

PRODUCT INFORMATION PACKET

Model No: 445THFN8036

Catalog No: Y577

Blue Max® Inverter Duty Encoder Motor, 150 HP, 3 Ph, 60 Hz, 460 V, 1800 RPM, 445T Frame, TEFC



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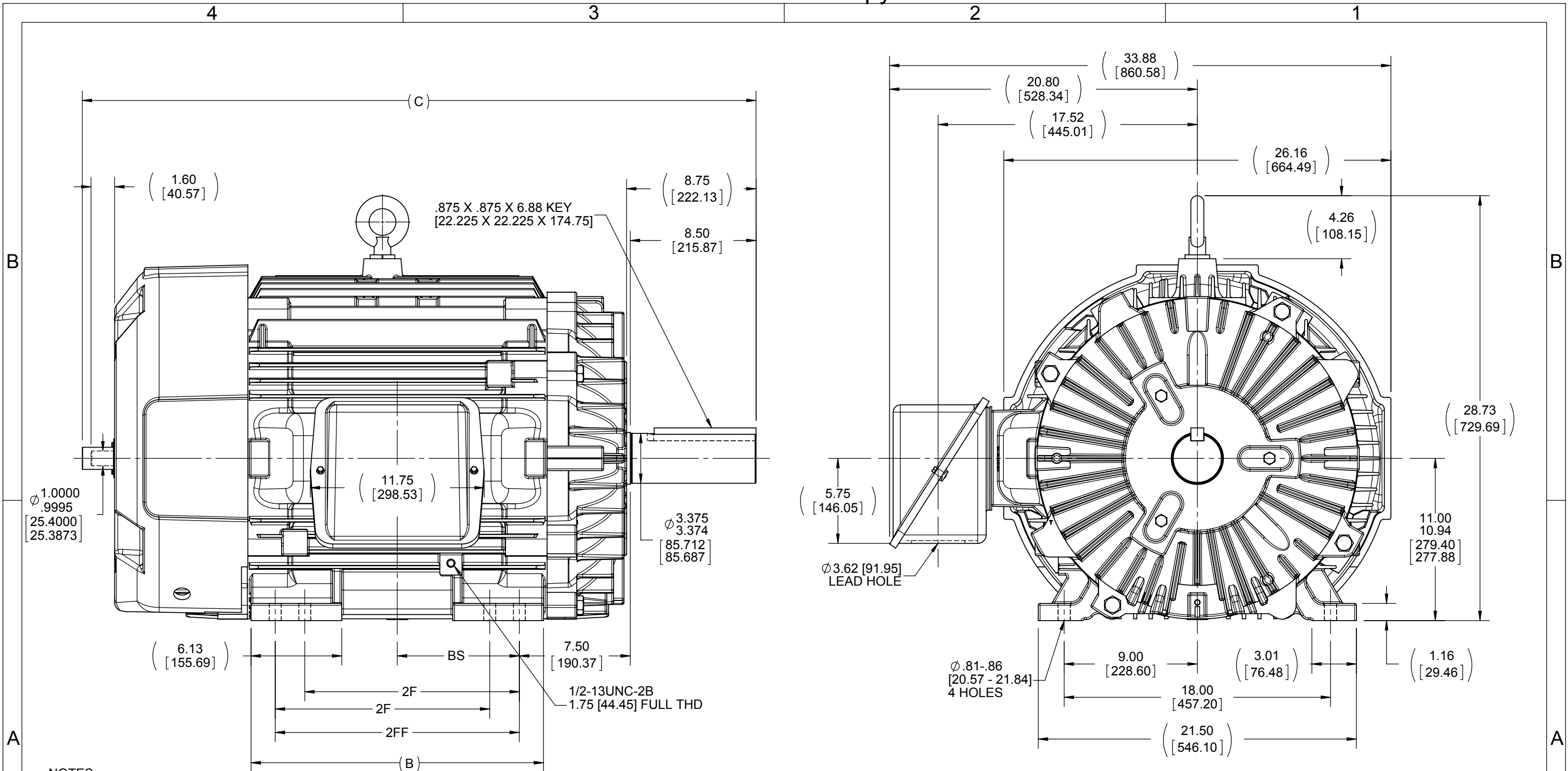
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Nameplate Specifications

