

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

Motor type: **SD100** FS: **184T - 4p - 5 hp -**

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

## Electrical data

Class I Division 2 Gr. A, B, C or D, T3

| U [V] | $\Delta/Y$ | f [Hz] | P [HP] | P [kW] | n [rpm] | I Load [Amps] |      |      |      |      | LRC  | Nom. Eff Load [%] |      |      | Pwr. Factor Load [%] |      |      | Torque [lb-ft] | T <sub>A</sub> /T <sub>N</sub> LRT [%] | T <sub>k</sub> /T <sub>N</sub> BDT [%] |
|-------|------------|--------|--------|--------|---------|---------------|------|------|------|------|------|-------------------|------|------|----------------------|------|------|----------------|--|--|
|       |            |        |        |        |         | 4/4           | 3/4  | 1/2  | 0    | 4/4  |      | 3/4               | 2/4  | 4/4  | 3/4                  | 2/4  |      |                |  |  |
| 575   | Y          | 60     | 5.00   | 4.00   | 1,800   | 5.20          | 4.20 | 3.30 | 2.40 | 36.8 | 89.5 | 90.0              | 89.2 | 80.5 | 75.1                 | 63.6 | 15.0 | 220            | 353                                    |  |

|                  |  |                                       |                                     |              |            |
|------------------|--|---------------------------------------|-------------------------------------|--------------|------------|
| Frame Type: 184T | Type of constr.: (A) Foot mounted - End shield | Ins. Cl.: Standard Class F Insulation | Motor Prot.: (A) Without Protection | NEMA Des.: B | S.F.: 1.15 |
| Mtr. WT: 135     |  | Temp. Rise Cl.: B                     | Amb. Temp.: + 40 to -20 °C @1000 m  | kVA: J       | IP 55      |

## Mechanical data

|                                      |                         |      |      |              |      |      |       |                         |                              |
|--------------------------------------|-------------------------|------|------|--------------|------|------|-------|-------------------------|------------------------------|
| Sound level (SPL / SWL) at 60 Hz     | 57.0 dB(A) / 67.0 dB(A) |      |      |              |      |      |       | Thickener               | Polyurea                     |
| Octave Band Center Frequencies Hertz |                         |      |      |              |      |      |       | Safe Stall Time Hot     | 14 s                         |
|                                      | 250                     | 500  | 1000 | 2000         | 4000 | 8000 | Hz    | Safe Stall Time Cold    | 29 s                         |
| SPL@3                                | 42.0                    | 46.0 | 54.0 | 49.0         | 43.0 | 32.0 | dB(A) | Frame material          | cast iron                    |
| Moment of inertia                    | 0.3 Lb-ft <sup>2</sup>  |      |      |              |      |      |       | Color, paint shade      | Standard Paint - RAL7030     |
| Ext Load Inertia Capability:         | 27.0 Lb ft <sup>2</sup> |      |      |              |      |      |       | Coating (paint finish)  | Standard Alkyed + Epoxy (C2) |
| <b>Bearings</b>                      |                         |      |      |              |      |      |       | <b>Ventilation Type</b> |                              |
| Bearing DE   NDE                     | 6206 Z C3 S0            |      |      | 6206 Z C3 S0 |      |      |       | Method of cooling       | TEFC                         |
| Bearing_Type                         | Ball Bearing            |      |      | Ball Bearing |      |      |       | Direction of rotation   | Bidirectional                |
| AFBMA:                               | 30BC02JP30              |      |      | 30BC02JP30   |      |      |       | Fan Material            | Polypropylen ESD             |
| <b>Grease</b>                        |                         |      |      |              |      |      |       | VFD                     | CT: 20:1 VT: 20:1            |
| Capacity                             | 0.2 oz                  |      |      | 0.2 oz       |      |      |       | Space heaters           | without                      |
| Grease Type:                         | Exxon Mobile EM         |      |      |              |      |      |       | Brake:                  | without                      |


