

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



Motor type : 1CV2280B SIMOTICS XP - 280 S - IM B3 - 4p

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

Remarks

|                 |                              |
|-----------------|------------------------------|
| Electrical data | II 3G Ex ec IIC T3 Gc<br>-/- |
|-----------------|------------------------------|

| 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)                     |       |          |       |      |        |         |       |                 |                                                  |      |                        |      |      |                                |                                |                                |       |
| 400                                                  | Δ     | 50       | 75.00 | -/-  | 132.00 | 1485    | 480.0 | 94.0            | 94.2                                             | 93.8 | 0.87                   | 0.85 | 0.78 | 6.8                            | 2.5                            | 3.0                            | IE2   |
| 690                                                  | Y     | 50       | 75.00 | -/-  | 77.00  | 1485    | 480.0 | 94.0            | 94.2                                             | 93.8 | 0.87                   | 0.85 | 0.78 | 6.8                            | 2.5                            | 3.0                            | IE2   |
| 460                                                  | Δ     | 60       | 86.00 | -/-  | 130.00 | 1785    | 460.0 | 94.5            | 94.6                                             | 94.0 | 0.88                   | 0.86 | 0.80 | 6.7                            | 2.5                            | 2.8                            | IE2   |
| 460                                                  | Δ     | 60       | 75.00 | -/-  | 114.00 | 1788    | 400.0 | 94.5            | 94.3                                             | 93.2 | 0.87                   | 0.84 | 0.77 | 7.6                            | 2.7                            | 3.2                            | IE2   |
| IM B3 / IM 1001                                      |       | FS 280 S |       |      |        | IP55    |       |                 | IEC/EN 60034                                     |      | IEC, DIN, ISO, VDE, EN |      |      |                                |                                |                                |       |
| Environmental conditions : -20 °C - +40 °C / 1,000 m |       |          |       |      |        |         |       |                 | Locked rotor time (hot / cold) : 29.8 s   47.1 s |      |                        |      |      |                                |                                |                                |       |

Mechanical data

|                                                                                 |                                |                                |                                 |                                         |
|---------------------------------------------------------------------------------|--------------------------------|--------------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                            | 71 / 85 dB(A) <sup>2) 3)</sup> | 79 / 92 dB(A) <sup>2) 3)</sup> | External earthing terminal      | With (standard)                         |
| Moment of inertia                                                               | 1.3000 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> <sup>1)</sup> for coupling operation 50 60Hz | 40000 h                        | 32000 h                        | Direction of rotation           | bidirectional                           |
| Relubrication interval/quantity DE   NDE                                        | 30 g   30 g<br>8000 h          |                                | Frame material                  | cast iron                               |
| Lubricants                                                                      | Unirex N3                      |                                | Net weight of the motor (IM B3) | 550 kg                                  |
| Regreasing device                                                               | With (standard)                |                                | Coating (paint finish)          | Standard paint finish C2                |
| Grease nipple                                                                   | M10x1 DIN 3404 A               |                                | Color, paint shade              | RAL7030                                 |
| Type of bearing                                                                 | Locating bearing NDE           |                                | Motor protection                | (A) without (Standard)                  |
| Condensate drainage holes                                                       | With (standard)                |                                | Method of cooling               | IC411 - self ventilated, surface cooled |

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 - 45 mm       |
| Type of terminal box     | TB1 N01   | Cable entry                    | 2xM63x1,5           |
| Contact screw thread     | M10       |                                |                     |

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>B</sub>/M<sub>N</sub> = break down torque / nominal torque

1) L<sub>10mh</sub> 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. | Link documents  |
| IN LVM            |                     | SPC        |               |                                                                                                              |                 |
| SIEMENS           | document type       |            |               |                                                                                                              | document status |
|                   | datasheet           |            |               |                                                                                                              | released        |
|                   | title               |            |               |                                                                                                              | document number |
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