

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



Motor type : 1AV3104B

SIMOTICS GP - 100 L - IM B5 - 4p

|                  |                 |           |
|------------------|-----------------|-----------|
| 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> |      |      | $I_A/I_N$<br>$I_i/I_N$ | $M_A/M_N$<br>$T_i/T_N$ | $M_K/M_N$<br>$T_B/T_N$ | IE-CL |
|-----------------------------------------|--------------|-----------|-----------|-----------|----------|--------------|-----------|------------------------|------|------|--------------------------|------|------|------------------------|------------------------|------------------------|-------|
|                                         |              |           |           |           |          |              |           | 4/4                    | 3/4  | 2/4  | 4/4                      | 3/4  | 2/4  |                        |                        |                        |       |
| <b>DOL duty (S1) - 155(F) to 130(B)</b> |              |           |           |           |          |              |           |                        |      |      |                          |      |      |                        |                        |                        |       |
| 400                                     | $\Delta$     | 50        | 2.20      | -/-       | 4.45     | 1455         | 14.4      | 86.7                   | 87.2 | 86.3 | 0.82                     | 0.76 | 0.64 | 8.3                    | 3.0                    | 3.8                    | IE3   |
| 690                                     | Y            | 50        | 2.20      | -/-       | 2.60     | 1455         | 14.4      | 86.7                   | 87.2 | 86.3 | 0.82                     | 0.76 | 0.64 | 8.3                    | 3.0                    | 3.8                    | IE3   |
| 460                                     | $\Delta$     | 60        | 2.54      | -/-       | 4.30     | 1750         | 13.9      | 89.5                   | 90.1 | 89.2 | 0.83                     | 0.77 | 0.66 | 8.8                    | 3.0                    | 3.9                    | IE3   |
| 460                                     | $\Delta$     | 60        | 2.20      | -/-       | 3.85     | 1760         | 11.9      | 89.5                   | 89.5 | 88.0 | 0.80                     | 0.73 | 0.61 | 9.9                    | 3.5                    | 4.6                    | IE3   |
| IM B5 / IM 3001                         |              | FS 100 L  |           | IP55      |          | IEC/EN 60034 |           | IEC, DIN, ISO, VDE, EN |      |      |                          |      |      |                        |                        |                        |       |

Environmental conditions : -20 °C - +40 °C / 1000 m

Locked rotor time (hot / cold) : 18.6 s | 22.6 s

## Mechanical data

|                                                                      |                             |                             |                                 |                                         |
|----------------------------------------------------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------------------|
| Sound level (SPL / SWL) at 50Hz 60Hz                                 | 60 / 72 dB(A) <sup>2)</sup> | 62 / 74 dB(A) <sup>2)</sup> | Vibration severity grade        | A                                       |
| Moment of inertia                                                    | 0.0101 kg m <sup>2</sup>    |                             | Thermal class                   | F                                       |
| Bearing DE   NDE                                                     | 6206 2Z C3                  | 6206 2Z C3                  | Duty type                       | S1                                      |
| <b>bearing lifetime</b>                                              |                             |                             | Direction of rotation           | bidirectional                           |
| $L_{10mh}$ , $F_{Rad}$ , $m_{min}$ for coupling operation<br>50 60Hz | 40000 h                     | 32000 h                     | Frame material                  | aluminum                                |
| Lubricants                                                           | Unirex N3                   |                             | Net weight of the motor (IM B3) | 25 kg                                   |
| 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                                            | No                          |                             | Method of cooling               | IC411 - self ventilated, surface cooled |
| External earthing terminal                                           | No                          |                             |                                 |                                         |

## Terminal box

|                          |           |                                |                   |
|--------------------------|-----------|--------------------------------|-------------------|
| Terminal box position    | top       | Max. cross-sectional area      | 4 mm <sup>2</sup> |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 11 mm - 21 mm     |
| Type of terminal box     | TB1 F00   | 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                 | <i>Technical data are subject to change! There may be discrepancies between calculated and rating plate values.</i> | <a href="#">Link documents</a> |                |
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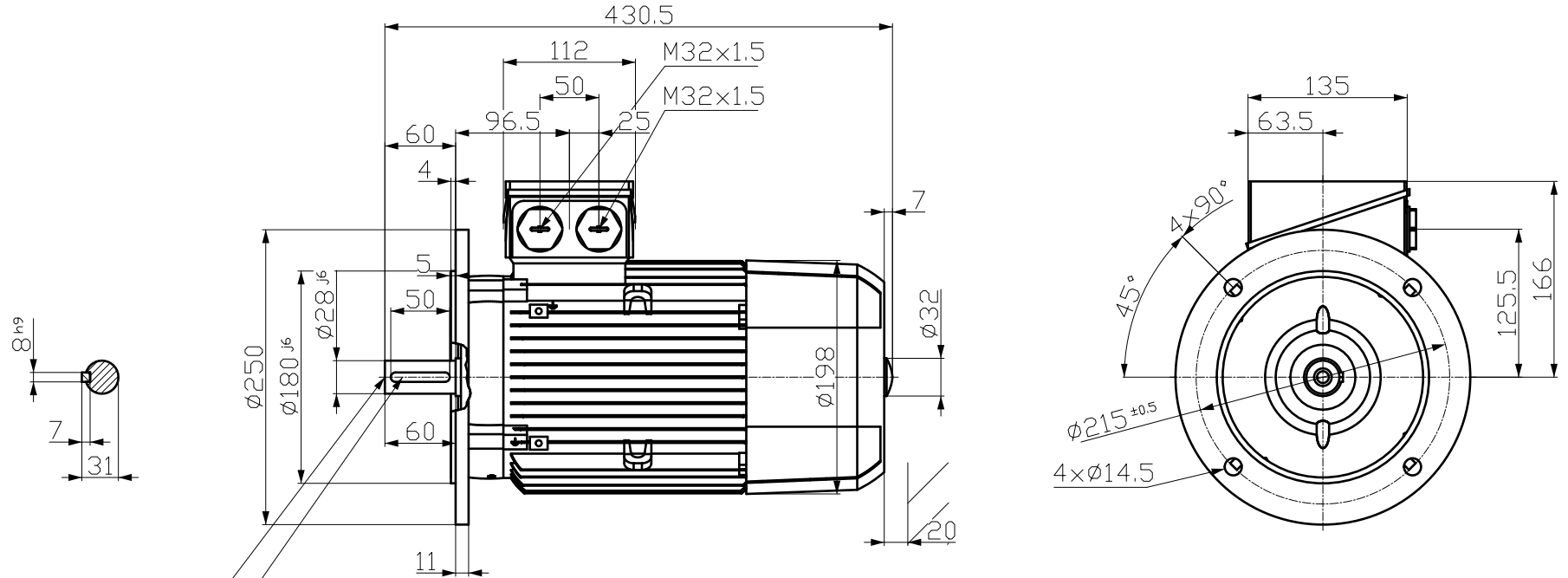
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DIN 332-DR M10  
DIN 6885-1

| Tolerance     | Surface      | Material      | Weight | Scale        |
|---------------|--------------|---------------|--------|--------------|
| F50FEFC01H00E | Author       | Material      | E      | { { }        |
| E             | Creator      | ÖVS           |        |              |
|               | Approval     | T a : ^ @ } * |        |              |
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