

PRODUCT INFORMATION PACKET

Model No: 182THES8048

Catalog No: Y980

Blue Max® Hazardous Duty® Explosion Proof Motor, 3 HP, 3 Ph, 60 Hz, 230/460 V, 1800 RPM,
182TC Frame, EPNV



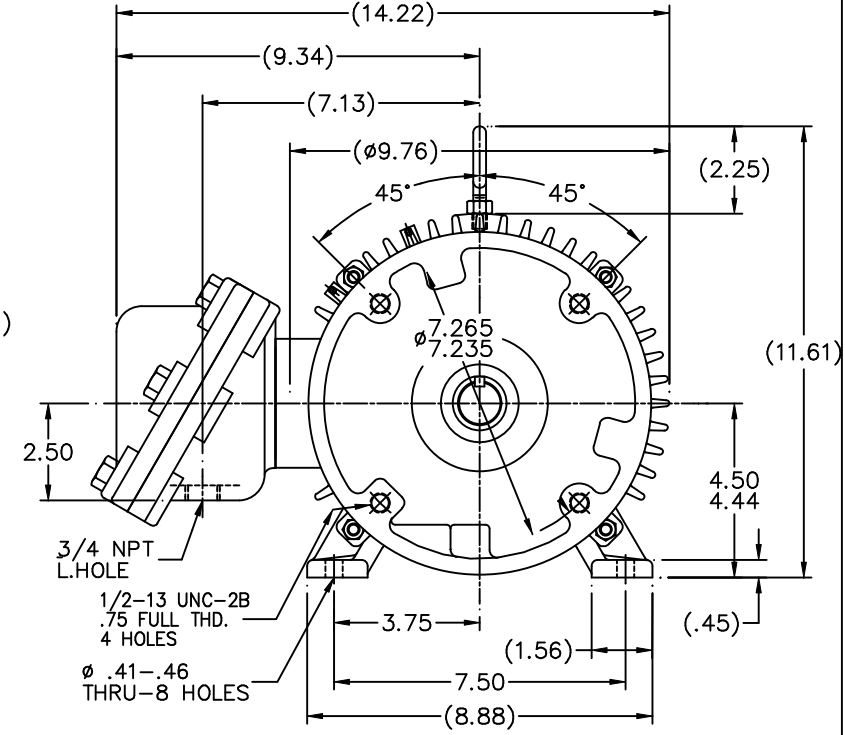
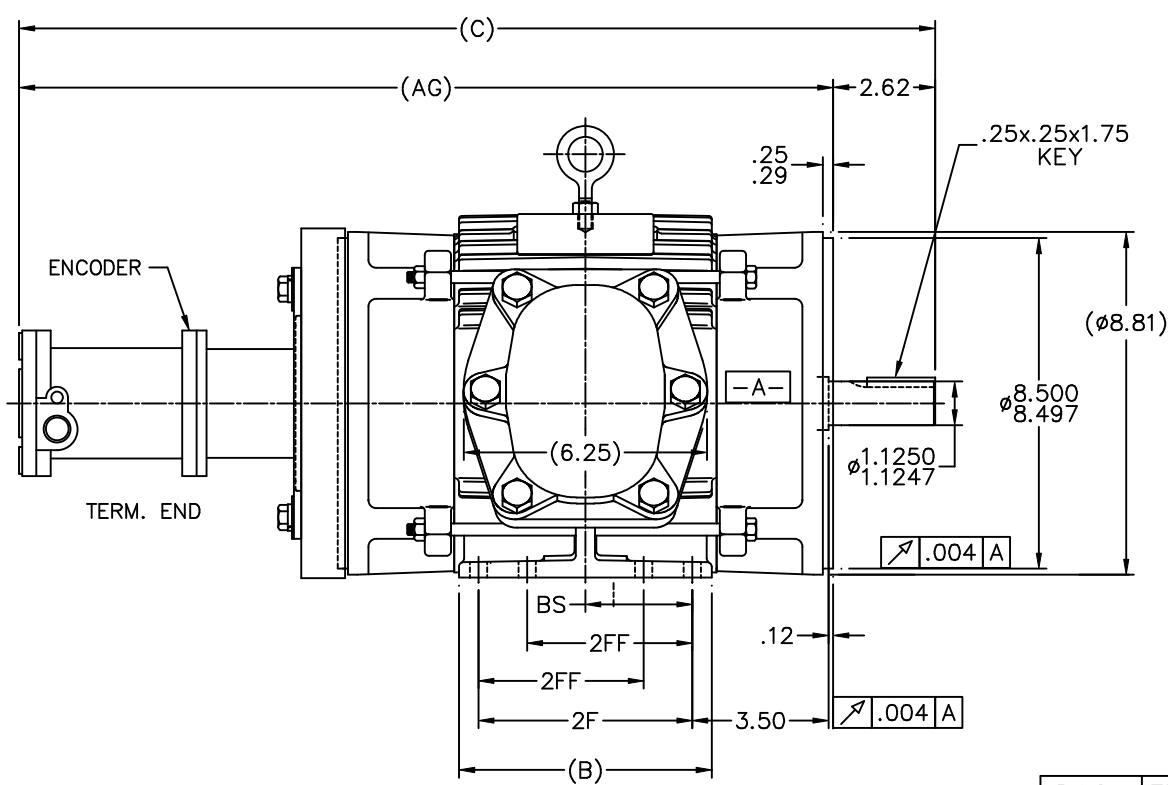
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Nameplate Specifications

