

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 112MTFC6512

Catalog No: R424A

5.50 HP General Purpose, 3 phase, 3600 RPM, 575 V, 112M Frame, TEFC  
Cast Iron Motors



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**RegalRexnord**

**Nameplate Specifications**

|                        |                   |                            |                                    |
|------------------------|-------------------|----------------------------|------------------------------------|
| Output HP              | <b>5.50 Hp</b>    | Output KW                  | <b>4.1 kW</b>                      |
| Frequency              | <b>60 Hz</b>      | Voltage                    | <b>575 V</b>                       |
| Current                | <b>5.1 A</b>      | Speed                      | <b>3510 rpm</b>                    |
| Service Factor         | <b>1.15</b>       | Phase                      | <b>3</b>                           |
| Efficiency             | <b>89.5 %</b>     | Power Factor               | <b>91</b>                          |
| Duty                   | <b>Continuous</b> | Insulation Class           | <b>F</b>                           |
| Design Code            | <b>B</b>          | KVA Code                   | <b>J</b>                           |
| Frame                  | <b>112M</b>       | Enclosure                  | <b>Totally Enclosed Fan Cooled</b> |
| Thermal Protection     | <b>No</b>         | Ambient Temperature        | <b>40 °C</b>                       |
| Drive End Bearing Size | <b>6206</b>       | Opp Drive End Bearing Size | <b>6205</b>                        |
| UL                     | <b>Recognized</b> | CSA                        | <b>N</b>                           |
| CE                     | <b>Y</b>          | IP Code                    | <b>54</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>               |
| Mounting          | <b>Rigid Base</b>                   | Motor Orientation     | <b>Horizontal Or Shaft Down</b> |
| Drive End Bearing | <b>Ball</b>                         | Opp Drive End Bearing | <b>Ball</b>                     |
| Frame Material    | <b>Cast Iron</b>                    | Shaft Type            | <b>IEC</b>                      |
| Overall Length    | <b>18.42 in</b>                     | Shaft Diameter        | <b>1.111 in</b>                 |
| Shaft Extension   | <b>2.36 in</b>                      | Assembly/Box Mounting | <b>F3</b>                       |
| Inverter Load     | <b>CONSTANT 20:1</b>                |                       |                                 |
| Outline Drawing   | <b>SS622368-193306</b>              | Connection Drawing    | <b>005102.01</b>                |

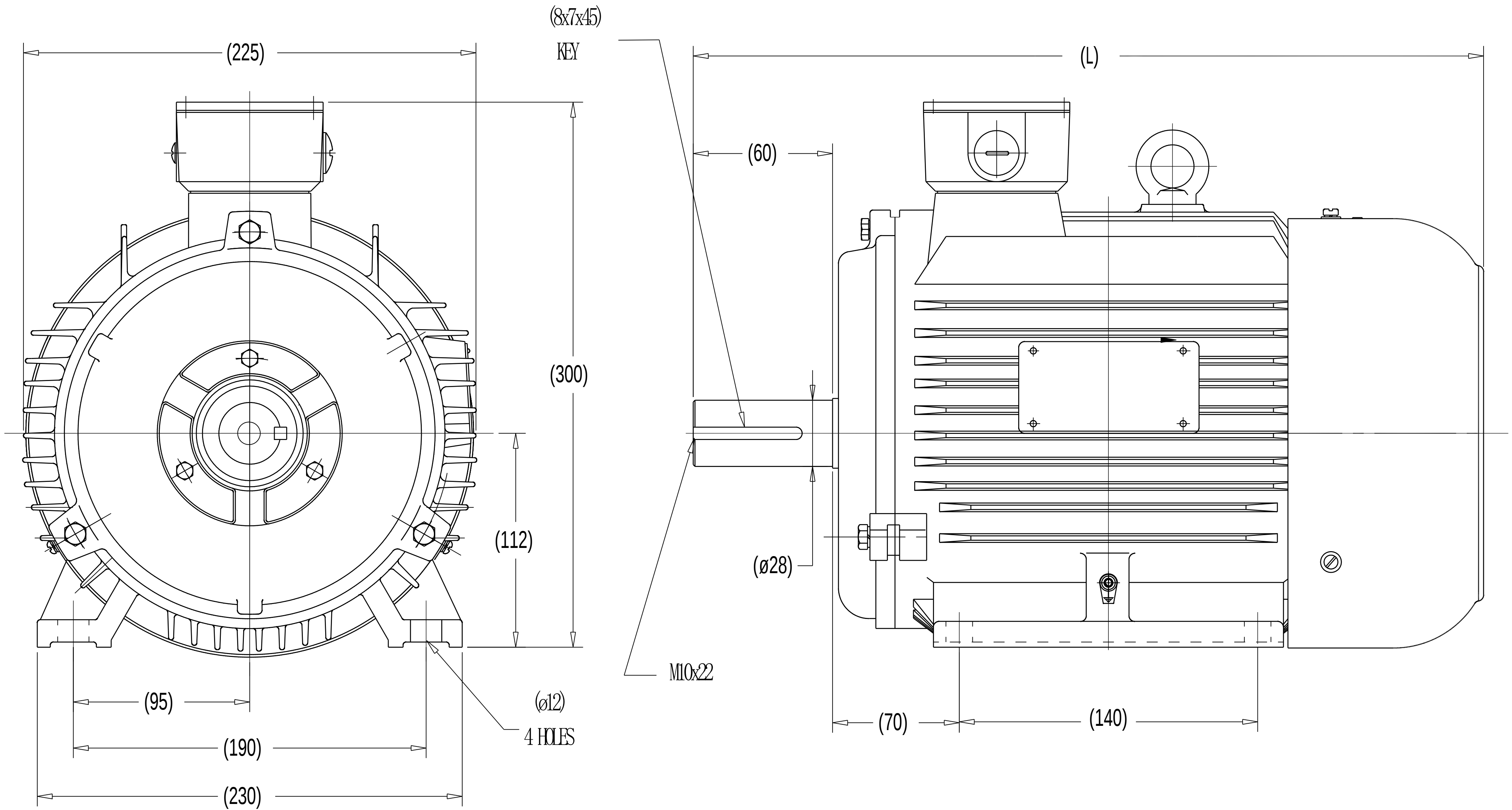
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B

