

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



Motor type : 1CV2282B

SIMOTICS SD - 280 M - 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> |       |
| DOL duty (S1) - 155(F) to 130(B)                     |       |      |          |      |        |         |       |                 |                                                  |                        |                    |      |      |                                |                                |                                |       |
| 380                                                  | Δ     | 50   | 90.00    | -/-  | 167.00 | 1486    | 580.0 | 94.2            | 94.3                                             | 93.6                   | 0.87               | 0.84 | 0.75 | 7.3                            | 2.6                            | 3.1                            | IE2   |
| 660                                                  | Y     | 50   | 90.00    | -/-  | 96.00  | 1486    | 580.0 | 94.2            | 94.3                                             | 93.6                   | 0.87               | 0.84 | 0.75 | 7.3                            | 2.6                            | 3.1                            | IE2   |
| 440                                                  | Δ     | 60   | 104.00   | -/-  | 165.00 | 1785    | 560.0 | 95.0            | 95.1                                             | 94.3                   | 0.87               | 0.85 | 0.77 | 7.2                            | 2.5                            | 3.1                            | IE2   |
| 440                                                  | Δ     | 60   | 90.00    | -/-  | 144.00 | 1788    | 480.0 | 94.5            | 94.3                                             | 93.3                   | 0.87               | 0.84 | 0.75 | 8.1                            | 2.9                            | 3.4                            | IE2   |
| IM B3 / IM 1001                                      |       |      | FS 280 M |      |        | IP55    |       | IEC/EN 60034    |                                                  | IEC, DIN, ISO, VDE, EN |                    |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |      |          |      |        |         |       |                 | Locked rotor time (hot / cold) : 20.3 s   35.5 s |                        |                    |      |      |                                |                                |                                |       |

## Mechanical data

|                                                                             |                             |                             |                                 |                                                    |
|-----------------------------------------------------------------------------|-----------------------------|-----------------------------|---------------------------------|----------------------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                        | 71 / 85 dB(A) <sup>2)</sup> | 78 / 92 dB(A) <sup>2)</sup> | External earthing terminal      | Yes (standard)                                     |
| Moment of inertia                                                           | 1.4000 kg m <sup>2</sup>    |                             | Vibration severity grade        | A                                                  |
| Bearing DE   NDE                                                            | 6317 C3                     | 6317 C3                     | Thermal class                   | F                                                  |
| bearing lifetime                                                            |                             |                             | Duty type                       | S1                                                 |
| L <sub>10mh</sub> F <sub>Rad</sub> min <sup>1)</sup> for coupling operation | 40000 h                     | 32000 h                     | Direction of rotation           | bidirectional                                      |
| 50 60Hz                                                                     |                             |                             | Frame material                  | cast iron                                          |
| Relubrication interval/quantity DE                                          | 30 g   30 g                 |                             | Net weight of the motor (IM B3) | 570 kg                                             |
| NDE                                                                         | 8000 h                      |                             | Coating (paint finish)          | Standard paint finish C2                           |
| Lubricants                                                                  | Unirex N3                   |                             | Color, paint shade              | RAL7030                                            |
| Regreasing device                                                           | Yes (standard)              |                             | Motor protection                | (B) 3 PTC thermistors - for tripping (2 terminals) |
| Grease nipple                                                               | M10x1 DIN 3404 A            |                             | Method of cooling               | IC411 - self ventilated, surface cooled            |
| Type of bearing                                                             | Locating bearing NDE        |                             |                                 |                                                    |
| Condensate drainage holes                                                   | Yes (standard)              |                             |                                 |                                                    |

## Terminal box

|                          |           |                                |                     |
|--------------------------|-----------|--------------------------------|---------------------|
| Terminal box position    | top       | 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                    | 2xM63x1,5-2xM20x1,5 |
| Contact screw thread     | M10       | Cable gland                    | 4 plugs             |

## Notes:

|                                                                         |                                           |                                                                  |
|-------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------|
| I <sub>A</sub> /I <sub>N</sub> = locked rotor current / current nominal | 1) L10mh according to DIN ISO 281 10/2010 | 3) Value is valid only for DOL operation with motor design IC411 |
| M <sub>K</sub> /M <sub>N</sub> = locked rotor torque / torque nominal   | 2) at rated power / at full load          |                                                                  |
| M <sub>B</sub> /M <sub>N</sub> = break down torque / nominal torque     |                                           |                                                                  |

|                                                                                    |                      |                 |             |                                                                                                              |                 |                                                                                       |      |  |
|------------------------------------------------------------------------------------|----------------------|-----------------|-------------|--------------------------------------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------|------|--|
| responsible dep.                                                                   | technical reference  | created by      | approved by | Technical data are subject to change! There may be discrepancies between calculated and rating plate values. |                 | <a href="#">Link documents</a>                                                        |      |  |
| DI MC LVM                                                                          |                      | DT Configurator |             |                                                                                                              |                 |  |      |  |
|  | document type        |                 |             |                                                                                                              | document status |                                                                                       |      |  |
|                                                                                    | datasheet            |                 |             |                                                                                                              | released        |                                                                                       |      |  |
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|                                                                                    |                      |                 |             | 01                                                                                                           | 2022-03-29      | en                                                                                    | 1/2  |  |

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### Special design

D47 TR CU product safety certificate EAC for the Eurasian Customs Union

### Notes:

|                                                                                    |                                      |                               |                             |                                                                                                              |                                |
|------------------------------------------------------------------------------------|--------------------------------------|-------------------------------|-----------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------|
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|  | document type<br>datasheet           |                               |                             |                                                                                                              | document status<br>released    |
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