| | | | |
|------------------------|---|----------------------------|---------------------------------------|
| Output HP | 3 Hp | Output KW | 2.2 kW |
| Frequency | 60 Hz | Voltage | 230/460 V |
| Current | 8.2/4.1 A | Speed | 1742 rpm |
| Service Factor | 1 | Phase | 3 |
| Efficiency | 86.5 % | Power Factor | 81 |
| Duty | Continuous | Insulation Class | F |
| Design Code | INV | KVA Code | L |
| Frame | 182TC | Enclosure | Explosion Proof Non Ventilated |
| Thermal Protection | Thermostat | Ambient Temperature | 40 °C |
| Drive End Bearing Size | 6207 | Opp Drive End Bearing Size | 6206 |
| UL | UL Listed And CSA Certified | CSA | Y |
| CE | N | IP Code | 54 |
| Hazardous Location | DIV 1 EXP PROOF CL I GR CD CL II GR FG T3C | Number of Speeds | 1 |

Technical Specifications

| | | | |
|-----------------------|------------------------------------|-----------------------|----------------------|
| Electrical Type | Squirrel Cage Inverter Duty | Starting Method | Inverter Only |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | 4.9 Ohms | Mounting | Rigid Base |
| Motor Orientation | Horizontal | Drive End Bearing | Ball |
| Opp Drive End Bearing | Ball | Frame Material | Cast Iron |
| Shaft Type | T | Overall Length | 24.82 in |
| Frame Length | 8.00 in | Shaft Diameter | 1.125 in |
| Shaft Extension | 2.62 in | Assembly/Box Mounting | F1/F2 CAPABLE |
| Inverter Load | CONSTANT 2000:1 | | |
| Outline Drawing | B-SS69060-800 | Connection Drawing | A-EE7308T |



| DASH | FRAME | B | C | 2F | 2FF | AG | BS | MOUNTING |
|------|-------|------|-------|------|------|-------|------|----------|
| 575 | 182TC | 5.50 | 22.57 | - | 4.50 | 12.69 | 2.25 | F1 ONLY |
| 675 | 182TC | 6.50 | 23.57 | 5.50 | 4.50 | 13.69 | 2.75 | F1 ONLY |
| 675 | 184TC | 6.50 | 23.57 | 5.50 | - | 13.69 | 2.75 | F1 OR F2 |
| 800 | 182TC | 7.75 | 24.82 | 6.75 | 4.50 | 14.94 | 2.75 | F1 OR F2 |
| 800 | 184TC | 7.75 | 24.82 | - | 5.50 | 13.94 | 2.75 | F1 OR F2 |