A

B

A



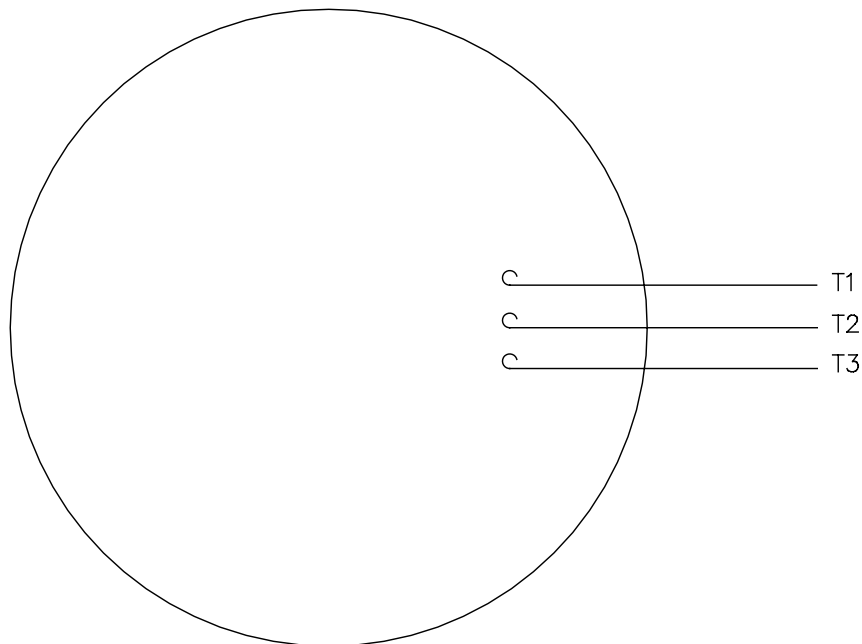
| PART NO.  | FRAME       | L   |
|-----------|-------------|-----|
| 193306.60 | C20-112M-2  | 410 |
| 193307.60 | C20-112M1-4 |     |
| 193302.60 | C20-112M1-6 |     |

