | 6xM12                              | Cable gland                    | 2 plugs             |

|                                                                         |  |                                                       |                                                                  |
|-------------------------------------------------------------------------|--|-------------------------------------------------------|------------------------------------------------------------------|
| Notes:                                                                  |  |                                                       |                                                                  |
| I <sub>A</sub> /I <sub>N</sub> = locked rotor current / current nominal |  | 1) L <sub>10mh</sub> 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>IN LVM                                                         | technical reference         | created by<br>SPC | 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 |                                                                                                                         |             |
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