

# PRODUCT INFORMATION PACKET

Model No: 254THFNA9001

Catalog No: W544

Severe Duty Motor, 15 HP, 3 Ph, 60 Hz, 460 V, 3600 RPM, 254T Frame, TEFC



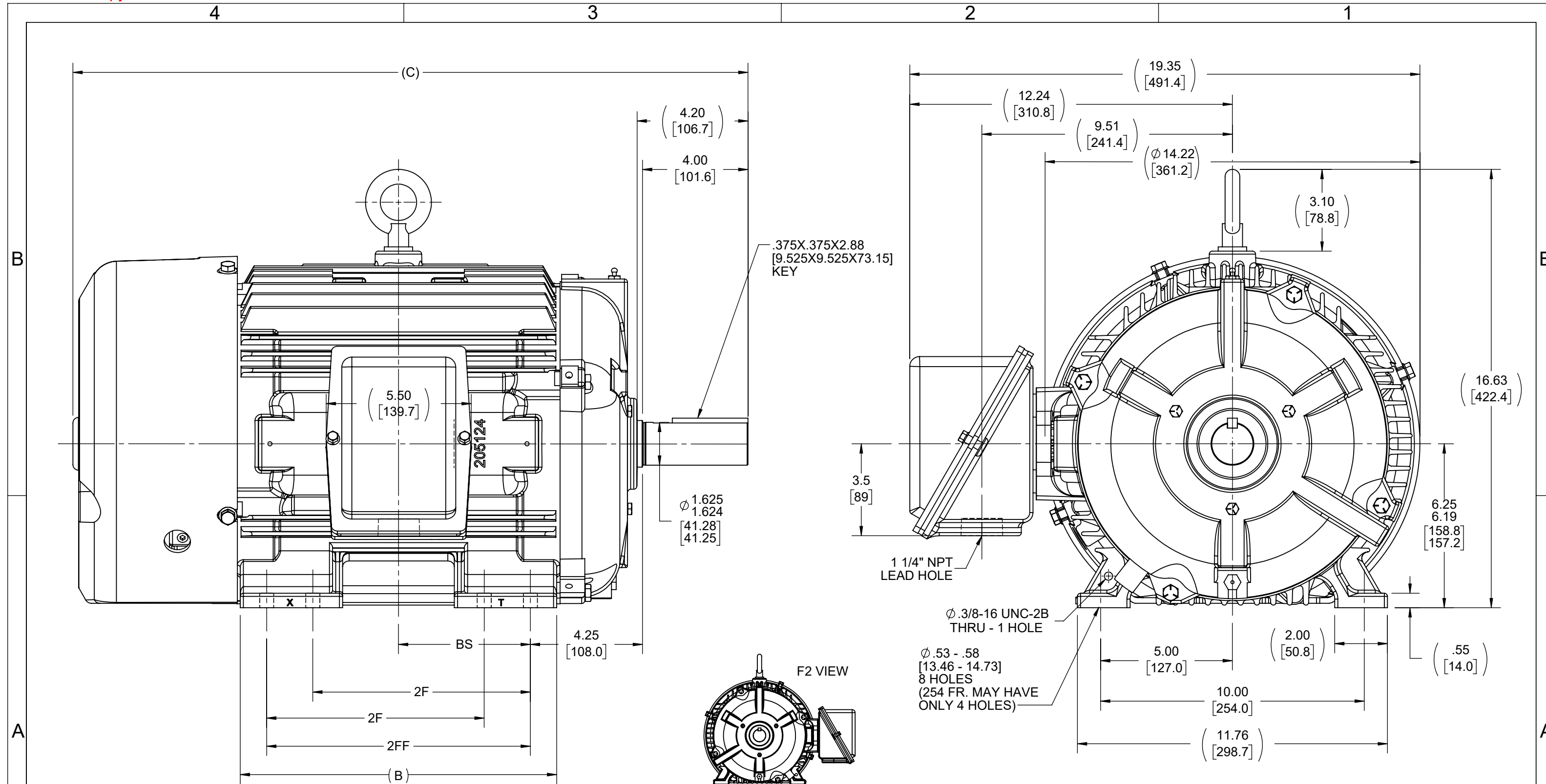
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### Nameplate Specifications

