

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



Motor type : 1CV4280A

SIMOTICS SD - 280 S - IM B3 - 2p

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

Remarks

## Electrical data

## Safe Area

| U                                | $\Delta / Y$ | f    | P        | P    | I      | n       | M     | $\eta^{3)}$  |                        |      | $\cos\phi^{3)}$ |      |      | $I_A/I_N$ | $M_A/M_N$ | $M_K/M_N$ | IE-CL |
|----------------------------------|--------------|------|----------|------|--------|---------|-------|--------------|------------------------|------|-----------------|------|------|-----------|-----------|-----------|-------|
| [V]                              |              | [Hz] | [kW]     | [hp] | [A]    | [1/min] | [Nm]  | 4/4          | 3/4                    | 2/4  | 4/4             | 3/4  | 2/4  | $I_i/I_N$ | $T_i/T_N$ | $T_B/T_N$ |       |
| DOL duty (S1) - 155(F) to 130(B) |              |      |          |      |        |         |       |              |                        |      |                 |      |      |           |           |           |       |
| 440                              | $\Delta$     | 60   | 77.28    | -/-  | 119.00 | 3580    | 206.2 | 95.3         | 95.0                   | 93.6 | 0.89            | 0.87 | 0.80 | 9.5       | 3.3       | 3.6       | IE4   |
|                                  |              |      |          |      |        |         |       |              |                        |      |                 |      |      |           |           |           |       |
|                                  |              |      |          |      |        |         |       |              |                        |      |                 |      |      |           |           |           |       |
|                                  |              |      |          |      |        |         |       |              |                        |      |                 |      |      |           |           |           |       |
| IM B3 / IM 1001                  |              |      | FS 280 S |      |        | IP55    |       | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |      |                 |      |      |           |           |           |       |

Environmental conditions : -20 °C - +50 °C / 1000 m

Locked rotor time (hot / cold) : 37 s | 50 s

These values are calculated. The final rating plate data will be calculated when the order is placed

The efficiency values and efficiency class according to EuP directive are valid for standard power ratings under standard conditions.

## Mechanical data

|                                                                                     |                                |                                |                                 |                                         |
|-------------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                                | 72 / 86 dB(A) <sup>2) 3)</sup> | 81 / 94 dB(A) <sup>2) 3)</sup> | External earthing terminal      | Yes (standard)                          |
| Moment of inertia                                                                   | 0.9400 kg m <sup>2</sup>       |                                | Vibration severity grade        | A                                       |
| Bearing DE   NDE                                                                    | 6315 C3                        | 6315 C3                        | Thermal class                   | F                                       |
| bearing lifetime                                                                    |                                |                                | 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                                            | 25 g   25 g                    | 2000 h                         | Frame material                  | cast iron                               |
| Lubricants                                                                          | Unirex N3                      |                                | Net weight of the motor (IM B3) | 600 kg                                  |
| Regreasing device                                                                   | Yes (standard)                 |                                | Coating (paint finish)          | Standard paint finish C2                |
| Grease nipple                                                                       | M10x1 DIN 3404 A               |                                | Color, paint shade              | RAL7030                                 |
| Type of bearing                                                                     | Locating 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    | right     | Max. cross-sectional area      | 120 mm <sup>2</sup> |
| Material of terminal box | cast iron | Cable diameter from ... to ... | 34 mm - 42 mm       |
| Type of terminal box     | TB1 N01   | Cable entry                    | 2xM63x1,5           |
| Contact screw thread     | M10       | 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. |                             | <a href="#">Link documents</a><br> |             |
|  | document type<br>datasheet                           |                               |             | document status<br>released                                                                                  |                             |                                                                                                                         |             |
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### Special design

|     |                                                  |     |                                                                                                |
|-----|--------------------------------------------------|-----|------------------------------------------------------------------------------------------------|
| B02 | Acceptance test certificate 3.1 acc. to EN 10204 | M1D | 440 VD for 60 Hz, 60-Hz power                                                                  |
| B61 | Document order dimension drawing                 | N06 | Temperature class 155 (F), utilised to 130 (B), cooling medium temperature 50°C, power reduced |
| L51 | Bearing insulation NDE                           |     |                                                                                                |

### Notes:

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