| | | | |
|------------------------|-------------------|----------------------------|------------------------------------|
| Phase | 3 | Output HP | 150 Hp |
| Output KW | 112.0 kW | Voltage | 460 V |
| Speed | 1790 rpm | Service Factor | 1 |
| Frame | 445T | Enclosure | Totally Enclosed Fan Cooled |
| Thermal Protection | Thermostat | Efficiency | 94.5 % |
| Ambient Temperature | 40 °C | Frequency | 60 Hz |
| Current | 170.0 A | Power Factor | 87.5 |
| Duty | Continuous | Insulation Class | H |
| Design Code | INV | KVA Code | J |
| Drive End Bearing Size | 6318 | Opp Drive End Bearing Size | 6316 |
| UL | Recognized | CSA | Y |
| CE | Y | IP Code | 43 |
| Number of Speeds | 1 | | |

Technical Specifications

| | | | |
|-----------------------|------------------------------------|-----------------------|------------------------|
| Electrical Type | Squirrel Cage Inverter Duty | Starting Method | Inverter Only |
| Poles | 4 | Rotation | Reversible |
| Resistance Main | .0245 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 | 45.54 in |
| Frame Length | 20.25 in | Shaft Diameter | 3.375 in |
| Shaft Extension | 8.75 in | Assembly/Box Mounting | F1/F2 CAPABLE |
| Inverter Load | CONSTANT 2000:1 | | |
| Connection Drawing | A-EE7300T | Outline Drawing | B-SS555993-2025 |



- NOTES:
 1. CONDUIT BOX CAN BE ROATED IN 90° STEPS.
 2. CONDUIT BOX CAN BE MOUNTED ON OPPOSITE SIDE BY REMOVING BRACKETS AND TURNING FRAME 180°.
 3. NAMEPLATES TO BE READ FROM CONDUIT BOX SIDE OF MOTOR.

| DASH | FRAME | B | C | BS | 2F | 2FF |
|------|----------|-------------------|--------------------|------------------|-------------------|-------------------|
| 1825 | 444T | 17.75 [450.85] | 43.54 [1105.92] | 7.25 [184.15] | 14.50 [368.30] | NA |
| 2025 | 444/445T | 19.75 [501.65] | 45.54 [1156.72] | 8.25 [209.55] | 14.50 [368.30] | 16.50 [419.10] |

| | | |
|--|--------------------|--------------------|
| DRAWING REVISION B | REVISION BY AJW | DATE 09-09-2014 |
| ECO ECO-0059601 | APPROVED BY DJK | DATE 09-09-2014 |
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TOLERANCES UNLESS OTHERWISE SPECIFIED:

| DEC. | INCH | mm | ANGLE |
|-------|---------|-----------|---------|
| .X | ±0.1 | [±2.5] | ±7° 30" |
| .XX | ±0.03 | [±0.76] | |
| .XXX | ±0.005 | [±0.127] | |
| .XXXX | ±0.0005 | [±0.0127] | |

REMOVE BURRS & BREAK SHARP EDGES: .003/.015 [0.076/.381]
 CORNER FILLETS: .02 [0.51]
 MACHINED SURFACES: 200 INCH 5.1 mm SHOWN IN [BRACKETS]

| |
|------------------------|
| DRAWN BY W. JOERGER |
| DATE 12-02-2013 |
| APPROVED BY E. HEIL |
| DATE 12-20-2013 |
| REFERENCE |
| THIRD ANGLE PROJECTION |