|                        |                       |                            |                                    |
|------------------------|-----------------------|----------------------------|------------------------------------|
| Output HP              | <b>15 Hp</b>          | Output KW                  | <b>11.2 kW</b>                     |
| Frequency              | <b>60 Hz</b>          | Voltage                    | <b>460 V</b>                       |
| Current                | <b>17.5 A</b>         | Speed                      | <b>3550 rpm</b>                    |
| Service Factor         | <b>1.15</b>           | Phase                      | <b>3</b>                           |
| Efficiency             | <b>91.7 %</b>         | Power Factor               | <b>85</b>                          |
| Duty                   | <b>Continuous</b>     | Insulation Class           | <b>F</b>                           |
| Design Code            | <b>B</b>              | KVA Code                   | <b>G</b>                           |
| Frame                  | <b>254T</b>           | Enclosure                  | <b>Totally Enclosed Fan Cooled</b> |
| Thermal Protection     | <b>No Protection</b>  | Ambient Temperature        | <b>40 °C</b>                       |
| Drive End Bearing Size | <b>6309</b>           | Opp Drive End Bearing Size | <b>6210</b>                        |
| UL                     | <b>Recognized</b>     | CSA                        | <b>Y</b>                           |
| CE                     | <b>Y</b>              | IP Code                    | <b>56</b>                          |
| Hazardous Location     | <b>DIVISION 2 T2B</b> | Number of Speeds           | <b>1</b>                           |

### Technical Specifications

|                       |                                     |                       |                         |
|-----------------------|-------------------------------------|-----------------------|-------------------------|
| Electrical Type       | <b>Squirrel Cage Inverter Rated</b> | Starting Method       | <b>Line Or Inverter</b> |
| Poles                 | <b>2</b>                            | Rotation              | <b>Reversible</b>       |
| Resistance Main       | <b>.603 Ohms</b>                    | Mounting              | <b>Rigid Base</b>       |
| Motor Orientation     | <b>Horizontal</b>                   | Drive End Bearing     | <b>Ball</b>             |
| Opp Drive End Bearing | <b>Ball</b>                         | Frame Material        | <b>Cast Iron</b>        |
| Shaft Type            | <b>T</b>                            | Overall Length        | <b>23.65 in</b>         |
| Frame Length          | <b>10.50 in</b>                     | Shaft Diameter        | <b>1.625 in</b>         |
| Shaft Extension       | <b>4.2 in</b>                       | Assembly/Box Mounting | <b>F1/F2 CAPABLE</b>    |
| Inverter Load         | <b>CONSTANT 20:1</b>                |                       |                         |
| Connection Drawing    | <b>A-EE7300</b>                     | Outline Drawing       | <b>B-SS203002-1050</b>  |



- NOTES:  
 1. CONDUIT BOX CAN BE ROTATED ON ITS AXIS.  
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.  
 3. NAMEPLATE TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

|      |          |                   |                   |                  |                   |                  |
|------|----------|-------------------|-------------------|------------------|-------------------|------------------|
| 1050 | 254T     | 23.85<br>[605.79] | 10.25<br>[260.35] | ---              | 8.25<br>[209.55]  | 4.25<br>[107.95] |
| 1225 | 254/256T | 25.60<br>[650.26] | 12.00<br>[304.80] | 8.25<br>[209.55] | 10.00<br>[254.00] | 5.00<br>[127.00] |
| DASH | FRAME    | C                 | B                 | 2F               | 2FF               | BS               |
|      |          | 4                 |                   |                  |                   |                  |

|  |                   |                               |
|--|-------------------|-------------------------------|
| DRAWING REVISION<br>H  | REVISION BY<br>KR | REV DATE/© DATE<br>02/21/2022 |
| REQUEST NUMBER<br>NMR-0212660  | APPROVED BY<br>VT | DATE<br>02/21/2022            |
| REQUEST NUMBER DESCRIPTION<br>OVER ALL LENGTH AND VIEWS UPDATED  |                   |                               |
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TOLERANCES (EXCEPT AS NOTED):  
 DEC. INCH mm ANGLE  
 .X ±0.1 [±3] ±7° 30"  
 .XX ±0.03 [±0.8]  
 .XXX ±0.005 [±0.13]  
 .XXXX ±0.0005 [±0.013]  
 REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.08/.38] X 45°  
 CORNER FILLETS: R.02 [5]  
 MACHINED SURFACES: 200/5.1 INCH/mm  
 mm DIMENSIONS IN [BRACKETS] ARE FOR REFERENCE ONLY

|                        |
|------------------------|
| DRAWN BY<br>TVUE       |
| DATE<br>12-18-2013     |
| APPROVED BY<br>TBROWN  |
| DATE<br>12-18-2013     |
| REFERENCE              |
| THIRD ANGLE PROJECTION |

|  |                                   |                            |  |
|--|-----------------------------------|----------------------------|--|
| <b>Regal Rexnord</b>   |                                   | Regal Beloit America, Inc. |  |
| DESCRIPTION<br><b>OUTLINE</b><br>250T FR. - TEFC - BB - STD. |                                   |                            |  |
| MATERIAL   |                                   | PROCESS/FINISH             |  |
| SIZE<br><b>B</b>   | DRAWING NUMBER<br><b>SS203002</b> | SHEET<br>1 OF 1            |  |

