

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



Motor type : 1CV4220B

SIMOTICS SD - 225 S - 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> |       |
| 400 | Δ     | 50   | 37.00 | -/-  | 67.00 | 1485    | 240.0 | 95.2            | 95.5 | 95.2 | 0.84               | 0.80 | 0.70 | 8.4                            | 3.2                            | 3.2                            | IE4   |
| 690 | Y     | 50   | 37.00 | -/-  | 38.50 | 1485    | 240.0 | 95.2            | 95.5 | 95.2 | 0.84               | 0.80 | 0.70 | 8.4                            | 3.2                            | 3.2                            | IE4   |
| 460 | Δ     | 60   | 42.50 | -/-  | 66.00 | 1782    | 230.0 | 95.4            | 95.6 | 95.3 | 0.85               | 0.81 | 0.72 | 8.5                            | 3.1                            | 3.1                            | IE4   |
| 460 | Δ     | 60   | 37.00 | -/-  | 59.00 | 1786    | 198.0 | 95.4            | 95.4 | 94.8 | 0.83               | 0.78 | 0.68 | 9.8                            | 3.6                            | 3.6                            | IE4   |

|                 |  |          |        |      |  |              |                        |  |  |
|-----------------|--|----------|--------|------|--|--------------|------------------------|--|--|
| IM B3 / IM 1001 |  | FS 225 S | 345 kg | IP55 |  | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |  |  |
|-----------------|--|----------|--------|------|--|--------------|------------------------|--|--|

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

Locked rotor time (hot / cold) : 35.2 s | 46.8 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                                               |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|---------------------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 69.0 / 82.0 dB(A) <sup>2)</sup> | 69.0 / 81.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes (standard)                                                |
| Moment of inertia                                                                   | 0.5200 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                             |
| Bearing DE   NDE                                                                    | 6313 C3                         | 6313 C3                         | Insulation                 | 155(F) to 130(B)                                              |
| <b>bearing lifetime</b>                                                             |                                 |                                 | 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                                            | 20 g   20 g<br>8000 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           | (B) 3 PTC thermistors - for tripping (standard) (2 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      | 35.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 27.0 mm - 35.0 mm    |
| Type of terminal box     | TB1 L01   | Cable entry                    | 2xM50x1,5-2xM20x1,5  |
| Contact screw thread     | M8        | 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. |
| DI MC LVM        |                     | DT Configurator |             |                                                                                                              |

|                                                                                    |                    |                  |          |      |
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