- NOTES:
1. CONDUIT BOX CAN BE ROTATED IN 90° STEPS.
 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 MOTOP

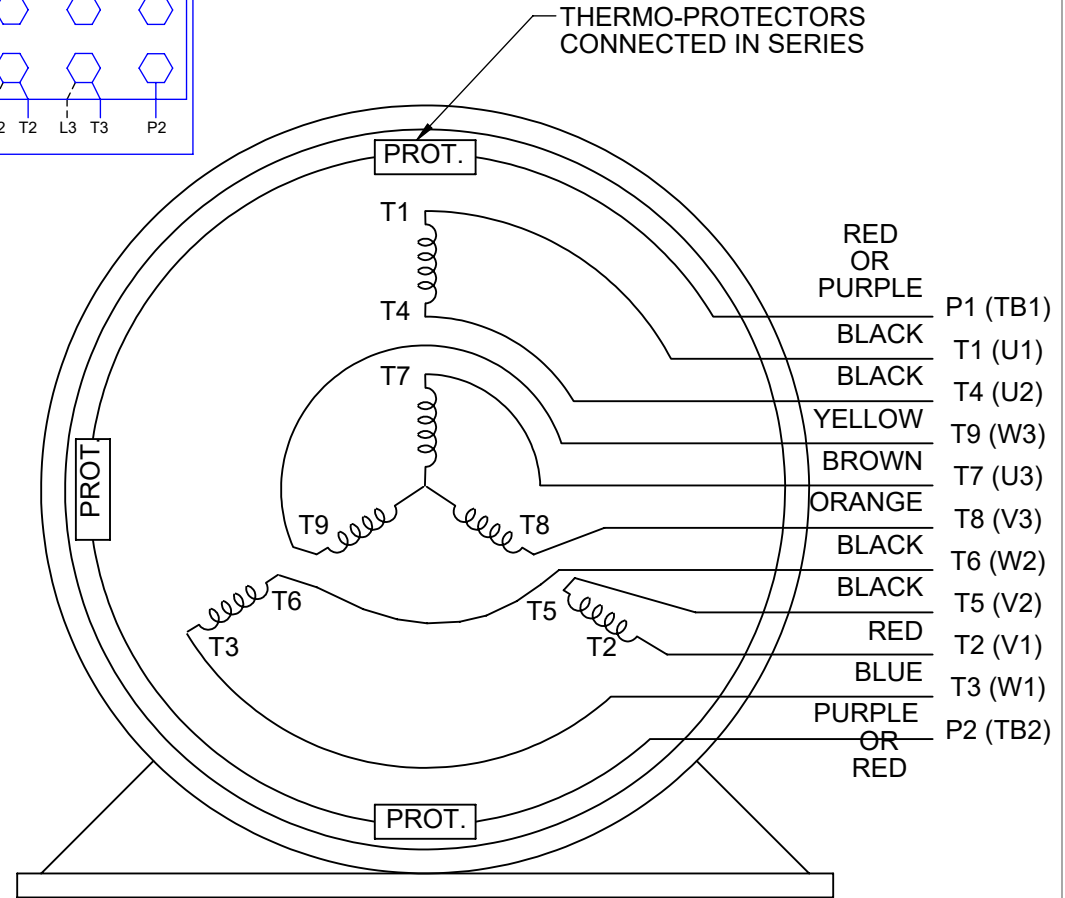
| | | | | | | |
|--|--|----------------|------|-----------------------------|--|----------------------|
| 4 | ADDED (C) & (AG) DIM. | RJW 04-21-2005 | ML | TOLERANCES UNLESS SPECIFIED | | DRAWN BJW 12-19-2000 |
| 3 | ADDED 6.75" 2F DIM. TO 182TC - DASH 800 CN 33665 | RJW 10-25-2004 | DEC. | INCHES | | CHK ML 12-28-2000 |
| 2 | REVISED O.D.E. BRACKET AND ADDED ADAPTOR CN 29200-1289 | BJW 01-19-2001 | .XX | ±.02 | TITLE OUTLINE - C'FACE 180TC FR. - EXP.PR. - BEI H38 TACH. | SCALE 5-16 |
| 1 | NEW DRAWING MU 34791 | BJW 12-29-2000 | .XXX | ±.005 | MAT'L | REF |
| NO. | REVISION | BY & DATE | CHK | ANG | FINISH | PREV |
| THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED THIS IS AN ELECTRONICALLY GENERATED DOCUMENT - DO NOT SCALE THIS PRINT | | | | | RFP | CAD FILE SS69060 |
| | | | | | DIST LB | SIZE B |
| | | | | | DRAWING NO. SS69060 | |
| | | | | | PAGE 4 | OF 4 |

