

# PRODUCT INFORMATION PACKET

**marathon®**  
Motors

Model No: 256TTGN16540

Catalog No: U028A

Hazardous Duty® Explosion Proof Motor, 20 HP, 3 Ph, 60 Hz, 575 V, 1800 RPM, 256T Frame, EPFC



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**RegalRexnord**

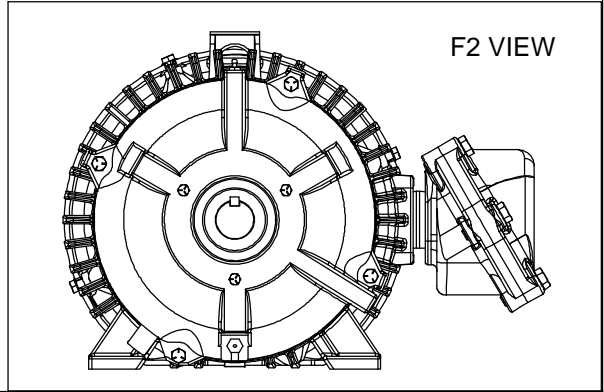
## Nameplate Specifications


|                        |  |                            |                            |
|------------------------|--|----------------------------|----------------------------|
| Output HP              | 20 Hp                                      | Output KW                  | 14.9 kW                    |
| Frequency              | 60 Hz                                      | Voltage                    | 575 V                      |
| Current                | 19.5 A                                     | Speed                      | 1775 rpm                   |
| Service Factor         | 1.15                                       | Phase                      | 3                          |
| Efficiency             | 93 %                                       | Power Factor               | 84                         |
| Duty                   | Continuous                                 | Insulation Class           | F                          |
| Design Code            | B  | KVA Code                   | G                          |
| Frame                  | 256T                                       | Enclosure                  | Explosion Proof Fan cooled |
| Thermal Protection     | Thermostat                                 | Ambient Temperature        | 40 °C                      |
| Drive End Bearing Size | 6309                                       | Opp Drive End Bearing Size | 6210                       |
| 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 T3B | Number of Speeds           | 1                          |

## Technical Specifications

|                       |                              |                       |                  |
|-----------------------|------------------------------|-----------------------|------------------|
| Electrical Type       | Squirrel Cage Inverter Rated | Starting Method       | Line Or Inverter |
| Poles                 | 4                            | Rotation              | Reversible       |
| Resistance Main       | .474 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        | 25.27 in         |
| Frame Length          | 12.25 in                     | Shaft Diameter        | 1.625 in         |
| Shaft Extension       | 4.18 in                      | Assembly/Box Mounting | F1 ONLY          |
| Inverter Load         | CONSTANT 2:1                 |                       |                  |
| Outline Drawing       | B-SS203001-1225              | Connection Drawing    | A-EE7300T        |





|  |  |                                   |                               |
|--|--|-----------------------------------|-------------------------------|
|  <b>Regal</b> <small>TM</small> |  | <b>Regal Beloit America, Inc.</b> |                               |
| <b>DESCRIPTION</b>   |  |                                   |                               |
| <h1>OUTLINE</h1> <p>250T FR. EXP. PR. - BB - T - STD.</p>  |  |                                   |                               |
| <b>MATERIAL</b>  |  | <b>PROCESS/FINISH</b>             |                               |
| <b>SIZE</b><br><b>B</b>  | <b>DRAWING NUMBER</b><br><b>SS203001</b> |                                   | <b>SHEET</b><br><b>1 OF 1</b> |