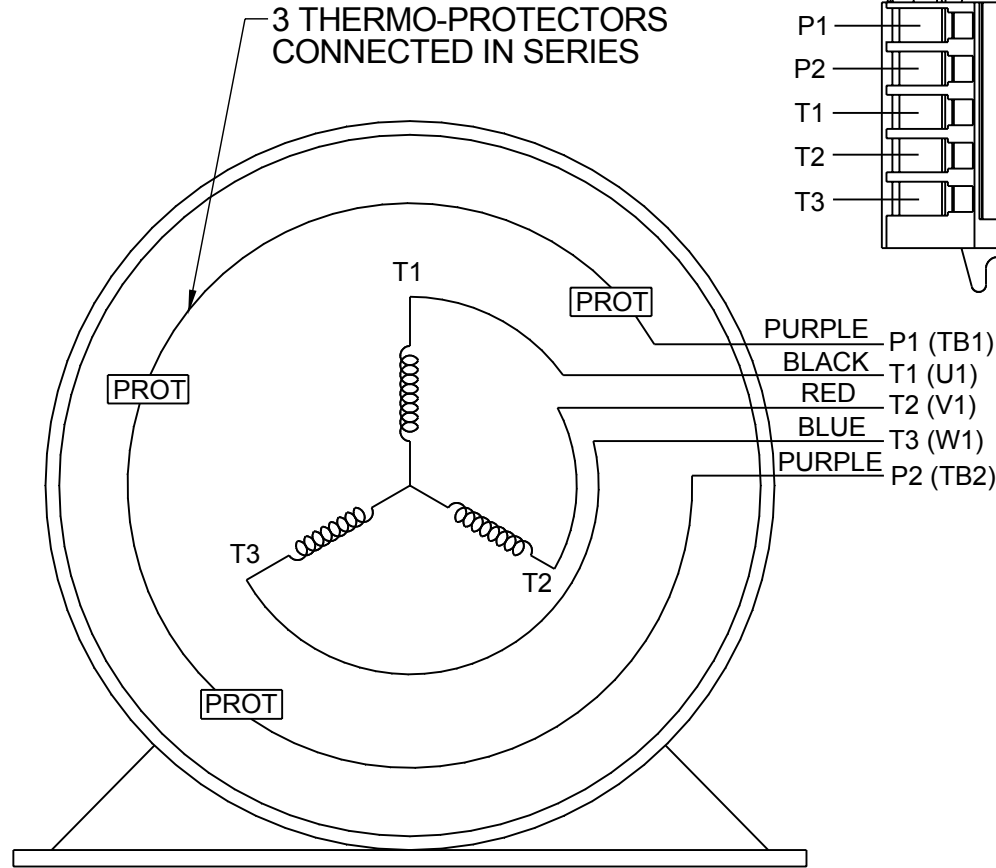
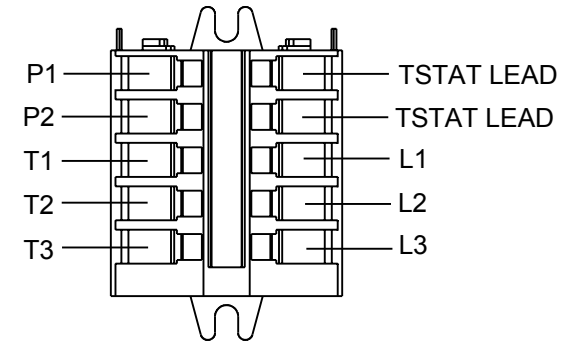
| | |
|---|-----------------------------------|
| REGAL ™ Regal Beloit America, Inc. | |
| DESCRIPTION OUTLINE TFN - ENC PROV - 440 FR - TEFC | |
| MATERIAL | PROCESS/FINISH |
| SIZE B | DRAWING NUMBER SS555993 |
| SHEET 1 OF 1 | |

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

**TO REVERSE ROTATION:
INTERCHANGE ANY TWO LINE
LEAD CONNECTIONS**

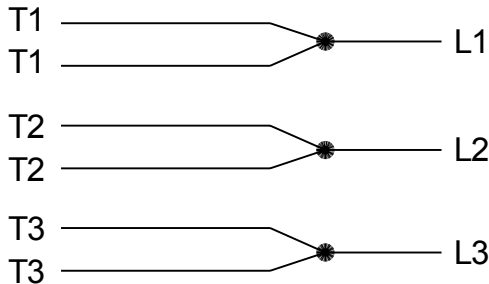
**NOTE FOR FACTORY USE ONLY:
TO SURGE TEST:
FOR 3 LEAD COMMON CONNECT:
CONNECT P1 TO T1 THEN P2 TO L1
FOR 6 LEAD COMMON CONNECT:
CONNECT P1 TO BOTH T1
THEN P2 TO L1**

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

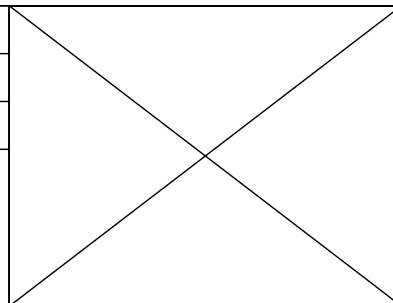
**IF MOTOR HAS MULTIPLE
T'S PER LEAD CONNECT
TOGETHER LIKE T'S**



A-9806 DECAL

- T2BM
- T6AW
- T6AL
- T6Z
- T4EG
- T4BF
- T8A
- T6H
- T6A
- T4AX
- T4A
- T2A
- T2F

| | | |
|---|----------------------|--------------------|
| DRAWING REVISION AB | REVISION BY AJW | DATE 07-17-2015 |
| ECO ECO-0081632 | APPROVED BY T.VUE | DATE 07-17-2015 |
| ECO DESCRIPTION REV'D IEC MARKINGS PER IEC-60034-8 | | |
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| |
|---------------------------|
| DRAWN BY LZ |
| DATE 01-04-1994 |
| APPROVED BY GK |
| DATE 01-20-1994 |
| REFERENCE |
| THIRD ANGLE PROJECTION |