DRAWING NOT TO SCALE

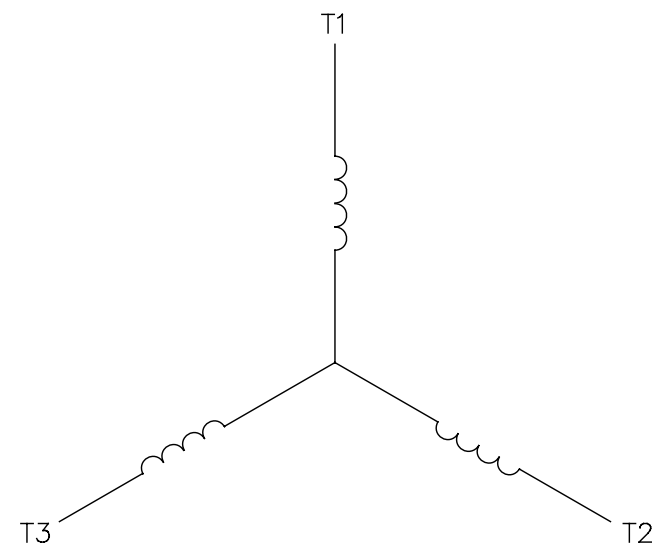
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                    |                                                                                                                                                                                                                                                                                                                                     |  |                           |  |                                                                                                                             |  |                            |                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------|--|-----------------------------------------------------------------------------------------------------------------------------|--|----------------------------|-----------------|
| DRAWING REVISION<br>F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | REVISION BY<br>W. JOERGER | DATE<br>08-20-2016 | TOLERANCES UNLESS<br>OTHERWISE SPECIFIED:<br>DEC. INCH mm ANGLE<br>.X ±0.1 [±2.5] ±7° 30"<br>.XX ±0.03 [±0.76]<br>.XXX ±0.005 [±0.127]<br>.XXXX ±0.0005 [±0.0127]<br>REMOVE BURRS & BREAK SHARP<br>EDGES: .003/.015 [.076/.381] X 45°<br>CORNER FILLETS: R.02 [.51]<br>MACHINED SURFACES: 200 5.1<br>mm SHOWN IN [BRACKETS] INCH mm |  | DRAWN BY<br>MOL           |  | <div> Regal Beloit America, Inc.</div> |  |                            |                 |
| ECO<br>ECO-0108079                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | APPROVED BY<br>E. HEIL    | DATE<br>08-20-2016 |                                                                                                                                                                                                                                                                                                                                     |  | DATE<br>04-12-2012        |  |                                                                                                                             |  |                            |                 |
| ECO DESCRIPTION<br>193307.60 FRAME WAS C20-112M1-6<br>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED.<br>PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF<br>REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY<br>INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED,<br>BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED<br>TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT<br>AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL<br>BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN<br>RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS. |                           |                    |                                                                                                                                                                                                                                                                                                                                     |  | APPROVED BY<br>SB         |  | DESCRIPTION<br>OUTLINE<br>IEC 112M - 2,4,6 - TEFC                                                                           |  |                            |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                    |                                                                                                                                                                                                                                                                                                                                     |  | DATE<br>04-12-2012        |  | MATERIAL                                                                                                                    |  | PROCESS/FINISH             |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                    |                                                                                                                                                                                                                                                                                                                                     |  | REFERENCE                 |  | SIZE<br>B                                                                                                                   |  | DRAWING NUMBER<br>SS622368 | SHEET<br>1 OF 1 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                           |                    |                                                                                                                                                                                                                                                                                                                                     |  | THIRD ANGLE<br>PROJECTION |  |                                        |  |                            |                 |

005102-01

VIEW FROM OUTSIDE OF MOTOR AT SWITCH END.



LINE LEADS

CONNECT LEADS AS FOLLOWS  
FOR FOUR CONDUCTOR CORD ( )

|       |             |               |               |         |
|-------|-------------|---------------|---------------|---------|
| CORD  | L1<br>(RED) | L2<br>(WHITE) | L3<br>(BLACK) | (GREEN) |
| MOTOR | T1          | T2            | T3            | GROUND  |