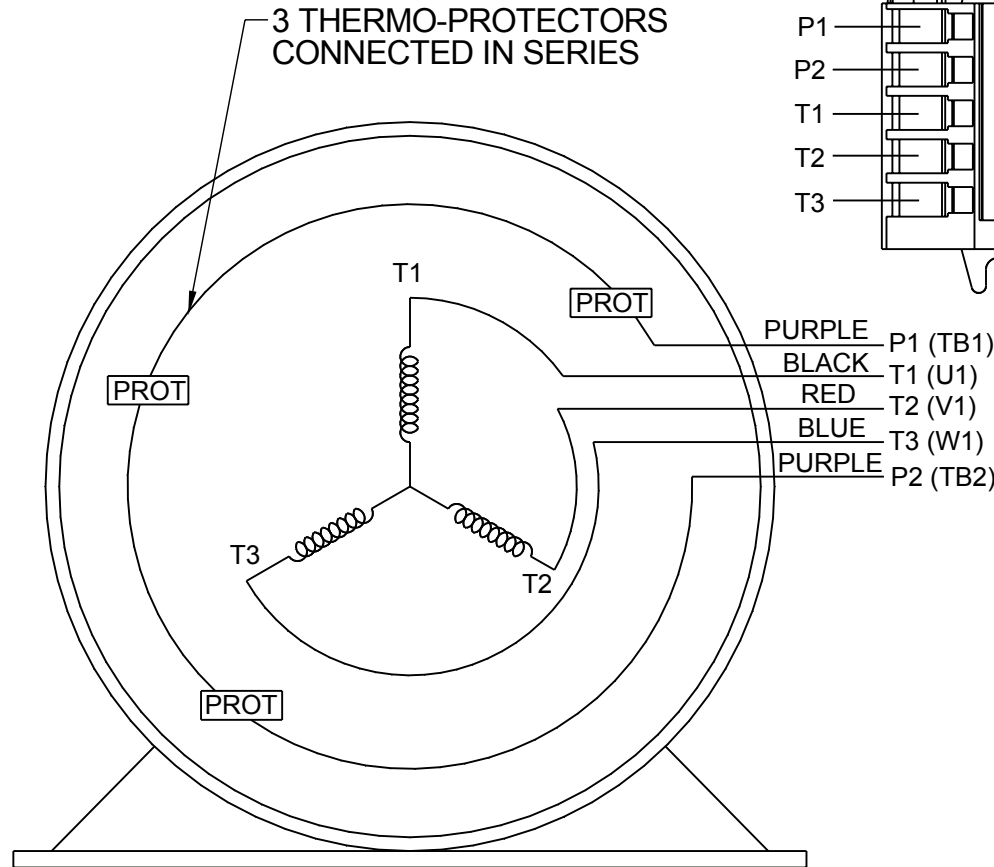
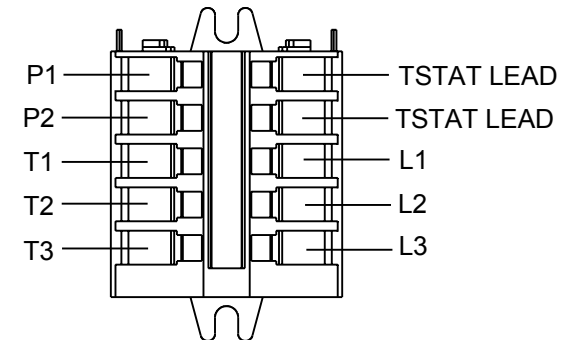
| DASH | FRAME | B                 | C                 | 2F  | 2FF               | BS               |
|------|-------|-------------------|-------------------|-----|-------------------|------------------|
| 1050 | 254T  | 10.25<br>[260.35] | 23.65<br>[600.71] | --- | 8.25<br>[209.55]  | 4.12<br>[104.65] |
| 1225 | 256T  | 12.00<br>[304.80] | 25.40<br>[645.16] | --- | 10.00<br>[254.00] | 5.00<br>[127.00] |

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

TO REVERSE ROTATION:  
INTERCHANGE ANY TWO LINE  
LEAD CONNECTIONS

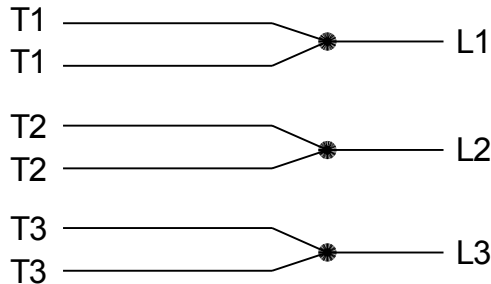
NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST:  
FOR 3 LEAD COMMON CONNECT:  
CONNECT P1 TO T1 THEN P2 TO L1  
FOR 6 LEAD COMMON CONNECT:  
CONNECT P1 TO BOTH T1  
THEN P2 TO L1

