

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



Motor type : 1CV2182A

SIMOTICS SD - 180 M - IM B3 - 2p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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  | $I_i/I_N$ | $T_i/T_N$ | $T_B/T_N$ |       |
| 400      | $\Delta$     | 50        | 22.00     | -/-       | 40.00    | 2940         | 71.0      | 91.3                 | 91.8 | 91.3 | 0.87                     | 0.83 | 0.74 | 7.4       | 2.7       | 3.6       | IE2   |
| 690      | Y            | 50        | 22.00     | -/-       | 23.00    | 2940         | 71.0      | 91.3                 | 91.8 | 91.3 | 0.87                     | 0.83 | 0.74 | 7.4       | 2.7       | 3.6       | IE2   |
| 460      | $\Delta$     | 60        | 24.50     | -/-       | 39.00    | 3540         | 66.0      | 91.0                 | 91.2 | 90.3 | 0.87                     | 0.83 | 0.75 | 7.7       | 2.8       | 3.8       | IE2   |
| 460      | $\Delta$     | 60        | 22.00     | -/-       | 35.50    | 3550         | 59.0      | 91.0                 | 91.2 | 90.3 | 0.86                     | 0.82 | 0.74 | 8.4       | 3.0       | 4.1       | IE2   |

|                 |  |          |        |      |  |              |                        |  |  |
|-----------------|--|----------|--------|------|--|--------------|------------------------|--|--|
| IM B3 / IM 1001 |  | FS 180 M | 145 kg | IP55 |  | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |  |  |
|-----------------|--|----------|--------|------|--|--------------|------------------------|--|--|

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

Locked rotor time (hot / cold) : 10.4 s | 19.8 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                                    |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|----------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 77.0 / 84.0 dB(A) <sup>2)</sup> | 80.0 / 87.0 dB(A) <sup>2)</sup> | External earthing terminal | Yes (standard)                                     |
| Moment of inertia                                                                   | 0.0690 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                                  |
| Bearing DE   NDE                                                                    | 6210 Z C3                       | 6210 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      | 16.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 19.0 mm - 28.0 mm    |
| Type of terminal box     | TB1 J01   | Cable entry                    | 2xM40x1,5-1xM16x1,5  |
| Contact screw thread     | M5        | Cable gland                    | 3 plugs              |

## Notes:

$I_A/I_N$  = locked rotor current / current nominal  
 $M_K/M_N$  = 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. | 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               | document status  | customer |      |
|                                                                                    | datasheet                   | released         |          |      |
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### Special design

|     |                                                                                    |
|-----|------------------------------------------------------------------------------------|
| D22 | motor without CE character for export outside the EEA (see EU regulation 640/2009) |
|-----|------------------------------------------------------------------------------------|

**Notes:**

|                                                                                    |                      |                 |             |                                                                                                              |                  |          |      |
|------------------------------------------------------------------------------------|----------------------|-----------------|-------------|--------------------------------------------------------------------------------------------------------------|------------------|----------|------|
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| DI MC LVM                                                                          |                      | DT Configurator |             |                                                                                                              |                  |          |      |
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