

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



Motor type : 1AV1090B

SIMOTICS GP - 90 S - IM B5 - 4p

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

Remarks

Electrical data

Safe Area

| U [V] | Δ / Y | f [Hz] | P [kW] | P [hp] | I [A] | n [1/min] | M [Nm] | η ³⁾ | | | $\cos\phi$ ³⁾ | | | I_A/I_N I_i/I_N | M_A/M_N T_i/T_N | M_K/M_N T_B/T_N | IE-CL |
|----------|--------------|-----------|-----------|-----------|----------|--------------|-----------|----------------------|------|------|--------------------------|------|------|------------------------|------------------------|------------------------|-------|
| | | | | | | | | 4/4 | 3/4 | 2/4 | 4/4 | 3/4 | 2/4 | | | | |
| 230 | Δ | 50 | 1.10 | -/- | 4.55 | 1405 | 7.5 | 75.0 | 75.9 | 73.6 | 0.81 | 0.72 | 0.58 | 4.5 | 2.1 | 2.3 | IE1 |
| 400 | Y | 50 | 1.10 | -/- | 2.60 | 1405 | 7.5 | 75.0 | 75.9 | 73.6 | 0.81 | 0.72 | 0.58 | 4.5 | 2.1 | 2.3 | IE1 |
| 460 | Y | 60 | 1.27 | -/- | 2.50 | 1705 | 7.1 | 79.0 | 79.8 | 77.7 | 0.81 | 0.73 | 0.59 | 5.0 | 2.2 | 2.5 | IE1 |

| | | | | | |
|---|---------|----|------|--|------------------------|
| IM B5 / IM 3001 | FS 90 S | kg | IP55 | IEC/EN 60034 | IEC, DIN, ISO, VDE, EN |
| Environmental conditions : -20 °C - +40 °C / 1000 m | | | | Locked rotor time (hot / cold) : 12.4 s 23.2 s | |

Mechanical data

| | | | | |
|---|-----------------------------|-----------------------------|----------------------------|---|
| Sound level (SPL / SWL) at 50Hz 60Hz | 56 / 67 dB(A) ²⁾ | 54 / 65 dB(A) ²⁾ | External earthing terminal | No |
| Moment of inertia | 0.0050 kg m ² | | Vibration severity grade | A |
| Bearing DE NDE | 6205 2Z C3 | 6004 2Z C3 | Insulation | 155(F) to 130(B) |
| bearing lifetime | | | Duty type | S1 |
| L _{10mh} , F _{Rad min} 50 60Hz ¹⁾ for coupling operation | 40000 h | 32000 h | Direction of rotation | bidirectional |
| Lubricants | Unirex N3 | | Frame material | aluminum |
| 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 | 1.5 mm ² |
| Material of terminal box | Aluminium | Cable diameter from ... to ... | 9 mm - 17 mm |
| Type of terminal box | TB1 E00 | Cable entry | 1xM25x1,5-1xM16x1,5 |
| 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. DI MC LVM | technical reference | created by DT Configurator | approved by | <i>Technical data are subject to change! There may be discrepancies between calculated and rating plate values.</i> | | | |
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Special design

| | | | |
|-----|---|-----|---|
| D22 | Motor without CE character for export outside the EEA (see EU regulation 2019/1781) | Q02 | Anti-condensation heating for 230 V (2 terminals) |
| N30 | Increased air humidity/temperature with 30 to 60 g water per m3 air | | |

Additional information:

Space heaters

| | |
|-----------------|--------------------|
| Technical data: | 1-phase, 230 V 25W |
| | |

Notes:

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