|                                                                                                                                                                                                                                        |                                    |              |      |                                |        |                                                                                                                         |                   |             |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------|------|--------------------------------|--------|-------------------------------------------------------------------------------------------------------------------------|-------------------|-------------|------|
|                                                                                                                                                                                                                                        |                                    |              |      | TOLERANCES<br>UNLESS SPECIFIED |        |  <b>Regal Beloit America, Inc.</b> | DRAWN JRW 9/11/75 |             |      |
|                                                                                                                                                                                                                                        |                                    |              |      | DEC.                           | INCHES |                                                                                                                         | CHK               |             |      |
|                                                                                                                                                                                                                                        |                                    |              |      | .X                             | ±.1    |                                                                                                                         | APPD JCW 9/11/75  |             |      |
| 08                                                                                                                                                                                                                                     | UPDATED TO REGAL LOGO              | SAJ 06/26/15 | AJY  | .XX                            | ±.01   | TITLE EXTERNAL WIRING DIAGRAM<br>TYPE "T" W/O PROTECTOR                                                                 | SCALE 1=1         |             |      |
| 07                                                                                                                                                                                                                                     | UPDATED TO CURRENT STANDARDS       | DBT 5/30/97  |      | .XXX                           | ±.005  |                                                                                                                         | REF W-T6343-6     |             |      |
| 06                                                                                                                                                                                                                                     | REDRAWN ON CAD; ADDED DECAL NUMBER | SAW 1/24/95  |      | .XXXX                          | ±.0005 | MAT'L. DECAL - 004169                                                                                                   | FMF 6T17FB7       |             |      |
| NO.                                                                                                                                                                                                                                    | REVISION                           | BY & DATE    | CHK  | ANG                            | ±1/2"  | FINISH                                                                                                                  | PREV              |             |      |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT<br>IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED<br>THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT |                                    |              | RFP  | 5/1/02                         |        | CAD FILE 00510201                                                                                                       | SIZE              | DRAWING NO. | REV. |
|                                                                                                                                                                                                                                        |                                    |              | DIST | BRF-NLV                        |        |                                                                                                                         | A                 | 005102-01   | 08   |

## CERTIFICATION DATA SHEET

Model#: 112MTFC6512 AA

WINDING#: T08702015 NONE 4

CONN. DIAGRAM: 005102.01

ASSEMBLY: F3

OUTLINE: SS622368

## TYPICAL MOTOR PERFORMANCE DATA

| HP    | KW  | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-------|-----|-----------|----------|-------|-----------|----------|--------|
| 5 1/2 | 4.1 | 3600      | 3510     | 112M  | TEFC      | J        | B      |

| PH | Hz | VOLTS | FL AMPS | START TYPE          | DUTY           | INSL | S.F  | AMB°C | ELEVATION |
|----|----|-------|---------|---------------------|----------------|------|------|-------|-----------|
| 3  | 60 | 575   | 5.1     | LINE OR<br>INVERTER | CONTINUOU<br>S | F2   | 1.15 | 40    | 3300      |

|                     |                    |                    |          |                   |              |
|---------------------|--------------------|--------------------|----------|-------------------|--------------|
| FULL LOAD EFF: 89.5 | 3/4 LOAD EFF: 90.2 | 1/2 LOAD EFF: 90.2 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF: 91    | 3/4 LOAD PF: 88.5  | 1/2 LOAD PF: 81.5  | 87.5     | SQ CAGE INV RATED | 1.5          |

|             |                   |                |                |             |
|-------------|-------------------|----------------|----------------|-------------|
| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE°C |
| 8.2 LB-FT   | 40.4              | 17.7 LB-FT 215 | 26.4 LB-FT 322 | 64          |

|                           |             |              |           |                 |                 |                      |
|---------------------------|-------------|--------------|-----------|-----------------|-----------------|----------------------|
| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2   | MAX. WK^2 | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
| 44.5 dBA                  | 54.5 dBA    | 0.12 LB-FT^2 | - LB-FT^2 | 15 SEC.         | 2               | 110 LBS.             |

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

| DE BRACKET<br>TYPE | ODE BRACKET<br>TYPE | MOUNT<br>TYPE | ORIENTATION                    | SEVERE<br>DUTY | HAZARDOUS<br>LOCATION | DRIP<br>COVER | SCREENS | PAINT            |
|--------------------|---------------------|---------------|--------------------------------|----------------|-----------------------|---------------|---------|------------------|
| STANDARD           | STANDARD            | RIGID         | HORIZONTAL<br>OR SHAFT<br>DOWN | TRUE           | NONE                  | FALSE         | NONE    | BLUE<br>(ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE   | SPECIAL DE | SPECIAL ODE | SHAFT<br>MATERIAL          | FRAME<br>MATERIAL |
|----------|------|------------|--------------|------------|-------------|----------------------------|-------------------|
| DE       | OPE  |            |              |            |             |                            |                   |
| BALL     | BALL |            |              |            |             |                            |                   |
| 6206     | 6205 | POLYREX EM | STANDARD IEC | NONE       | NONE        | 1045 HOT<br>ROLLED (C-204) | CAST IRON         |

| 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

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

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FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