THREE PHASE - SINGLE VOLTAGE  
MOTOR - CONDUIT BOX @ 'A'

TERMINAL BLOCK WHEN SPECIFIED

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS



VIEW OF TERMINAL END

**OPTIONAL CORD CONNECTION**

|    |       |
|----|-------|
| L1 | WHITE |
| L2 | RED   |
| L3 | BLACK |

|   |                   |                               |
|---|-------------------|-------------------------------|
| DRAWING REVISION<br>AC  | REVISION BY<br>BS | REV DATE/© DATE<br>26/07/2022 |
| REQUEST NUMBER<br>CR-0010402  | APPROVED BY<br>SN | DATE<br>26/07/2022            |
| REQUEST NUMBER DESCRIPTION<br>DRAWING UPDATED   |                   |                               |
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PRIMARY DIMENSIONS ARE INCH  
mm DIMENSIONS IN [BRACKETS]  
ARE FOR REFERENCE ONLY

|                        |
|------------------------|
| DRAWN BY<br>DA         |
| DATE<br>03-26-1993     |
| APPROVED BY<br>TB      |
| DATE<br>03-26-1993     |
| REFERENCE              |
| THIRD ANGLE PROJECTION |

|  |                                 |                            |                 |
|--|---------------------------------|----------------------------|-----------------|
|  |                                 | Regal Beloit America, Inc. |                 |
| DESCRIPTION<br><b>CONNECTION DIAGRAM</b><br>EXTERNAL - SINGLE VOLTAGE - 3Ø MOTOR |                                 |                            |                 |
| MATERIAL   |                                 | PROCESS/FINISH             |                 |
| SIZE<br><b>A</b>   | DRAWING NUMBER<br><b>EE7300</b> |                            | SHEET<br>1 OF 1 |

**CERTIFICATION DATA SHEET**

**Model#:** 254THFNA9001 BF      **WINDING#:** K256289 NONE 7  
**CONN. DIAGRAM:** A-EE7300      **ASSEMBLY:** F1/F2 CAPABLE  
**OUTLINE:** B-SS203002-1050

**TYPICAL MOTOR PERFORMANCE DATA**

| HP | KW   | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 15 | 11.2 | 3600      | 3550     | 254T  | TEFC      | G        | B      |

| PH | Hz | VOLTS | FL AMPS | START TYPE       | DUTY       | INSL | S.F  | AMB°C | ELEVATION |
|----|----|-------|---------|------------------|------------|------|------|-------|-----------|
| 3  | 60 | 460   | 17.5    | LINE OR INVERTER | CONTINUOUS | F3   | 1.15 | 40    | 3300      |

| FULL LOAD EFF: 91.7 | 3/4 LOAD EFF: 91.7 | 1/2 LOAD EFF: 90.2 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
|---------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD PF: 85    | 3/4 LOAD PF: 83.5  | 1/2 LOAD PF: 75.5  | 91       | SQ CAGE INV RATED | 6            |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE  | B.D. TORQUE  | F.L. RISE°C |
|-------------|-------------------|--------------|--------------|-------------|
| 22.2 LB-FT  | 116               | 41 LB-FT 185 | 65 LB-FT 293 | 50          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2  | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|------------|-----------------|--------------|-------------------|
| 72 dBA                 | 82 dBA      | 1.1 LB-FT^2 | 22 LB-FT^2 | 20 SEC.         | 2            | 310 LBS.          |

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY         | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT        |
|-----------------|------------------|------------|-------------|---------------------|--------------------|------------|---------|--------------|
| STANDARD        | STANDARD         | RIGID      | HORIZONTAL  | PREMIUM SEVERE DUTY | DIVISION 2 T2B     | FALSE      | NONE    | BLUE (EPOXY) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | OPE  |            |            |            |             |                         |                |
| BALL     | BALL | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |
| 6309     | 6210 |            |            |            |             |                         |                |

| THERMO-PROTECTORS |            |          |          | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS       | PROTECTORS | WDG RTDs | BRG RTDs |             |         |                  |
| NONE              | NOT        | NONE     | NONE     | NONE        | FALSE   | NONE VOLTS       |