| | |
|--|----------------------------------|
| Regal Beloit America, Inc. | |
| DESCRIPTION CONN DIAGRAM-EXTERNAL 3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR | |
| MATERIAL | PROCESS/FINISH |
| SIZE A | DRAWING NUMBER EE7300T |
| SHEET 1 OF 1 | |

CERTIFICATION DATA SHEET

Model#: 445THFN8036 BG
CONN. DIAGRAM: A-EE7300T
OUTLINE: B-SS555993-2025

WINDING#: T4454118 R5 5
ASSEMBLY: F1/F2 CAPABLE

TYPICAL MOTOR PERFORMANCE DATA

| HP | KW | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|-----|-----|-----------|----------|-------|-----------|----------|--------|
| 150 | 112 | 1800 | 1790 | 445T | TEFC | J | INV |

| PH | Hz | VOLTS | FL AMPS | START TYPE | DUTY | INSL | S.F | AMB°C | ELEVATION |
|----|----|-------|---------|---------------|------------|------|-----|-------|-----------|
| 3 | 60 | 460 | 170 | INVERTER ONLY | CONTINUOUS | H1 | 1.0 | 40 | 3300 |

| FULL LOAD EFF: 94.5 | 3/4 LOAD EFF: 93.6 | 1/2 LOAD EFF: 92.4 | GTD. EFF | ELEC. TYPE | NO LOAD AMPS |
|---------------------|--------------------|--------------------|----------|------------------|--------------|
| FULL LOAD PF: 87.5 | 3/4 LOAD PF: 84.5 | 1/2 LOAD PF: 77 | 93.6 | SQ CAGE INV DUTY | 57 |

| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|-------------|-------------------|---------------|----------------|-------------|
| 440 LB-FT | 1500 | 700 LB-FT 159 | 1475 LB-FT 335 | 55 |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2 | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|------------|-----------|-----------------|--------------|-------------------|
| 85 dBA | 95 dBA | 55 LB-FT^2 | - LB-FT^2 | - SEC. | - | 2250 LBS. |

EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

| R1 | R2 | X1 | X2 | XM |
|----------|---------|----------|---------|--------|
| 0.015876 | 0.00945 | 0.154035 | 0.11151 | 4.4226 |

| RM | ZREF | XR | TD | TD0 |
|--------|------|-----|--------|------|
| 241.92 | 1.89 | 7.4 | 0.0535 | 1.25 |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT |
|-----------------|------------------|------------|-------------|-------------|--------------------|------------|---------|---------------|
| STANDARD | ENCODER | RIGID | HORIZONTAL | FALSE | NONE | 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 | 1045 HOT ROLLED (C-204) | CAST IRON |
| 6318 | 6316 | | | | | | |

| 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: 1.5 X BASE SPEED |
| ENCODER: PROVISIONS ONLY NONE NONE NONE NONE PPR |
| BRAKE: NONE NONE NONE P/N NONE |

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| | | | |
|------------|--------|---------|--|
| NONE | NONE | | |
| NONE FT-LB | NONE V | NONE Hz | |

DATE: 06/21/2017 04:44:53 AM
FORM 3531 REV.3 02/07/99
** Subject to change without notice.

