

# PRODUCT INFORMATION PACKET



Model No: LM16030  
Catalog No: LM16030  
3 HP General Purpose Motor, 3 phase, 1200 RPM, 230/460 V, 213T Frame, TEFC  
General Purpose Motors



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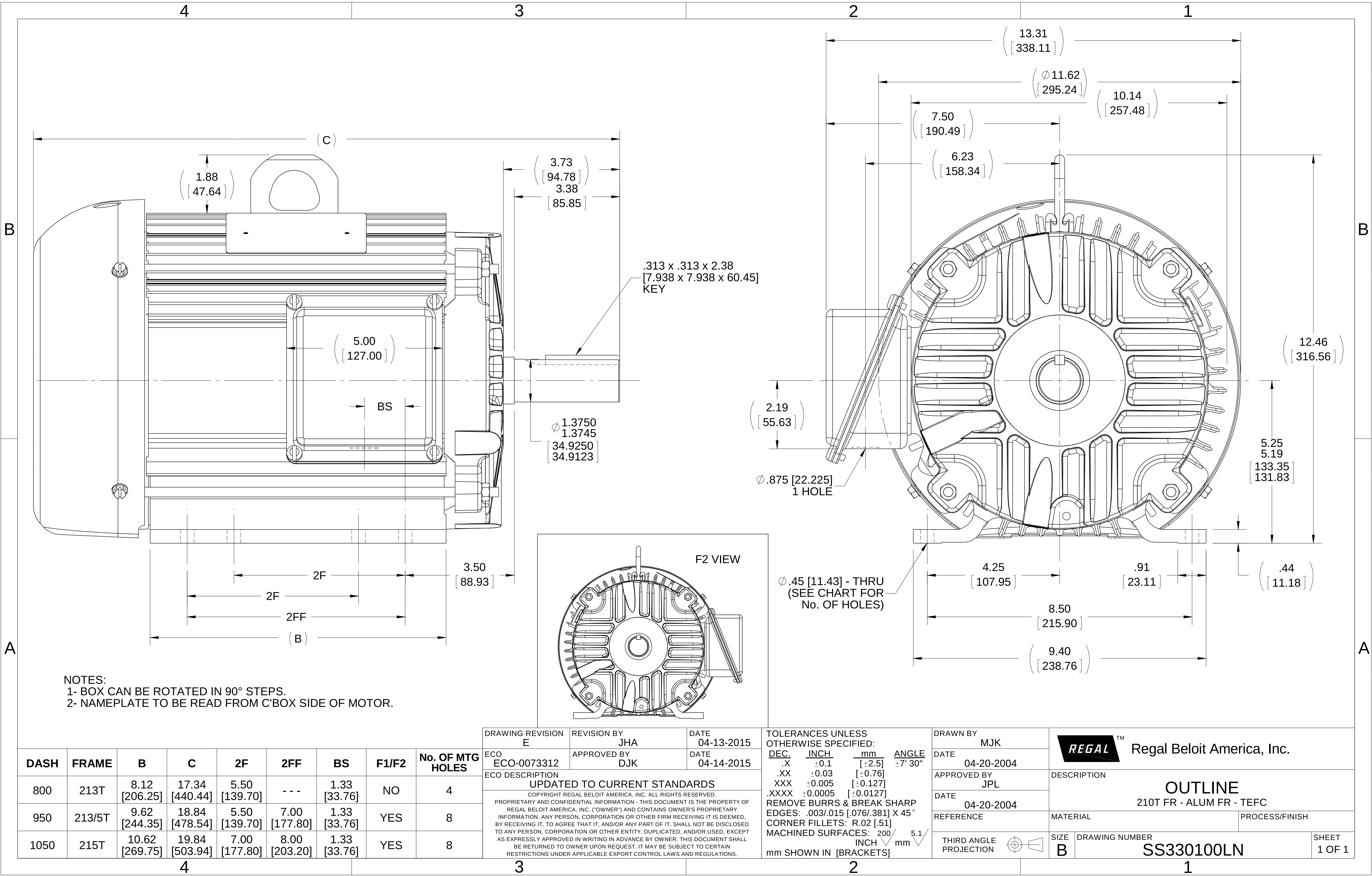
### Nameplate Specifications