## Terminal box

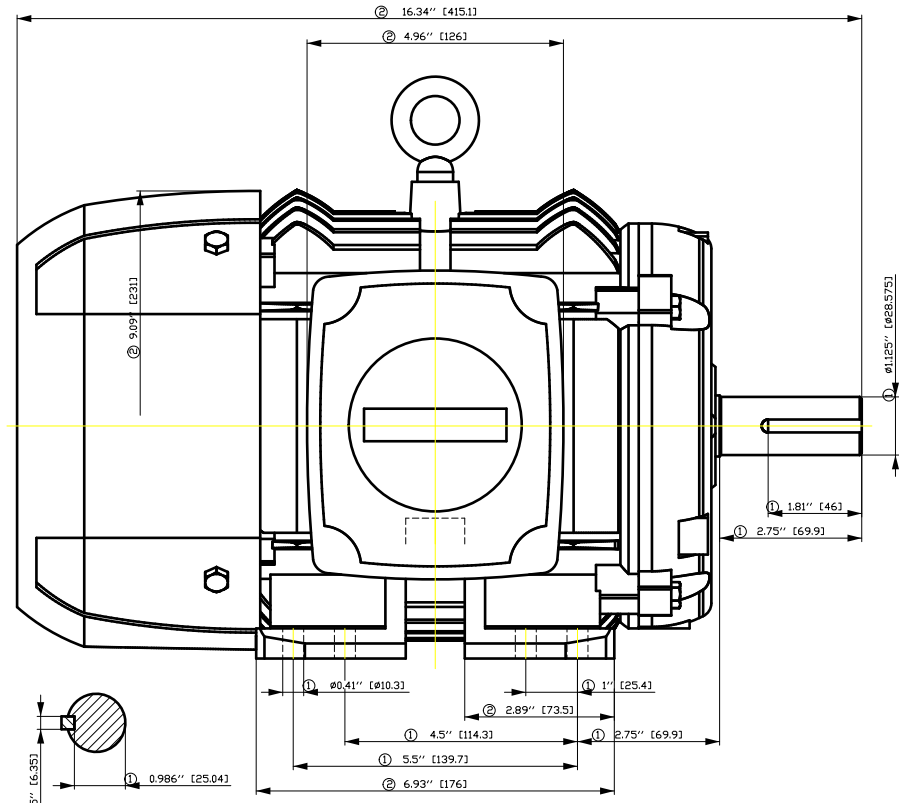
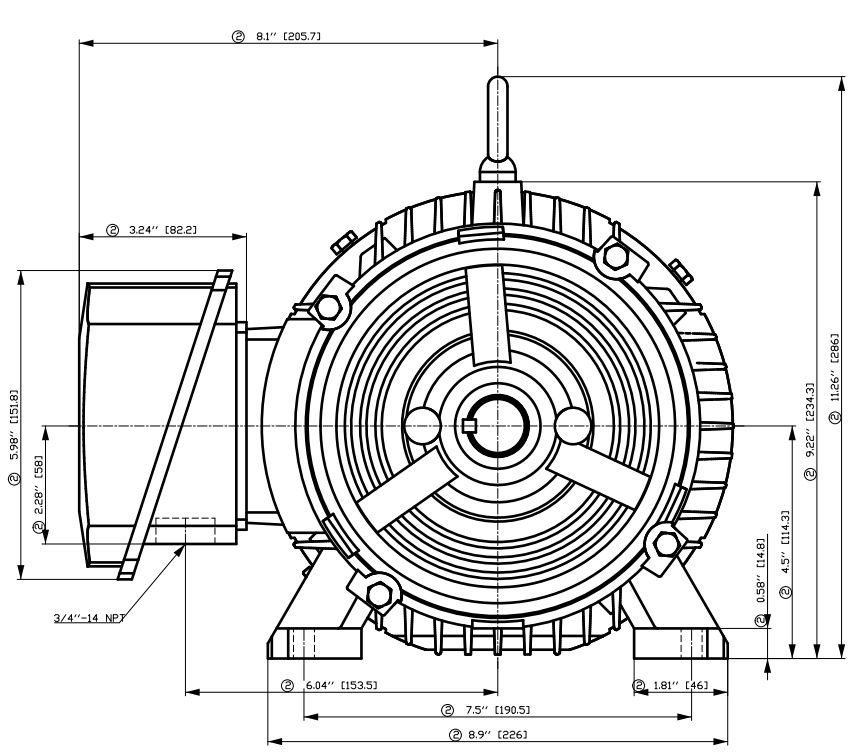
|                      |              |      |      |                    |                          |   |
|----------------------|--------------|------|------|--------------------|--------------------------|---|
| Lead Wire Connection | 3 LEAD - WYE |      |      |                    | Terminal box position    | (3) F-1, Standard Floor Mount, T. Box LHS |
| Voltage              | L1           | L1   | L1   | Connected together | Material of terminal box | Cast Iron                                 |
| ----                 | ----         | ---- | ---- | ----               | Cable entry              | .75" NPT                                  |
| ----                 | T1           | T2   | T3   | ----               |                          |   |