## Data Sheet

Date: 1/3/2019

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

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

Submitted by: FAREEDA DUDEKULA



112MTFC6512

Submittal

Data @ 575 V

## Motor Load Data

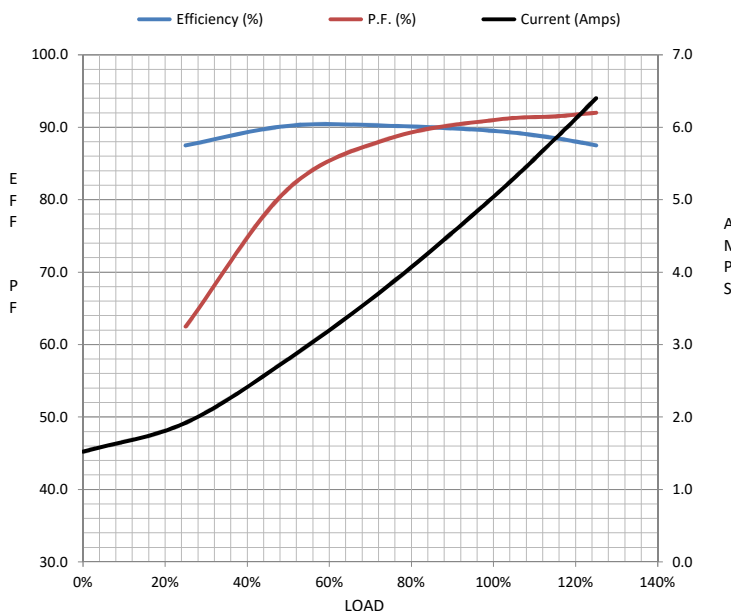
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 1.52 | 1.92 | 2.80 | 3.8  | 5.0  | 5.8   | 6.4  | 40.4 |  |
| Torque (ft-lb) | 0.00 | 2.00 | 4.1  | 6.1  | 8.2  | 9.5   | 10.4 | 17.7 |  |
| RPM            | 3600 | 3580 | 3560 | 3535 | 3510 | 3,495 | 3485 | 0    |  |
| Efficiency (%) |      | 87.5 | 90.2 | 90.2 | 89.5 | 88.5  | 87.5 |      |  |
| P.F. (%)       | 8.5  | 62.5 | 81.5 | 88.5 | 91.0 | 91.5  | 92.0 | 55.5 |  |

## Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 1800    | 2930 | 3510  | 3600 |
| Current (Amps) | 40.4 | 35.6    | 23.6 | 5.0   | 1.52 |
| Torque (ft-lb) | 17.7 | 19.9    | 26.4 | 8.2   | 0.00 |

## Information Block

|                             |                |                    |        |        |
|-----------------------------|----------------|--------------------|--------|--------|
| HP                          | 5.5            |                    |        |        |
| Sync. RPM                   | 3600           |                    |        |        |
| Frame                       | 112            |                    |        |        |
| Enclosure                   | TEFC           |                    |        |        |
| Construction                | TFS            |                    |        |        |
| Voltage                     | 575            | V                  |        |        |
| Frequency                   | 60             | Hz                 |        |        |
| Design                      | B              |                    |        |        |
| LR Code letter              | J              |                    |        |        |
| Service Factor              | 1.15           |                    |        |        |
| Temp Rise @ FL              | 64             | ° C                |        |        |
| Duty                        | CONT           |                    |        |        |
| Ambient                     | 40             | ° C                |        |        |
| Elevation                   | 3300           | feet               |        |        |
| Rotor/Shaft wk <sup>2</sup> | 0.12           | Lb-Ft <sup>2</sup> |        |        |
| Ref Wdg                     | T08702015 NONE |                    |        |        |
| Sound Pressure @ 1M         | 45             | dBA                |        |        |
| VFD Rating                  | CONSTANT 20:1  |                    |        |        |
| Outline Dwg                 | SS622368       |                    |        |        |
| Conn. Diag                  | 005102.01      |                    |        |        |
| Additional Specifications:  |                |                    |        |        |
| 0                           |                |                    |        |        |
| 0                           |                |                    |        |        |
| EQUIV CKT (OHMS / PHASE)    |                |                    |        |        |
| R1                          | R2             | X1                 | X2     | Xm     |
| 0.0000                      | 0.0000         | 0.0000             | 0.0000 | 0.0000 |



## Speed -Torque Curve

