

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

Motor type: **GP100** FS: **445TS - 2p - 150 hp -**

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

## Electrical data

| 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               | $\Delta$   | 60                                             | 150.00 | 110.00 | 3,600   | 131.20                                | 99.70 | 71.00                               | 29.60 | 868.0 | 95.0         | 95.0              | 94.2       | 90.0 | 89.0                 | 84.0 | 220.0 | 120            | 200                                    |                                        |
| Frame Type: 445TS |            | 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: 1,601    |            |                                                |        |        |         | Temp. Rise Cl.: B                     |       | Amb. Temp.: + 40 to -20 °C @1000 m  |       |       | kVA: G       |                   | IP 54      |      |                      |      |       |                |                                        |                                        |

## Mechanical data

|                                      |                          |      |      |               |      |      |                       |                         |                              |
|--------------------------------------|--------------------------|------|------|---------------|------|------|-----------------------|-------------------------|------------------------------|
| Sound level (SPL / SWL) at 60 Hz     | 79.0 dB(A) / 90.0 dB(A)  |      |      |               |      |      |                       | Thickener               | Polyurea                     |
| Octave Band Center Frequencies Hertz |                          |      |      |               |      |      |                       | Safe Stall Time Hot     | 15 s                         |
|                                      | 250                      | 500  | 1000 | 2000          | 4000 | 8000 | Hz                    | Safe Stall Time Cold    | 18 s                         |
| SPL@3                                | 67.0                     | 71.0 | 74.0 | 74.0          | 70.0 | 59.0 | dB(A)                 | Frame material          | cast iron                    |
| Moment of inertia                    | 25.1 Lb-ft <sup>2</sup>  |      |      |               |      |      |                       | Color, paint shade      | Standard Paint - RAL7030     |
| Ext Load Inertia Capability:         | 133.0 Lb ft <sup>2</sup> |      |      |               |      |      |                       | Coating (paint finish)  | Standard Alkyed + Epoxy (C2) |
| <b>Bearings</b>                      |                          |      |      |               |      |      |                       | <b>Ventilation Type</b> |                              |
| Bearing DE   NDE                     | 6316 Z C3 S0             |      |      | 6216 ZZ C3 S0 |      |      | Method of cooling     | TEFC                    |                              |
| Bearing_Type                         | Ball Bearing             |      |      | Ball Bearing  |      |      | Direction of rotation | Bidirectional           |                              |
| AFBMA:                               | 80BC03JP30               |      |      | 80BC02JPP30   |      |      | Fan Material          | Polypropylen ESD        |                              |
| <b>Grease</b>                        |                          |      |      |               |      |      |                       | VFD                     | CT: 4:1 VT: 20:1             |
| Capacity                             | 7.5 oz                   |      |      | 6 oz          |      |      | Space heaters         | without                 |                              |
| Grease Type:                         | Exxon Mobile EM          |      |      |               |      |      |                       | Brake:                  | without                      |