### Notes:

I<sub>L</sub>/I<sub>N</sub> = locked rotor current / current nominal  
M<sub>L</sub>/M<sub>N</sub> = locked rotor torque / torque nominal  
M<sub>B</sub>/M<sub>N</sub> = break down torque / nominal torque

3) Value is valid only for DOL operation with motor design IC411  
2) at rated power / at full load

|  |                             |                                   |                |  |  |  |  |
|--|-----------------------------|-----------------------------------|----------------|--|--|--|--|
| 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 software and hardware versions</i> |  |  |  |
|  | document type<br>datasheet  | document status<br>released       |                | customer   |  |  |  |
|  | title<br>1LE2321-1CB31-3AA3 | document number                   |                |  |  |  |  |
| © Siemens AG 2022  | rev.<br>01                  | creation date<br>2022-04-08 17:17 | language<br>en | Page<br>1/1  |  |  |  |



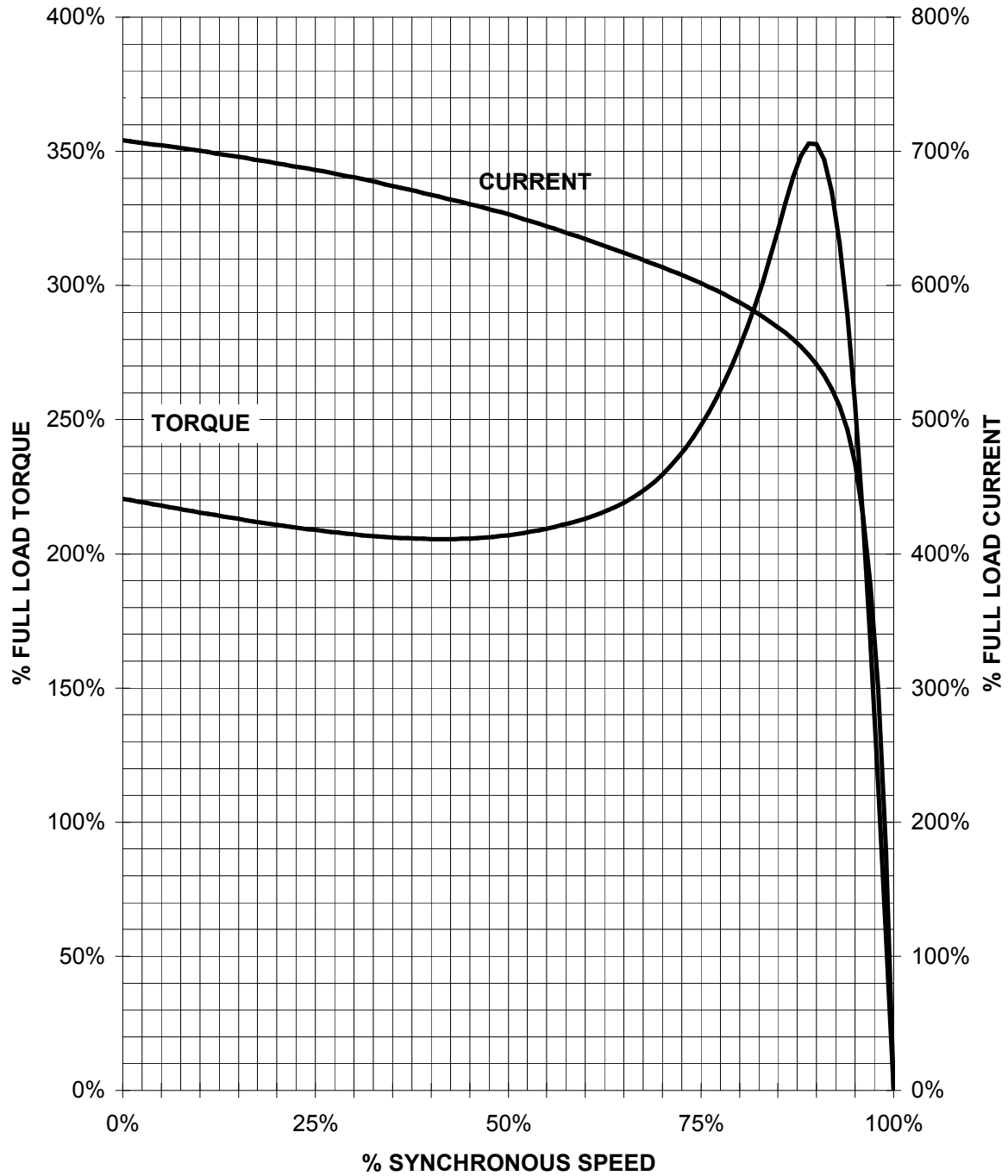
- ① Tolerances according to NEMA std.
- ② All these dimensions corresponding to assemblies and castings shall have a tolerance as per DIN standard 1686-GTB 19.
- ③ Not according to NEMA std.