TERMINAL BLOCK WHEN SPECIFIED



VIEW OF TERMINAL END

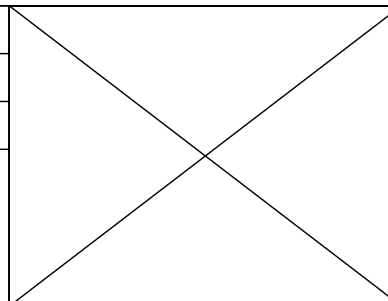
IF MOTOR HAS MULTIPLE  
T'S PER LEAD CONNECT  
TOGETHER LIKE T'S




A-9806 DECAL

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

|   |                      |                    |
|---|----------------------|--------------------|
| DRAWING REVISION<br>AB  | REVISION BY<br>AJW   | DATE<br>07-17-2015 |
| ECO<br>ECO-0081632  | APPROVED BY<br>T.VUE | DATE<br>07-17-2015 |
| ECO DESCRIPTION<br>REV'D IEC MARKINGS PER IEC-60034-8   |                      |                    |
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|                           |  |                           |
|---------------------------|--|---------------------------|
| DRAWN BY<br>LZ            |  Regal Beloit America, Inc. |                           |
| DATE<br>01-04-1994        |  |                           |
| APPROVED BY<br>GK         | DESCRIPTION<br><b>CONN DIAGRAM-EXTERNAL</b><br>3Ø-SINGLE VOLT-MOTOR WITH PROTECTOR                               |                           |
| DATE<br>01-20-1994        |  |                           |
| REFERENCE                 | MATERIAL   | PROCESS/FINISH            |
| THIRD ANGLE<br>PROJECTION | SIZE<br>A  | DRAWING NUMBER<br>EE7300T |
|                           |  | SHEET<br>1 OF 1           |

## CERTIFICATION DATA SHEET

Model#: 256TTGN16540 AA  
 CONN. DIAGRAM: A-EE7300T  
 OUTLINE: B-SS203001-1225

WINDING#: K2564164 NONE 3  
 ASSEMBLY: F1 ONLY

## TYPICAL MOTOR PERFORMANCE DATA

| HP | KW   | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE | DESIGN |
|----|------|-----------|----------|-------|-----------|----------|--------|
| 20 | 14.9 | 1800      | 1775     | 256T  | EPFC      | G        | B      |

| PH | Hz | VOLTS | FL AMPS | START TYPE          | DUTY       | INSL | S.F  | AMB°C | ELEVATION |
|----|----|-------|---------|---------------------|------------|------|------|-------|-----------|
| 3  | 60 | 575   | 19.5    | LINE OR<br>INVERTER | CONTINUOUS | F3   | 1.15 | 40    | 3300      |

|                   |                    |                  |          |                   |              |
|-------------------|--------------------|------------------|----------|-------------------|--------------|
| FULL LOAD EFF: 93 | 3/4 LOAD EFF: 93.6 | 1/2 LOAD EFF: 93 | GTD. EFF | ELEC. TYPE        | NO LOAD AMPS |
| FULL LOAD PF: 84  | 3/4 LOAD PF: 81    | 1/2 LOAD PF: 72  | 92.4     | SQ CAGE INV RATED | 6.8          |

|             |                   |               |               |             |
|-------------|-------------------|---------------|---------------|-------------|
| F.L. TORQUE | LOCKED ROTOR AMPS | L.R. TORQUE   | B.D. TORQUE   | F.L. RISE°C |
| 59.2 LB-FT  | 110.4             | 105 LB-FT 177 | 146 LB-FT 247 | 65          |

|                           |             |             |             |                 |                 |                      |
|---------------------------|-------------|-------------|-------------|-----------------|-----------------|----------------------|
| SOUND PRESSURE<br>@ 3 FT. | SOUND POWER | ROTOR WK^2  | MAX. WK^2   | SAFE STALL TIME | STARTS<br>/HOUR | APPROX. MOTOR<br>WGT |
| 65 dBA                    | 75 dBA      | 3.2 LB-FT^2 | 125 LB-FT^2 | 25 SEC.         | 2               | 400 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  | PREMIUM<br>SEVERE DUTY | EXP PROOF CL<br>I GR C&D CL II<br>GR F&G T3B | FALSE         | NONE    | BLUE (EPOXY) |