HIGH VOLTAGE



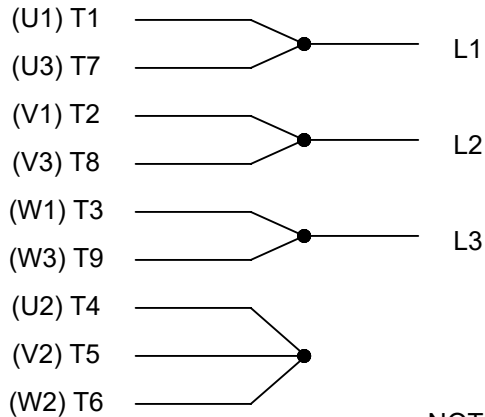
**THREE PHASE
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS
CONNECTED IN SERIES



NOTE FOR FACTORY USE ONLY:
TO SURGE TEST FOR COMMON CONNECT:
HIGH VOLT: CONNECT P1 TO T1
THEN P2 TO L1
LOW VOLT: CONNECT P1 TO T1 & T7,
THEN P2 TO L1

LOW VOLTAGE



VIEW OF TERMINAL END

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

| | | | | | | |
|---|-------------------|--------------------|----------------------------|--------------------|---|-----------------|
| DRAWING REVISION T | REVISION BY ZR | DATE 01-14-2019 | | DRAWN BY SMC | Regal Beloit America, Inc. | |
| ECO ECO-0159915 | APPROVED BY DR | DATE 01-15-2019 | | DATE 05-13-1992 | | |
| ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM | | | | APPROVED BY TB | DESCRIPTION CONN DIAGRAM-INTERNAL 3 PHASE - DUAL VOLTAGE MOTOR | |
| <small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small> | | | | DATE 05-13-1992 | MATERIAL | PROCESS/FINISH |
| | | | REFERENCE EE7308/EE7300 | SIZE A | DRAWING NUMBER EE7308T | SHEET 1 OF 1 |
| | | | THIRD ANGLE PROJECTION | | | |

CERTIFICATION DATA SHEET

Model#: 182THES8048 BR
CONN. DIAGRAM: A-EE7308T
OUTLINE: B-SS69060-800

WINDING#: K1824103 R2 2
ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 3 | 2.24 | 1800 | 1742 | 182TC | EPNV | L | INV |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|----|---------|---------|---------------|------------|------|-----|-------|-----------|
| 3 | 60 | 230/460 | 8.2/4.1 | INVERTER ONLY | CONTINUOUS | F3 | 1.0 | 40 | 3300 |

| FULL LOAD EFF: 86.5 | 3/4 LOAD EFF: 86.5 | 1/2 LOAD EFF: 85.5 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
|---------------------|--------------------|--------------------|----------|------------------|--------------|
| FULL LOAD PF: 81 | 3/4 LOAD PF: 75 | 1/2 LOAD PF: 63 | 81.5 | SQ CAGE INV DUTY | 4 / 2 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|--------------|--------------|-------------|
| 9 LB-FT | 73 / 36.5 | 27 LB-FT 300 | 35 LB-FT 388 | 75 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|-------------|-----------|-----------------|--------------|-------------------|
| 62 dBA | 72 dBA | 0.4 LB-FT^2 | - LB-FT^2 | - SEC. | - | 90 LBS. |

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

| R1 | R2 | X1 | X2 | XM |
|---------|---------|---------|--------|---------|
| 3.24478 | 2.25148 | 5.49626 | 6.5747 | 152.306 |

| RM | ZREF | XR | TD | TD0 |
|---------|------|-----|--------|-------|
| 5411.12 | 94.6 | 1.4 | 0.0069 | 0.185 |

***** SUPPLEMENTAL INFORMATION *****

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|-----------------|------------------|------------|-------------|-------------|--|------------|---------|---------------|
| C-FACE | ENCODER | RIGID | HORIZONTAL | FALSE | EXP PROOF CL I GR C&D CL II GR F&G T3C | FALSE | NONE | BLUE (ENAMEL) |

| BEARINGS | | GREASE | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|--------------------------|----------------|
| DE | OPE | | | | | | |
| BALL | BALL | POLYREX EM | T | NONE | NONE | 1144 STRESSPROOF (C-223) | CAST IRON |
| 6207 | 6206 | | | | | | |

| THERMO-PROTECTORS | | | | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS | PROTECTORS | WDG RTDs | BRG RTDs | | | |
| TSTATS (N/C) | NOT | NONE | NONE | NONE | FALSE | NONE VOLTS |

