

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



Motor type : 1CV1316D

SIMOTICS SD - 315 L - IM B3 - 8p

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

Remarks

## Electrical data

## Safe Area

| U<br>[V]        | $\Delta / Y$ | f<br>[Hz] | P<br>[kW] | P<br>[hp] | I<br>[A] | n<br>[1/min] | M<br>[Nm] | $\eta$ <sup>3)</sup> |      |      | $\cos\phi$ <sup>3)</sup> |      |      | $I_A/I_N$ | $M_A/M_N$ | $M_K/M_N$ | IE-CL |
|-----------------|--------------|-----------|-----------|-----------|----------|--------------|-----------|----------------------|------|------|--------------------------|------|------|-----------|-----------|-----------|-------|
|                 |              |           |           |           |          |              |           | 4/4                  | 3/4  | 2/4  | 4/4                      | 3/4  | 2/4  | $I_l/I_N$ | $T_l/T_N$ | $T_B/T_N$ |       |
| 230             | $\Delta$     | 50        | 132.00    | -/-       | 445.00   | 740          | 1700.0    | 91.5                 | 91.9 | 91.6 | 0.81                     | 0.76 | 0.65 | 7.2       | 2.9       | 3.3       | IE1   |
| 400             | Y            | 50        | 132.00    | -/-       | 255.00   | 740          | 1700.0    | 91.5                 | 91.9 | 91.6 | 0.81                     | 0.76 | 0.65 | 7.2       | 2.9       | 3.3       | IE1   |
| 460             | Y            | 60        | 158.00    | -/-       | 260.00   | 888          | 1700.0    | 92.5                 | 92.9 | 92.7 | 0.83                     | 0.79 | 0.70 | 6.8       | 2.7       | 3.1       | IE1   |
| IM B3 / IM 1001 |              |           | FS 315 L  |           | 1080 kg  |              | IP55      | IEC/EN 60034         |      |      | IEC, DIN, ISO, VDE, EN   |      |      |           |           |           |       |

Environmental conditions : -20 °C - +40 °C / 1,000 m

Locked rotor time (hot / cold) : 32.7 s | 32.7 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                                              |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|--------------------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 75.0 / 89.0 dB(A) <sup>2)</sup> | 80.0 / 94.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes (standard)                                               |
| Moment of inertia                                                                   | 4.5000 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                            |
| Bearing DE   NDE                                                                    | 6319 C3                         | 6319 C3                         | Insulation                 | 155(F) to 130(B)                                             |
| <b>bearing lifetime</b>                                                             |                                 |                                 | Duty type                  | S1                                                           |
| L <sub>10mh</sub> F <sub>rad min</sub> 50 60Hz <sup>1)</sup> for coupling operation | 40000 h                         | 32000 h                         | Direction of rotation      | bidirectional                                                |
| Relubrication interval/quantity DE   NDE                                            | 40 g<br>6000 h                  | 40 g<br>6000 h                  | Frame material             | cast iron                                                    |
| Lubricants                                                                          | Unirex N3                       |                                 | Coating (paint finish)     | Special paint finish C3                                      |
| Regreasing device                                                                   | Yes (standard)                  |                                 | Color, paint shade         | RAL7030                                                      |
| Grease nipple                                                                       | M10x1 DIN 3404 A                |                                 | Motor protection           | (C) 6 PTC thermistors - for alarm and tripping (4 terminals) |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Method of cooling          | IC411 - self ventilated, surface cooled                      |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 |                            |                                                              |

## Terminal box

|                          |           |                                |                       |
|--------------------------|-----------|--------------------------------|-----------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 240.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 38.0 mm - 45.0 mm     |
| Type of terminal box     | TB1 Q01   | Cable entry                    | 2xM63x1,5-2xM20x1,5   |
| Contact screw thread     | M12       | Cable gland                    | 2 glands, 2 plugs     |

## Notes:

$I_A/I_N$  = locked rotor current / current nominal  
 $M_A/M_N$  = locked rotor torque / torque nominal  
 $M_K/M_N$  = 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.<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. |             |  |  |
|  | document type<br>datasheet                                               | document status<br>released   |                                   | customer                                                                                                     |             |  |  |
|                                                                                    | title<br>1LE1502-3AD62-2AC4-Z<br>B02+D22+D47+F74+F76+L05+L50+Q02+R18+S02 | document number               |                                   |                                                                                                              |             |  |  |
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### Special design

|     |                                                                                    |     |                                                   |
|-----|------------------------------------------------------------------------------------|-----|---------------------------------------------------|
| B02 | Acceptance test certificate 3.1 acc. to EN 10204                                   | L05 | Second standard shaft extension                   |
| D22 | motor without CE character for export outside the EEA (see EU regulation 640/2009) | L50 | Bearing insulation DE                             |
| D47 | TR CU product safety certificate EAC for the Eurasian Customs Union                | Q02 | Anti-condensation heating for 230 V (2 terminals) |
| F74 | Sheet steel fan cowl                                                               | R18 | Cable gland metal, max. number                    |
| F76 | Metal external fan                                                                 | S02 | Special paint finish C3                           |

### Additional information:

#### Space heaters

Technical data: 1-phase, 230 V 109W

### Notes:

|                                                                                    |                                                                          |                               |             |                             |                                                                                                              |                |             |  |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------|-------------|-----------------------------|--------------------------------------------------------------------------------------------------------------|----------------|-------------|--|
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