## Terminal box

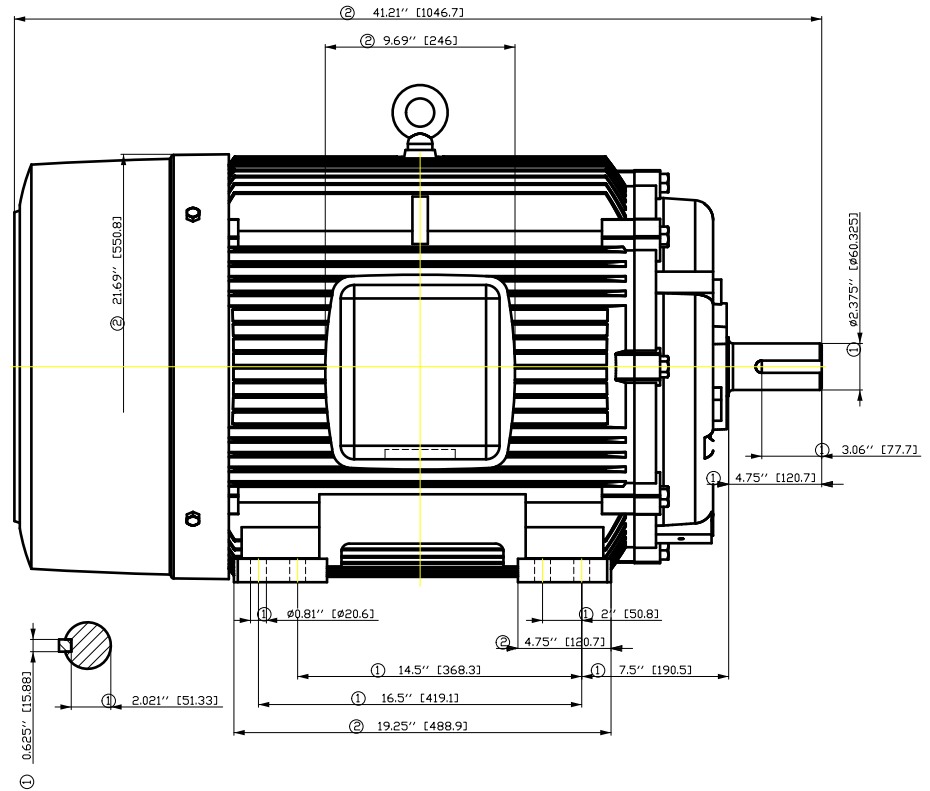
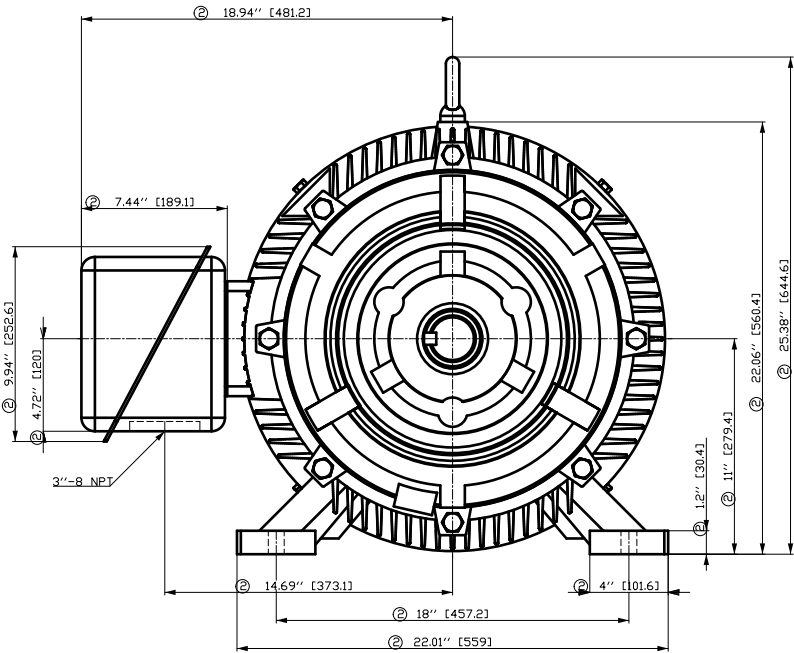
|                      |      |      |      |                    |                          |                                           |
|----------------------|------|------|------|--------------------|--------------------------|-------------------------------------------|
| Lead Wire Connection |      |      |      |                    | 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              | 3" 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>1LE2221-4DA21-3AA3 | document number                   |                |                                                                                                                |  |  |  |
| © Siemens AG 2022                                                                  | rev.<br>01                  | creation date<br>2022-04-08 22:59 | language<br>en | Page<br>1/1                                                                                                    |  |  |  |