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 2000:1
 INV. HP SPEED RANGE: 2.0 X BASE SPEED

*
N
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S

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| | | | |
|---------------------------------------|--|--------|---------|
| ENCODER: REGAL SUPPLIED - REGAL MOUNT | | | |
| BEI H38 | | | |
| NPS HOLE 1024 PPR | | | |
| BRAKE: NONE NONE | | | |
| NONE P/N NONE | | | |
| NONE NONE | | | |
| NONE FT-LB | | NONE V | NONE Hz |

DATE: 06/27/2017 01:11:16 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 6/20/2017

Customer: _____

Attention: _____

Submitted by: FAREEDA DUDEKULA



182THES8048

Submittal

Data @ 460 V

Motor Load Data

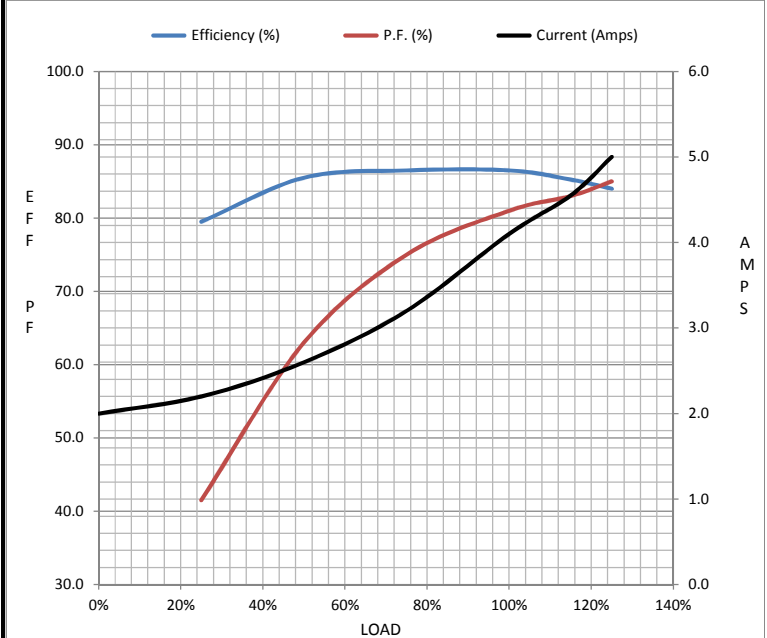
| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|------|
| Current (Amps) | 2.00 | 2.20 | 2.60 | 3.2 | 4.1 | 4.6 | 5.0 | 36.5 |
| Torque (ft-lb) | 0.00 | 2.20 | 4.4 | 6.7 | 9.0 | 10.3 | 11.5 | 27.0 |
| RPM | 1800 | 1785 | 1772 | 1758 | 1742 | 1,735 | 1725 | 0 |
| Efficiency (%) | | 79.5 | 85.5 | 86.5 | 86.5 | 85.3 | 84.0 | |
| P.F. (%) | 8.5 | 41.5 | 63.0 | 75.0 | 81.0 | 83.0 | 85.0 | 63.0 |

Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|------|---------|------|-------|------|
| Speed (RPM) | 0 | 500 | 1400 | 1742 | 1800 |
| Current (Amps) | 36.5 | 33.0 | 22.0 | 4.1 | 2.00 |
| Torque (ft-lb) | 27.0 | 24.0 | 35.0 | 9.0 | 0.00 |

Information Block

| | | | | |
|-----------------------------|-------------------------|--------|--------|----------|
| HP | 3.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 182 | | | |
| Enclosure | TENV | | | |
| Construction | TTS | | | |
| Voltage | 230/460 V | | | |
| Frequency | 60 Hz | | | |
| Design | A | | | |
| LR Code letter | L | | | |
| Service Factor | 1.15 | | | |
| Temp Rise @ FL | 75 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 0.40 Lb-Ft ² | | | |
| Ref Wdg | K1824103 R2 | | | |
| Sound Pressure @ 1M | 62 dBA | | | |
| VFD Rating | CONSTANT 2000:1 | | | |
| Outline Dwg | B-SS69060-800 | | | |
| Conn. Diag | A-EE7308T | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 0 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 3.2450 | 2.2510 | 5.4960 | 6.5750 | 152.3060 |



Speed -Torque Curve

