

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



Motor type : 1CV2220B

SIMOTICS SD - 225 S - IM B5 - 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> |       |
| 230             | Δ     | 50       | 37.00 | -/-    | 114.00 | 1470    | 240.0 | 92.7            | 93.5 | 93.5                   | 0.88               | 0.85 | 0.78 | 6.6                            | 2.3                            | 2.9                            | IE2   |
| 400             | Y     | 50       | 37.00 | -/-    | 65.00  | 1470    | 240.0 | 92.7            | 93.5 | 93.5                   | 0.88               | 0.85 | 0.78 | 6.6                            | 2.3                            | 2.9                            | IE2   |
| 460             | Y     | 60       | 42.50 | -/-    | 65.00  | 1770    | 230.0 | 93.6            | 94.2 | 94.0                   | 0.88               | 0.86 | 0.79 | 6.6                            | 2.3                            | 2.9                            | IE2   |
| 460             | Y     | 60       | 37.00 | -/-    | 57.00  | 1778    | 199.0 | 93.0            | 93.2 | 92.5                   | 0.87               | 0.84 | 0.76 | 7.2                            | 2.7                            | 3.3                            | IE2   |
| IM B5 / IM 3001 |       | FS 225 S |       | 280 kg |        | IP55    |       | IEC/EN 60034    |      | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |

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

Locked rotor time (hot / cold) : 16.2 s | 29.2 s

Mechanical data

|                                                                                     |                                 |                                 |                            |                                                    |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|----------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 66.0 / 79.0 dB(A) <sup>2)</sup> | 69.0 / 82.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes (standard)                                     |
| Moment of inertia                                                                   | 0.4200 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                  |
| Bearing DE   NDE                                                                    | 6213 Z C3                       | 6213 Z C3                       | Insulation                 | 155(F) to 130(B)                                   |
| bearing lifetime                                                                    |                                 |                                 | 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                                      |
| Lubricants                                                                          | Unirex N3                       |                                 | Frame material             | cast iron                                          |
| Regreasing device                                                                   | No                              |                                 | Coating (paint finish)     | Standard paint finish C2                           |
| Grease nipple                                                                       | -/-                             |                                 | Color, paint shade         | RAL7030                                            |
| Type of bearing                                                                     | Locating bearing NDE            |                                 | Motor protection           | (B) 3 PTC thermistors - for tripping (2 terminals) |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 | Method of cooling          | IC411 - self ventilated, surface cooled            |

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 |                      |  |                                                                                                              |                  |          |      |
|  | document type       | datasheet       |                      |  | document status                                                                                              |                  | customer |      |
|                                                                                    |                     |                 |                      |  | released                                                                                                     |                  |          |      |
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### Special design

Q32 2/6 Bi-metallic sensors (opener) for warning and tripping (4 terminals)

### Notes:

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