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

| 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

|                                 |                               |
|---------------------------------|-------------------------------|
| *<br>N<br>O<br>T<br>E<br>S<br>* | INVERTER TORQUE: CONSTANT 2:1 |
|                                 | INV. HP SPEED RANGE: NONE     |
|                                 | ENCODER: NONE                 |
|                                 | NONE NONE PPR                 |
|                                 | BRAKE: NONE NONE              |
|                                 | NONE P/N NONE                 |
|                                 | NONE NONE                     |
|                                 | - FT-LB NONE V NONE Hz        |

DATE: 06/21/2017 10:52:25 AM  
 FORM 3531 REV.3 02/07/99  
 \*\* Subject to change without notice.

## Data Sheet

Date: 16-06-2017

Customer:

Attention:

Submitted by: FAREEDA DUDEKULA



256TTGN16540

Submittal

Data @ 575 V

## Motor Load Data

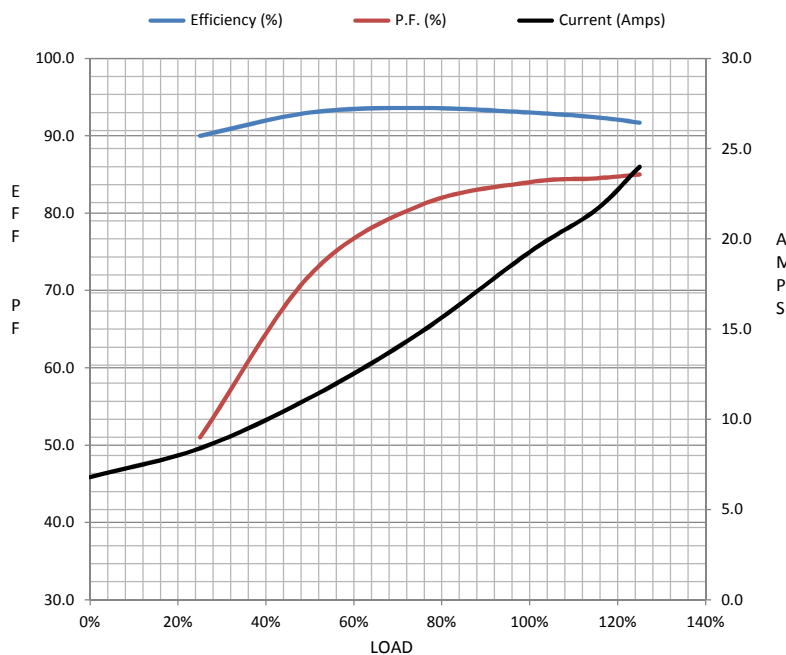
| Load           | 0%   | 25%  | 50%  | 75%  | 100% | 115%  | 125% | LR   |  |
|----------------|------|------|------|------|------|-------|------|------|--|
| Current (Amps) | 6.8  | 8.4  | 11.2 | 14.8 | 19.3 | 21.6  | 24.0 | 110  |  |
| Torque (ft-lb) | 0.00 | 14.5 | 29.5 | 44.5 | 59.2 | 68.0  | 74.5 | 105  |  |
| RPM            | 1800 | 1795 | 1785 | 1780 | 1775 | 1,770 | 1760 | 0    |  |
| Efficiency (%) |      | 90.0 | 93.0 | 93.6 | 93.0 | 92.4  | 91.7 |      |  |
| P.F. (%)       | 8.5  | 51.0 | 72.0 | 81.0 | 84.0 | 84.5  | 85.0 | 40.0 |  |