Data Sheet

Date: 29-06-2017
 Customer: _____
 Attention: _____
 Submitted by: FAREEDA DUDEKULA



445THFN8036

Submittal

Data @ 460 V

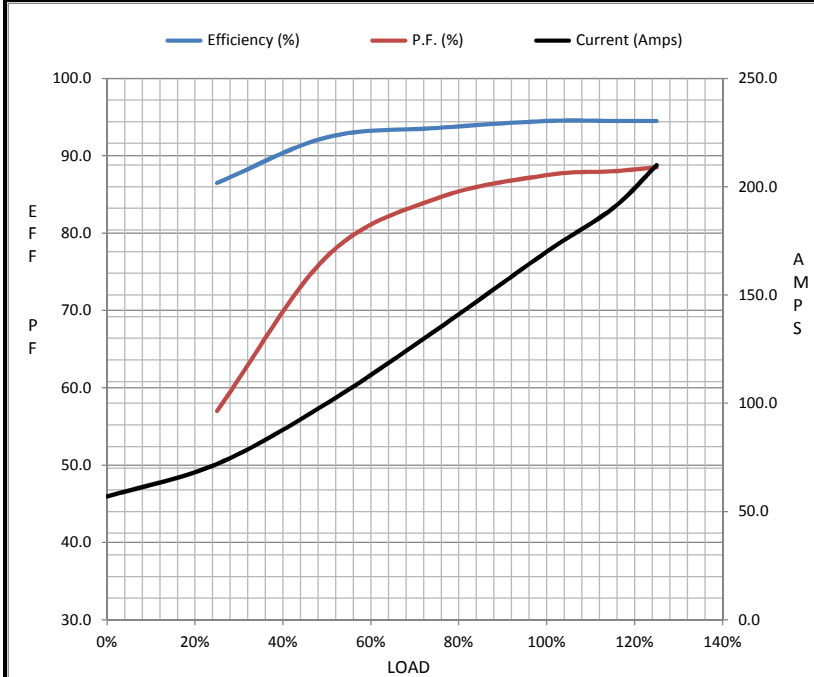
Motor Load Data

| Load | 0% | 25% | 50% | 75% | 100% | 115% | 125% | LR |
|----------------|------|------|------|------|------|-------|------|-------|
| Current (Amps) | 57.0 | 72.0 | 100 | 134 | 170 | 190 | 210 | 1,500 |
| Torque (ft-lb) | 0.00 | 110 | 220 | 330 | 440 | 495 | 550 | 700 |
| RPM | 1800 | 1798 | 1795 | 1792 | 1790 | 1,788 | 1786 | 0 |
| Efficiency (%) | | 86.5 | 92.4 | 93.6 | 94.5 | 94.5 | 94.5 | |
| P.F. (%) | 10.0 | 57.0 | 77.0 | 84.5 | 87.5 | 88.0 | 88.5 | 24.0 |