|                        |            |                            |                             |
|------------------------|------------|----------------------------|-----------------------------|
| Output HP              | 3 Hp       | Output KW                  | 2.2 kW                      |
| Frequency              | 60 Hz      | Voltage                    | 230/460 V                   |
| Current                | 8.8/4.4 A  | Speed                      | 1175 rpm                    |
| Service Factor         | 1.25       | Phase                      | 3                           |
| Efficiency             | 89.5 %     | Power Factor               | 71.5                        |
| Duty                   | Continuous | Insulation Class           | F                           |
| Design Code            | B          | KVA Code                   | K                           |
| Frame                  | 213T       | Enclosure                  | Totally Enclosed Fan Cooled |
| Thermal Protection     | No         | Ambient Temperature        | 40 °C                       |
| Drive End Bearing Size | 6208       | Opp Drive End Bearing Size | 6206                        |
| UL                     | Recognized | CSA                        | Y                           |
| CE                     | Y          | IP Code                    | 43                          |
| Number of Speeds       | 1          |                            |                             |

### Technical Specifications

|                       |                             |                       |                 |
|-----------------------|-----------------------------|-----------------------|-----------------|
| Electrical Type       | Squirrel Cage Induction Run | Starting Method       | Across The Line |
| Poles                 | 6                           | Rotation              | Reversible      |
| Resistance Main       | 2.7431 Ohms                 | Mounting              | Rigid Base      |
| Motor Orientation     | Horizontal                  | Drive End Bearing     | Ball            |
| Opp Drive End Bearing | Ball                        | Frame Material        | Aluminum        |
| Shaft Type            | T                           | Overall Length        | 17.34 in        |
| Frame Length          | 8.00 in                     | Shaft Diameter        | 1.375 in        |
| Shaft Extension       | 3.38 in                     | Assembly/Box Mounting | F1/F2 CAPABLE   |
| Outline Drawing       | SS330100LN-800              | Connection Drawing    | A-EE7308-LN     |

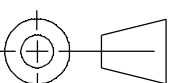
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| DASH | FRAME  | B              | C              | 2F            | 2FF           | BS           | F1/F2 | No. OF MTG HOLES |
|------|--------|----------------|----------------|---------------|---------------|--------------|-------|------------------|
| 800  | 213T   | 8.12 [206.25]  | 17.34 [440.44] | 5.50 [139.70] | ---           | 1.33 [33.76] | NO    | 4                |
| 950  | 213/5T | 9.62 [244.35]  | 18.84 [478.54] | 5.50 [139.70] | 7.00 [177.80] | 1.33 [33.76] | YES   | 8                |
| 1050 | 215T   | 10.62 [269.75] | 19.84 [503.94] | 7.00 [177.80] | 8.00 [203.20] | 1.33 [33.76] | YES   | 8                |