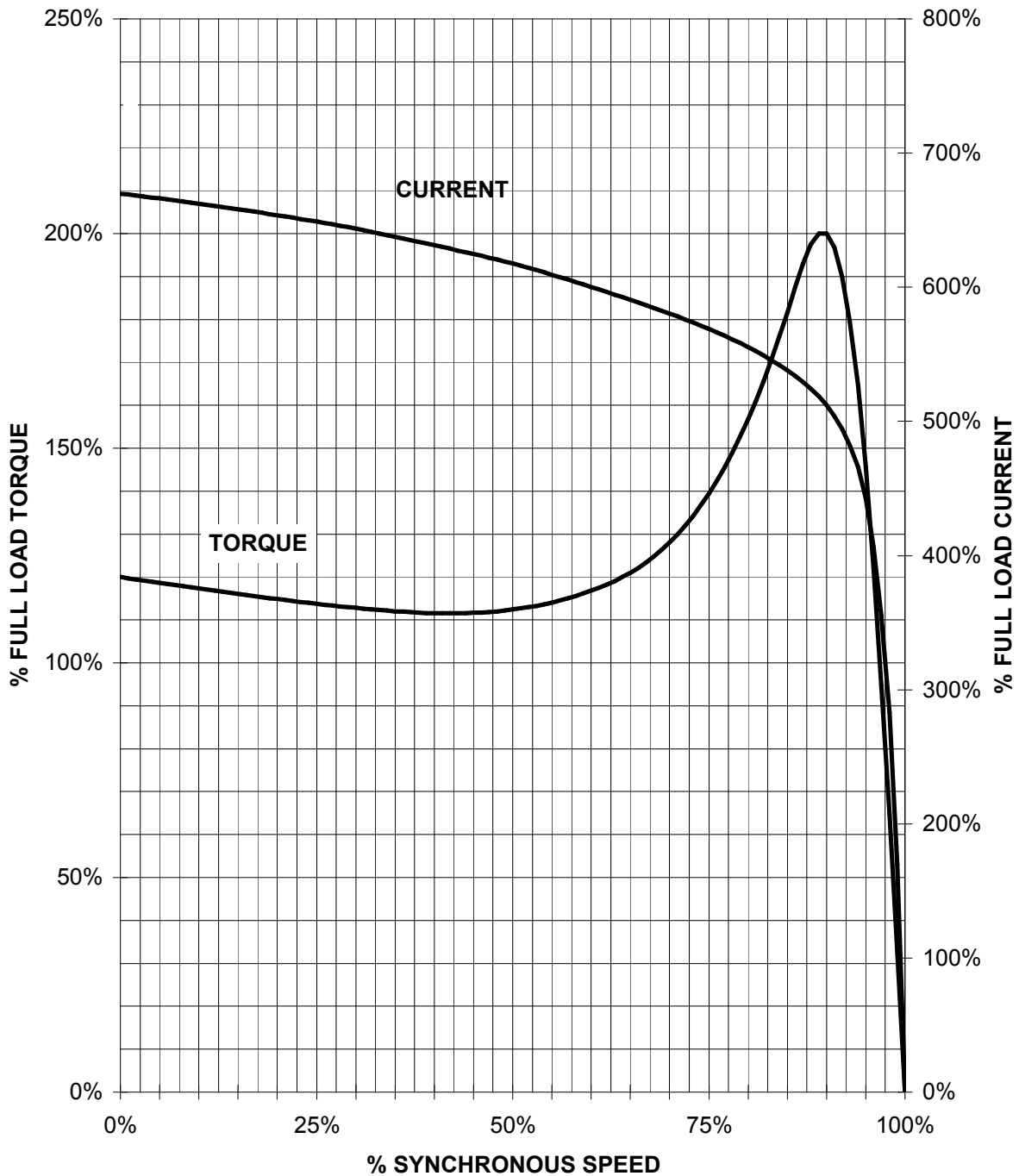
- ① Tolerances according to NEMA std.
- ② All these dimensions corresponding to assemblies and castings shall have a tolerance as per DIN standard 1686-GTB 19.
- ③ Not according to NEMA std.

| Tolerance         | Surface      | Material    | Weight   | Scale          |
|-------------------|--------------|-------------|----------|----------------|
| F50GGGF Ö0GF-H00H | Author       | ÖV          | Ä        | { {            |
| Ä                 | Creator      | ÖVS         | Ä        | { {            |
|                   | Approval     | T ä : ^@~ } |          |                |
|                   | Department   |             |          |                |
|                   | Change Order | MFB         | Doc Type | /              |
| <b>SIEMENS</b>    | Doc. State   | I ð BGG     | Item No  | Paper Size     |
| © Siemens AG 2018 | Revision     | Index RS    | Doc No   | 1st Language ^ |
|                   | Project No   | Ä           | Ref No   | 2nd Language ä |
|                   |              |             |          | Sheet F of F   |