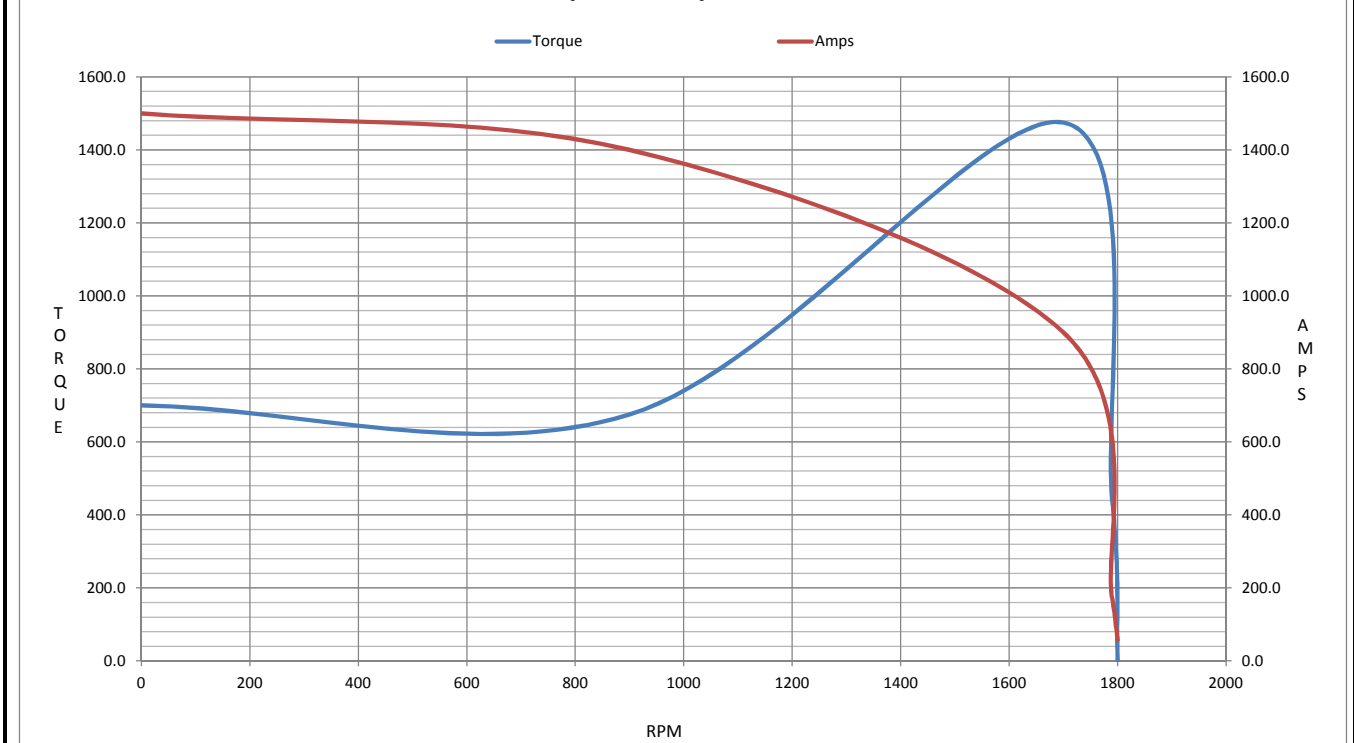
Motor Speed Data

| | LR | Pull-Up | BD | Rated | Idle |
|----------------|-------|---------|-------|-------|------|
| Speed (RPM) | 0 | 900 | 1700 | 1790 | 1800 |
| Current (Amps) | 1,500 | 1,400 | 900 | 170 | 57.0 |
| Torque (ft-lb) | 700 | 675 | 1,475 | 440 | 0.00 |

| Information Block | | | | |
|-----------------------------|-------------------------|--------|--------|--------|
| HP | 150.0 | | | |
| Sync. RPM | 1800 | | | |
| Frame | 445 | | | |
| Enclosure | TEFC | | | |
| Construction | TFN | | | |
| Voltage | 460 V | | | |
| Frequency | 60 Hz | | | |
| Design | A | | | |
| LR Code letter | J | | | |
| Service Factor | 1.0 | | | |
| Temp Rise @ FL | 55 ° C | | | |
| Duty | CONT | | | |
| Ambient | 40 ° C | | | |
| Elevation | 1,000 feet | | | |
| Rotor/Shaft wk ² | 55.0 Lb-Ft ² | | | |
| Ref Wdg | T4454118 R5 | | | |
| Sound Pressure @ 1M | 85 dBA | | | |
| VFD Rating | CONSTANT 2000:1 | | | |
| Outline Dwg | B-SS555993-2025 | | | |
| Conn. Diag | A-EE7300T | | | |
| Additional Specifications: | | | | |
| 0 | | | | |
| 365THFS8036 | | | | |
| EQUIV CKT (OHMS / PHASE) | | | | |
| R1 | R2 | X1 | X2 | Xm |
| 0.0160 | 0.0090 | 0.1540 | 0.1120 | 4.4230 |



Speed - Torque Curve



EC Declaration of Conformity

The undersigned representing
the manufacturer:

Regal Beloit America
100 East Randolph St.
Wausau, WI 54401

and the authorized representative
established within the Community:

Marathon Electric UK
6F Thistleton Road Ind. Estate
Market Overton
Oakham, Rutland LE15 7PP UK

are committed to providing customers with products that comply with applicable regulations and international protocols to which they are subject, including the requirements of the European Parliament Directive on the Harmonization of the laws relating to electrical equipment designed for use within certain voltage limits (2014/35/EU).

Regal Beloit America declares that the following product(s), to which this declaration relates, are in conformity with the relevant sections of the EC standards listed below.

This statement supersedes any statements previously issued pertaining to the product(s) listed below and is subject to change without notice.

Model No : 445THFN8036

(Model No. may contain prefix and/or suffix characters)

Catalog No : Y577

Rework No : N/A

Directives :

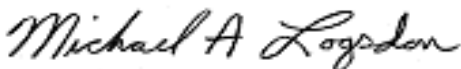
Low Voltage Directive 2014/35/EU

Harmonized Standards Used :

EN 60034-1: 2010 (IEC 60034-1: 2010)

EN 60034-5: 2001/A1:2007 (IEC 60034-5: 2000/A1:2006)

Authorized Representative:



Michael A. Logsdon
Vice President, Technology

Authorized Representative in the Community:



Julian Clark
Marketing Engineer

Created on 09/01/2022

CE 22