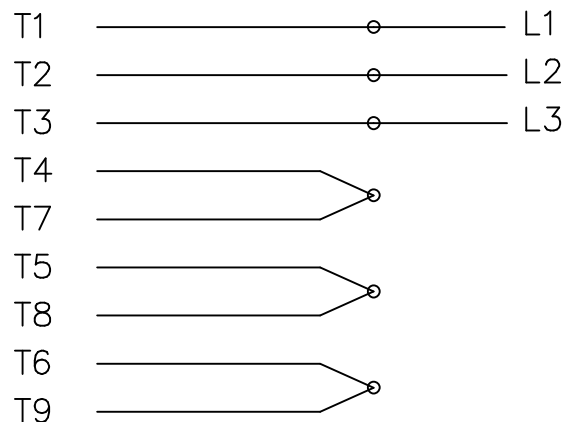
| DRAWING REVISION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | REVISION BY | DATE       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|------------|
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | JHA         | 04-13-2015 |
| ECO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DJK         | 04-14-2015 |
| ECO-0073312                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |            |
| ECO DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |             |            |
| UPDATED TO CURRENT STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             |            |
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|                                                                                                                              |              |                  |                      |
|------------------------------------------------------------------------------------------------------------------------------|--------------|------------------|----------------------|
| TOLERANCES UNLESS OTHERWISE SPECIFIED:                                                                                       |              |                  |                      |
| DEC.                                                                                                                         | INCH         | mm               | ANGLE                |
| .X                                                                                                                           | $\pm 0.1$    | [ $\pm 2.5$ ]    | $\pm 7^{\circ} 30''$ |
| .XX                                                                                                                          | $\pm 0.03$   | [ $\pm 0.76$ ]   |                      |
| .XXX                                                                                                                         | $\pm 0.005$  | [ $\pm 0.127$ ]  |                      |
| .XXXX                                                                                                                        | $\pm 0.0005$ | [ $\pm 0.0127$ ] |                      |
| REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381] X 45° CORNER FILLETS: R.02 [.51] MACHINED SURFACES: 200 INCH 5.1 mm |              |                  |                      |
| mm SHOWN IN [BRACKETS]                                                                                                       |              |                  |                      |

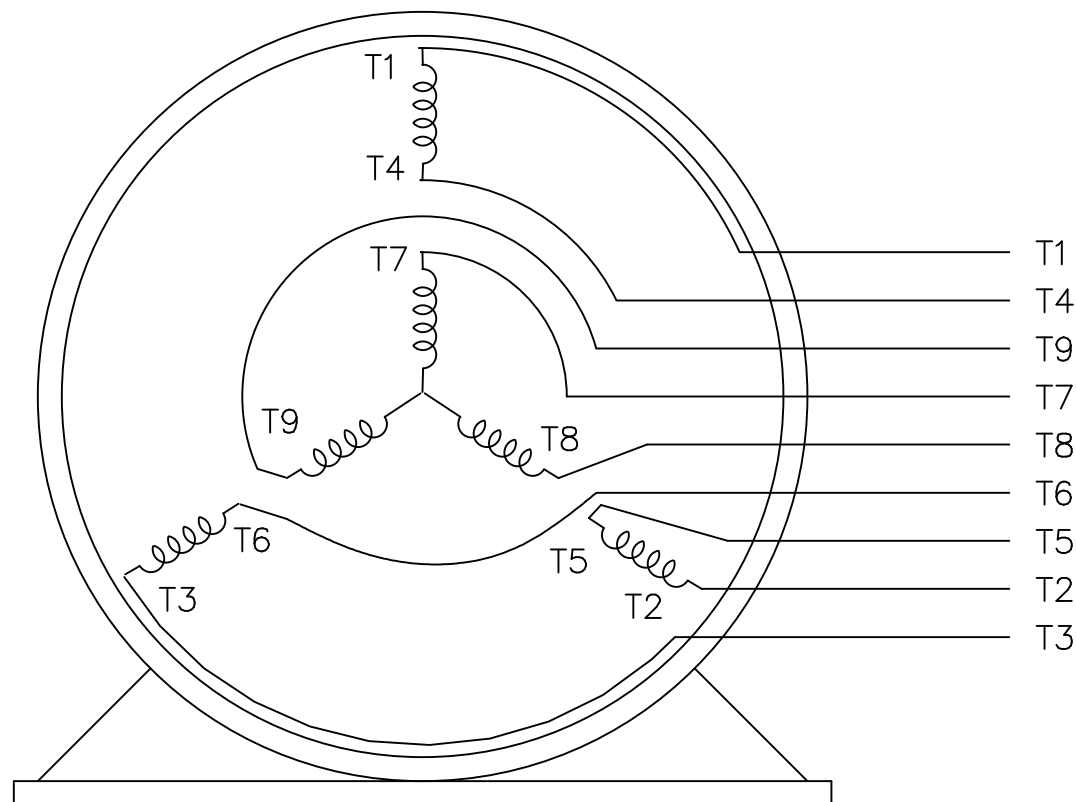
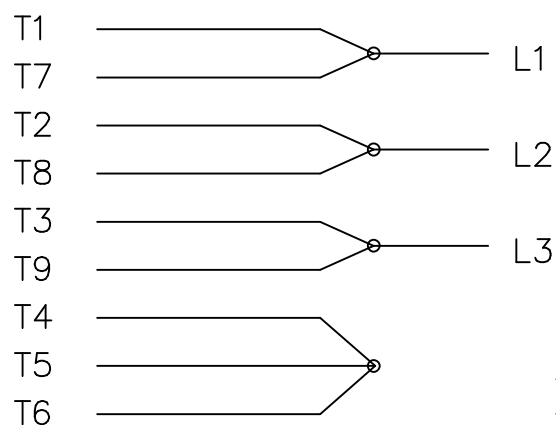
|                           |                                                                                       |                                                                                                                             |                              |
|---------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------|
| DRAWN BY<br>MJK           |                                                                                       | <div> Regal Beloit America, Inc.</div> |                              |
| DATE<br>04-20-2004        |                                                                                       |                                                                                                                             |                              |
| APPROVED BY<br>JPL        |                                                                                       | DESCRIPTION<br><br>OUTLINE<br>210T FR - ALUM FR - TEFC                                                                      |                              |
| DATE<br>04-20-2004        |                                                                                       |                                                                                                                             |                              |
| REFERENCE                 |                                                                                       | MATERIAL                                                                                                                    | PROCESS/FINISH               |
| THIRD ANGLE<br>PROJECTION |  | SIZE<br>B                                                                                                                   | DRAWING NUMBER<br>SS330100LN |
|                           |                                                                                       |                                                                                                                             | SHEET<br>1 OF 1              |