|                   |                |                                    |              |                  |        |
|-------------------|----------------|------------------------------------|--------------|------------------|--------|
| Tolerance         | Surface        | Material                           | Weight<br>Ë  | Scale<br>{ }     |        |
| F5ÖG·GF#ÖÓ·FH·ÖÖH | Author         | Öä }·# }·#·#·#·#·#<br>T ä: ^&@ }·# |              |                  |        |
| Ë                 | Creator<br>ÖVS |                                    |              |                  |        |
|                   | Approval       |                                    |              |                  |        |
|                   | Department     |                                    |              |                  |        |
|                   | Change Order   | MLFB                               |              | Doc Type         |        |
| <b>SIEMENS</b>    | Doc State      | I ð ÖG                             | Item No      | Paper Size<br>CH |        |
|                   | Revision       | Index                              | RS           | Doc No           |        |
|                   | 1st Language   | ^                                  | 2nd Language | ä^               |        |
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|                   |                |                                    |              | Sheet            | F of F |

# SIEMENS INDUSTRY, INC.

HP 5 VOLTS < 600V RPM 1800 TYPE SD100  
HZ 60 PHASE 3 FRAME 184T NEMA B

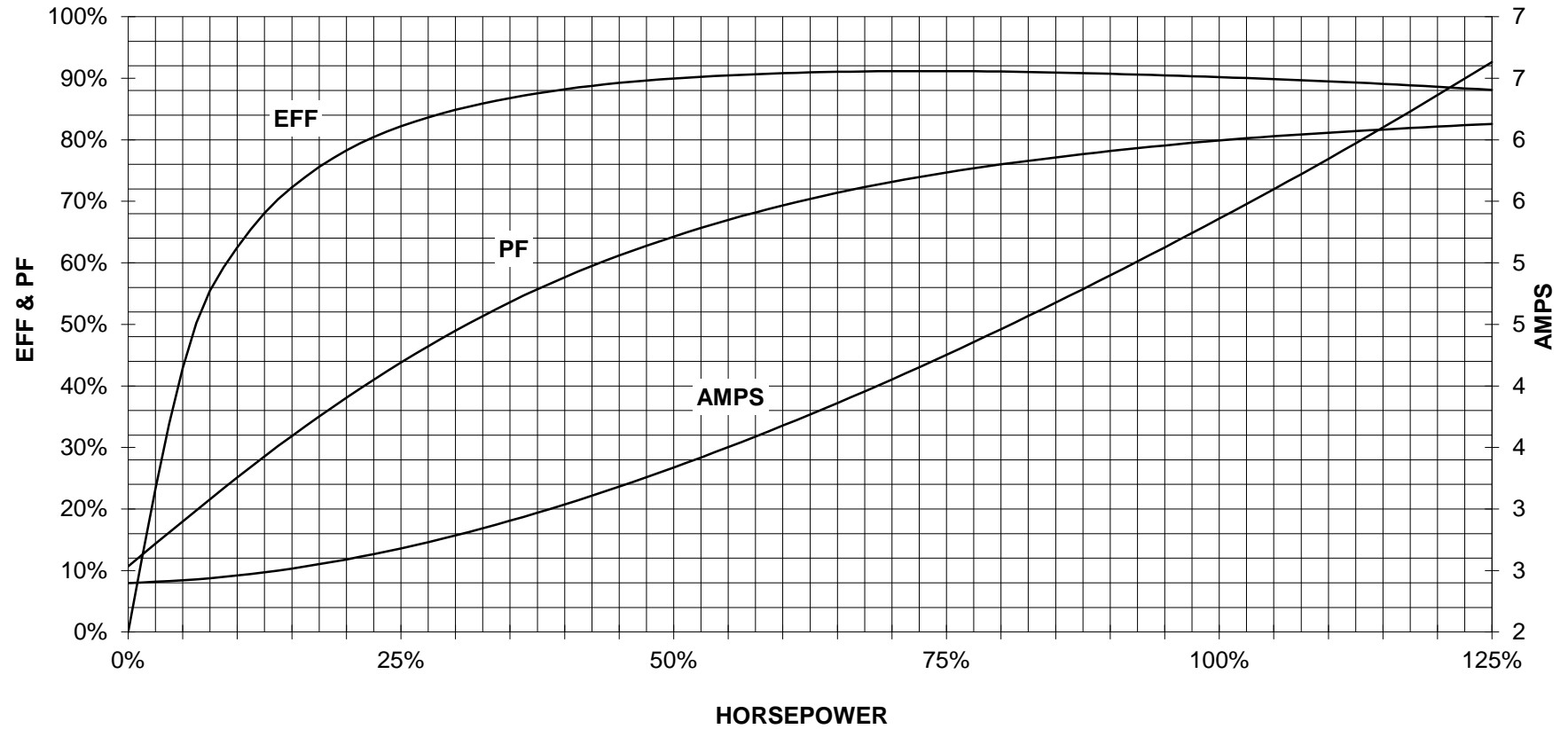
## TORQUE & CURRENT VS. SPEED



CUSTOMER: \_\_\_\_\_ ORDER#: \_\_\_\_\_

5 HP 1800 RPM 184T FRAME 575 VOLTS 3 PHASE NEMA DESIGN B

**SIEMENS INDUSTRY, INC.**  
**PERFORMANCE CURVE**  
**SD100**



CUSTOMER \_\_\_\_\_ ORDER # \_\_\_\_\_ PO # \_\_\_\_\_

PERFORMANCE BASED ON DESIGN CALCULATIONS. SUBJECT TO CHANGE WITHOUT NOTICE.

REV. 1

Main terminal diagram



| 3 LEAD WYE |    |    |       |
|------------|----|----|-------|
| LINES      |    |    | CONN. |
| L1         | L2 | L3 |       |
| T1         | T2 | T3 |       |

responsible dep.  
DI MC LVM

technical reference

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Project

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document type  
Wiring Diagram

title  
1LE2321-1CB31-3AA3

document status  
free

document number

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