# SIEMENS INDUSTRY, INC.

HP 150    VOLTS < 600V    RPM 3600    TYPE GP100  
HZ 60    PHASE 3    FRAME 445TS    NEMA B

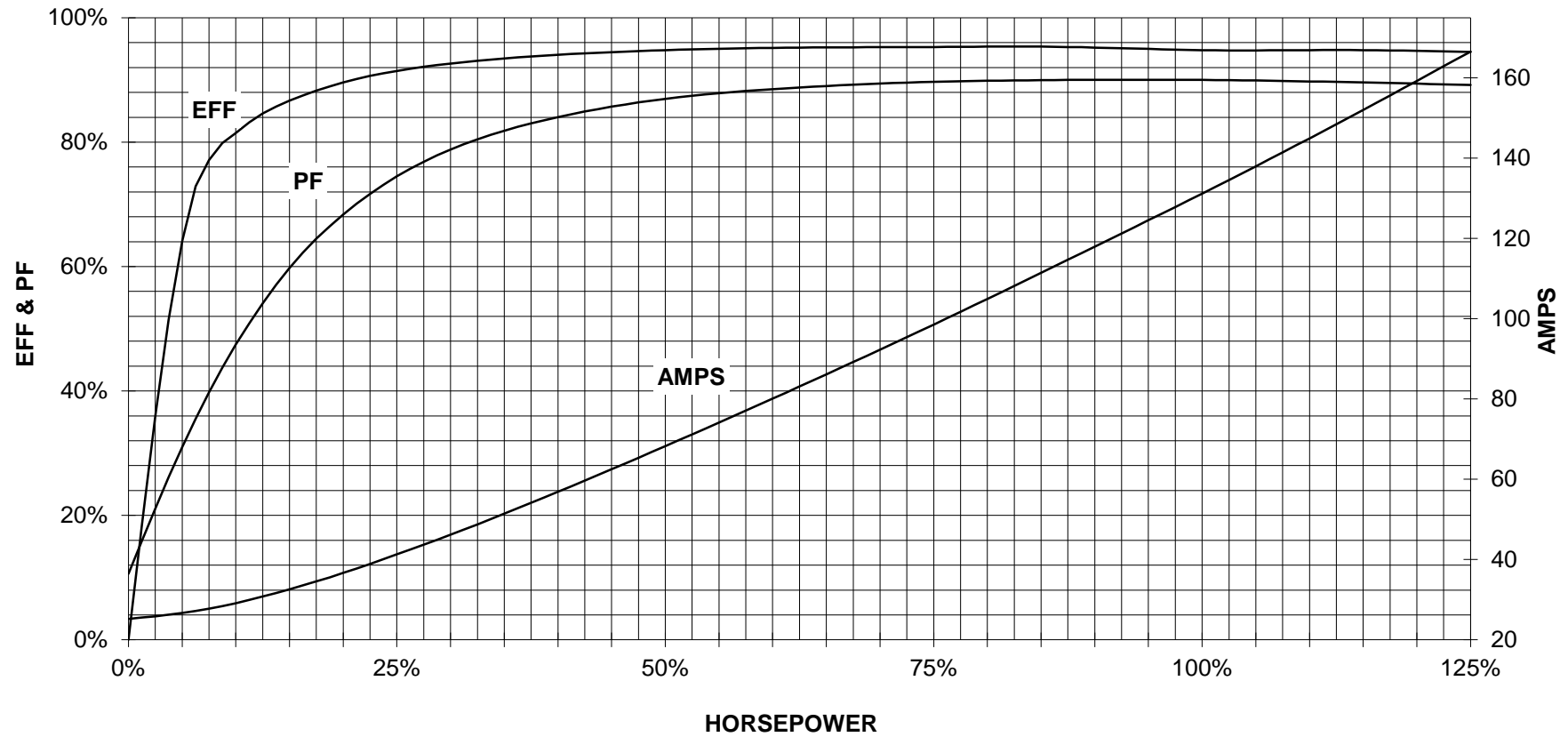
## TORQUE & CURRENT VS. SPEED



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

150 HP 3600 RPM 445TS FRAME 575 VOLTS 3 PHASE NEMA DESIGN B

**SIEMENS INDUSTRY, INC.**  
**PERFORMANCE CURVE**  
**GP100**

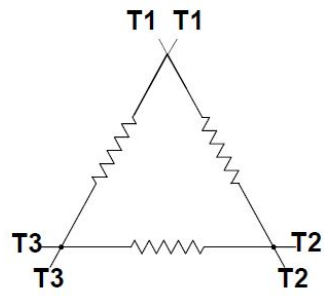


CUSTOMER \_\_\_\_\_ ORDER # \_\_\_\_\_ PO # \_\_\_\_\_


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

REV. 1

Main terminal diagram



| 6 LEAD DELTA |    |    |       |
|--------------|----|----|-------|
| LINES        |    |    | CONN. |
| L1           | L2 | L3 |       |
| T1           | T2 | T3 | Δ     |

|                                                                                    |                                 |            |                         |                             |                |             |
|------------------------------------------------------------------------------------|---------------------------------|------------|-------------------------|-----------------------------|----------------|-------------|
| responsible dep.<br>DI MC LVM                                                      | technical reference             | created by | approved by             | Project                     |                |             |
|  | document type<br>Wiring Diagram |            | document status<br>free |                             | customer       |             |
|                                                                                    | title<br>1LE2221-4DA21-3AA3     |            | document number         |                             |                |             |
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