THREE PHASE  
DUAL VOLTAGE MOTOR

## HIGH VOLTAGE



## LOW VOLTAGE

REF.  
WINDING DIAGRAM

T8Y, T2Y, T2BL, T4BX, T2EC, T2G  
T6BZ, T2B, T6BL, T4AV, T6B, T4B

OPTIONAL CORD  
CONNECTION

L1 — WHITE  
L2 — RED  
L3 — BLACK

|                                                                                                                                                                                                                                     |                                            |                |     |                                |        |                                                                                       |                      |             |         |      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|----------------|-----|--------------------------------|--------|---------------------------------------------------------------------------------------|----------------------|-------------|---------|------|
|                                                                                                                                                                                                                                     |                                            |                |     | TOLERANCES<br>UNLESS SPECIFIED |        |  | DRAWN BLR 06/11/1999 |             |         |      |
|                                                                                                                                                                                                                                     |                                            |                |     | DEC.                           | INCHES |                                                                                       | CHK ML 06/18/1999    |             |         |      |
|                                                                                                                                                                                                                                     |                                            |                |     | .X                             | ±.1    |                                                                                       | APPD GK 06/18/1999   |             |         |      |
| 3                                                                                                                                                                                                                                   | ADDED THE OPTIONAL CORD CONNECTION MU46318 | RDH 04/24/2003 | DRS | .XX                            | ±.02   | TITLE CONNECTION DIAGRAM<br>3ø – DUAL VOLTAGE MOTOR                                   | SCALE 1=1            |             |         |      |
| 2                                                                                                                                                                                                                                   | RE-ISSUE, ADDED '-' TO PART NUMBER         | BLR 08/09/1999 | GK  | .XXX                           | ±.005  |                                                                                       | REF                  |             |         |      |
| 1                                                                                                                                                                                                                                   | NEW DRAWING                                | BLR 06/18/1999 | GK  | .XXXX                          | ±.0005 | MAT'L.                                                                                | FMF                  |             |         |      |
| NO.                                                                                                                                                                                                                                 | REVISION                                   | BY & DATE      | CHK | ANG                            | ±7'30" | FINISH                                                                                | PREV                 |             |         |      |
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|                                                                                                                                                                                                                                     |                                            |                |     | DIST WP                        |        |                                                                                       | A                    | EE7308-LN   |         | 3    |