If Inverter equals NONE, contact factory for further information

\*  
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\*

|   |
|---|
| INVERTER TORQUE: CONSTANT 20:1<br>INV. HP SPEED RANGE: 1.5 X BASE SPEED     |
| ENCODER: NONE<br>NONE NONE<br>NONE NONE PPR                                 |
| BRAKE: NONE NONE<br>NONE P/N NONE<br>NONE NONE<br>NONE FT-LB NONE V NONE Hz |

DATE: 06/21/2017 10:26:34 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

Data Sheet

Date: 6/29/2017

Customer: \_\_\_\_\_

Attention: \_\_\_\_\_

Submitted by: FAREEDA DUDEKULA



254THFNA9001

Submittal

Data @ 460 V

Motor Load Data

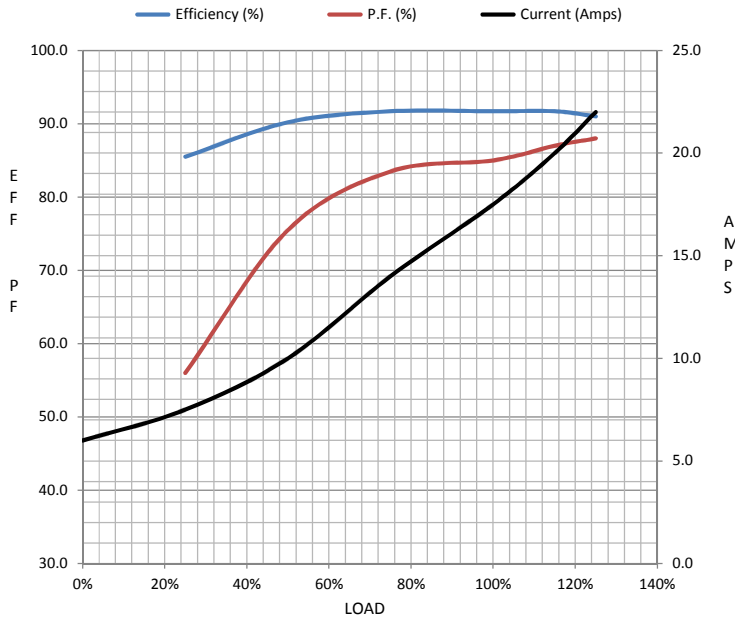
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 6.0  | 7.5  | 10.0 | 14.0 | 17.5 | 20.0  | 22.0 | 116  |
| Torque (ft-lb) | 0.00 | 5.5  | 11.0 | 16.5 | 22.2 | 25.0  | 28.0 | 41.0 |
| RPM            | 3600 | 3585 | 3570 | 3560 | 3550 | 3,540 | 3525 | 0    |
| Efficiency (%) |      | 85.5 | 90.2 | 91.7 | 91.7 | 91.7  | 91.0 |      |
| P.F. (%)       | 10.5 | 56.0 | 75.5 | 83.5 | 85.0 | 87.0  | 88.0 | 38.0 |

Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 1800    | 3175 | 3550  | 3600 |
| Current (Amps) | 116  | 103     | 75.0 | 17.5  | 6.0  |
| Torque (ft-lb) | 41.0 | 37.0    | 65.0 | 22.2  | 0.00 |

Information Block

|                             |                         |
|-----------------------------|-------------------------|
| HP                          | 15.0                    |
| Sync. RPM                   | 3600                    |
| Frame                       | 254                     |
| Enclosure                   | TEFC                    |
| Construction                | TFN                     |
| Voltage                     | 460 V                   |
| Frequency                   | 60 Hz                   |
| Design                      | A                       |
| LR Code letter              | G                       |
| Service Factor              | 1.15                    |
| Temp Rise @ FL              | 50 °C                   |
| Duty                        | CONT                    |
| Ambient                     | 40 °C                   |
| Elevation                   | 1,000 feet              |
| Rotor/Shaft wk <sup>2</sup> | 1.10 Lb-Ft <sup>2</sup> |
| Ref Wdg                     | K256289 NONE            |
| Sound Pressure @ 1M         | 72 dBA                  |
| VFD Rating                  | CONSTANT 20:1           |
| Outline Dwg                 | B-SS203002-1050         |
| Conn. Diag                  | A-EE7300                |



Additional Specifications:

0

0

| EQUIV CKT (OHMS / PHASE) |        |        |        |         |
|--------------------------|--------|--------|--------|---------|
| R1                       | R2     | X1     | X2     | Xm      |
| 0.3870                   | 0.2760 | 1.4040 | 1.2980 | 42.3360 |

Speed -Torque Curve

