

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



Motor type : 1CV2116A

SIMOTICS SD - 112 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  | $I_l/I_N$ | $T_l/T_N$ | $T_B/T_N$ |       |
| 415             | $\Delta$     | 50        | 5.50      | -/-       | 10.00    | 2945         | 17.8      | 87.0                 | 87.8 | 87.4                   | 0.88                     | 0.84 | 0.75 | 8.5       | 2.3       | 3.8       | IE2   |
| 480             | $\Delta$     | 60        | 6.30      | -/-       | 9.60     | 3540         | 17.0      | 88.5                 | 89.1 | 88.5                   | 0.89                     | 0.86 | 0.78 | 8.8       | 2.4       | 4.0       | IE2   |
| 480             | $\Delta$     | 60        | 5.50      | -/-       | 8.60     | 3550         | 14.8      | 88.5                 | 88.6 | 87.4                   | 0.87                     | 0.83 | 0.74 | 9.9       | 2.8       | 4.5       | IE2   |
| IM B3 / IM 1001 |              | FS 112 M  |           | 53 kg     |          | IP55         |           | IEC/EN 60034         |      | IEC, DIN, ISO, VDE, EN |                          |      |      |           |           |           |       |

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

Locked rotor time (hot / cold) : 5.76 s | 9.8 s

## Mechanical data

|                                                                                     |                                 |                                 |                            |                                         |
|-------------------------------------------------------------------------------------|---------------------------------|---------------------------------|----------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 69.0 / 81.0 dB(A) <sup>2)</sup> | 73.0 / 85.0 dB(A) <sup>2)</sup> | External earthing terminal | No                                      |
| Moment of inertia                                                                   | 0.0120 kg m <sup>2</sup>        |                                 | Vibration severity grade   | A                                       |
| Bearing DE   NDE                                                                    | 6206 2Z C3                      | 6206 2Z 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                                                                     | Preloaded bearing DE            |                                 | Motor protection           | (A) without (Standard)                  |
| Condensate drainage holes                                                           | Yes (standard)                  |                                 | Method of cooling          | IC411 - self ventilated, surface cooled |

## Terminal box

|                          |           |                                |                     |
|--------------------------|-----------|--------------------------------|---------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 4.0 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 11.0 mm - 21.0 mm   |
| Type of terminal box     | TB1 F01   | Cable entry                    | 2xM32x1,5           |
| Contact screw thread     | M4        | Cable gland                    | 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>1LE1501-1BA63-5AA4 |                               |             | document number             |                                                                                                              |                |             |  |
| © Siemens AG 2021                                                                  |                             |                               |             | rev.<br>01                  | creation date<br>2021-04-22 21:52                                                                            | language<br>en | Page<br>1/1 |  |