# CERTIFICATION DATA SHEET

2100 WASHINGTON ST.  
GRAFTON, WI  
PH. 262-277-8810

CONN. DIAGRAM: A-EE7308-LN

OUTLINE: SS330100LN-800

CATALOG : LM16030

WINDING #: K213699 R1 2

MOUNTING: F1/F2 CAPABLE

## TYPICAL MOTOR PERFORMANCE DATA

| HP | kW   | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 3  | 2.24 | 1200      | 1175     | 213T  | TEFC      | K        | B      |

| PH | Hz | VOLTS   | AMPS    | START TYPE      | DUTY       | INSL | S.F. | AMB°C |
|----|----|---------|---------|-----------------|------------|------|------|-------|
| 3  | 60 | 230/460 | 8.8/4.4 | ACROSS THE LINE | CONTINUOUS | F3   | 1.25 | 40    |

|                |      |               |      |               |      |          |                 |
|----------------|------|---------------|------|---------------|------|----------|-----------------|
| FULL LOAD EFF: | 89.5 | 3/4 LOAD EFF: | 88.7 | 1/2 LOAD EFF: | 86.7 | GTD. EFF | ELEC. TYPE      |
| FULL LOAD PF:  | 71.5 | 3/4 LOAD PF:  | 64.1 | 1/2 LOAD PF:  | 52.4 | 87.5     | SQ CAGE IND RUN |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE    | B.D. TORQUE    | F.L. RISE°C |
|-------------|-------------------|----------------|----------------|-------------|
| 13.43 LB-FT | 64 / 32           | 31 LB-FT 231 % | 47 LB-FT 351 % | 35          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2  | SAFE STALL TIME | STARTS / HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|------------|-----------------|---------------|-------------------|
| 55 dBA                 | 65 dBA      | 0.8 LB-FT^2 | 90 LB-FT^2 | 25 SEC.         | 2             | 160 LBS.          |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
|-----------------|------------------|------------|-------------|-------------|--------------------|------------|---------|---------------|
| STANDARD        | STANDARD         | RIGID      | HORIZONTAL  | FALSE       | NONE               | FALSE      | NONE    | GRAY (ENAMEL) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | ODE  |            |            |            |             |                         |                |
| BALL     | BALL |            |            |            |             |                         |                |
| 6208     | 6206 | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | ALUMINUM       |

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

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|---------------------------|
| INVERTER TORQUE: NONE     |
| INV. HP SPEED RANGE: NONE |
| ENCODER: NONE             |
| NONE NONE                 |
| NONE NONE PPR             |
| BRAKE: NONE NONE          |
| NONE P/N NONE             |
| NONE NONE                 |
| NONE FT-LB NONE V NONE Hz |



## Data Sheet

Date: 1/31/2018

LM16030



Data @ 460 V

## Motor Load Data

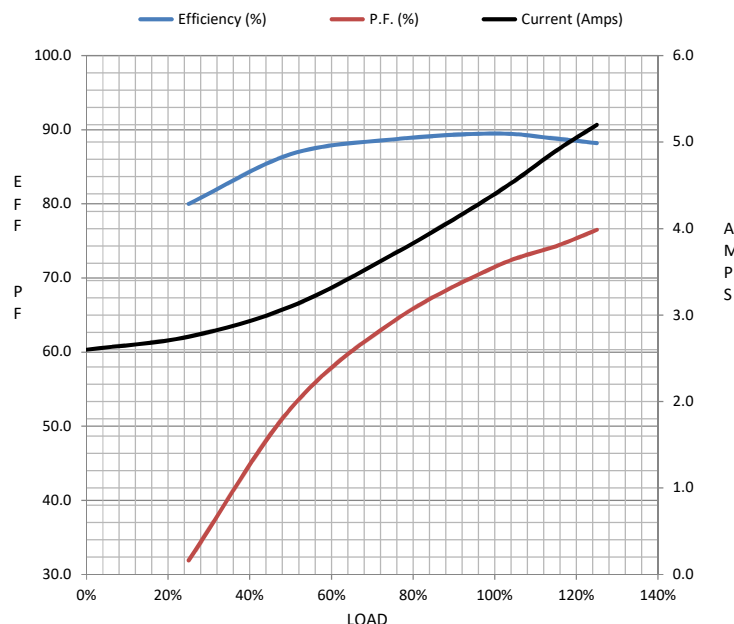
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 2.60 | 2.75 | 3.1  | 3.7  | 4.4  | 4.9   | 5.2  | 32.0 |  |
| Torque (ft-lb) | 0.00 | 3.3  | 6.7  | 10.0 | 13.4 | 15.5  | 16.9 | 31.0 |  |
| RPM            | 1200 | 1194 | 1188 | 1180 | 1175 | 1,170 | 1166 | 0    |  |
| Efficiency (%) |      | 80.0 | 86.7 | 88.7 | 89.5 | 88.8  | 88.2 |      |  |
| P.F. (%)       | 7.2  | 31.9 | 52.4 | 64.1 | 71.5 | 74.3  | 76.5 | 40.0 |  |

## Motor Speed Data

|                | LR   | Pull-Up | BD   | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM)    | 0    | 600     | 1025 | 1175  | 1200 |
| Current (Amps) | 32.0 | 28.0    | 20.0 | 4.4   | 2.60 |
| Torque (ft-lb) | 31.0 | 30.0    | 47.0 | 13.4  | 0.00 |

## Information Block

|                            |                |        |        |         |
|----------------------------|----------------|--------|--------|---------|
| HP                         | 3.0            |        |        |         |
| Sync. RPM                  | 1200           |        |        |         |
| Frame                      | 213            |        |        |         |
| Enclosure                  | TEFC           |        |        |         |
| Construction               | TFL            |        |        |         |
| Voltage                    | 230/460 V      |        |        |         |
| Frequency                  | 60 Hz          |        |        |         |
| Design                     | B              |        |        |         |
| LR Code letter             | K              |        |        |         |
| Service Factor             | 1.15           |        |        |         |
| Temp Rise @ FL             | 35 °C          |        |        |         |
| Duty                       | CONT           |        |        |         |
| Ambient                    | 40 °C          |        |        |         |
| Elevation                  | 1,000 feet     |        |        |         |
| Rotor/Shaft wk²            | 0.80 Lb-Ft²    |        |        |         |
| Ref Wdg                    | K213699 R1     |        |        |         |
| Sound Pressure @ 1M        | 55 dBA         |        |        |         |
| VFD Rating                 | NONE           |        |        |         |
| Outline Dwg                | SS330100LN-800 |        |        |         |
| Conn. Diag                 | A-EE7308-LN    |        |        |         |
| Additional Specifications: |                |        |        |         |
| 0                          |                |        |        |         |
| 0                          |                |        |        |         |
| EQUIV CKT (OHMS / PHASE)   |                |        |        |         |
| R1                         | R2             | X1     | X2     | Xm      |
| 1.7210                     | 1.5030         | 6.7130 | 7.1380 | 98.2080 |



## Speed - Torque Curve