## Motor Speed Data

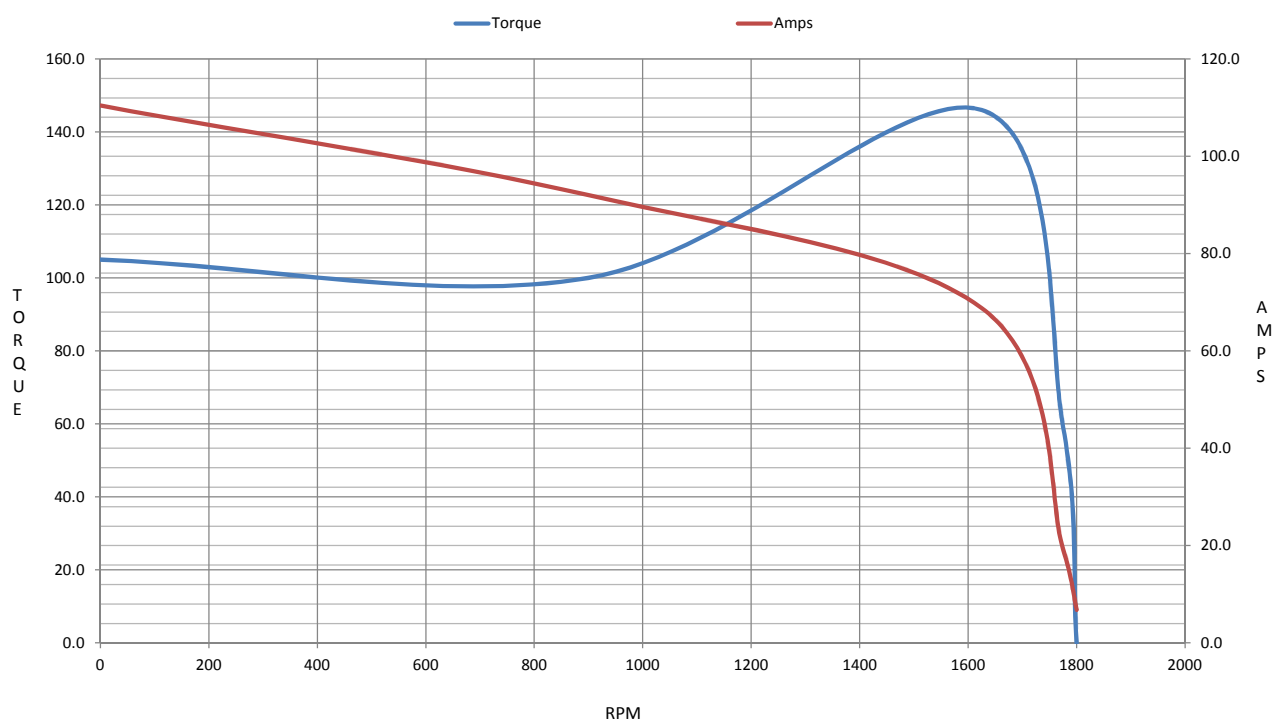
|                | LR  | Pull-Up | BD   | Rated | Idle |
|----------------|-----|---------|------|-------|------|
| Speed (RPM)    | 0   | 900     | 1625 | 1775  | 1800 |
| Current (Amps) | 110 | 92.0    | 68.8 | 19.3  | 6.8  |
| Torque (ft-lb) | 105 | 100     | 146  | 59.2  | 0.00 |

## Information Block

|                            |                 |        |        |         |
|----------------------------|-----------------|--------|--------|---------|
| HP                         | 20.0            |        |        |         |
| Sync. RPM                  | 1800            |        |        |         |
| Frame                      | 256             |        |        |         |
| Enclosure                  | TEFC            |        |        |         |
| Construction               | TFN             |        |        |         |
| Voltage                    | 575 V           |        |        |         |
| Frequency                  | 60 Hz           |        |        |         |
| Design                     | B               |        |        |         |
| LR Code letter             | G               |        |        |         |
| Service Factor             | 1.15            |        |        |         |
| Temp Rise @ FL             | 65 ° C          |        |        |         |
| Duty                       | CONT            |        |        |         |
| Ambient                    | 40 ° C          |        |        |         |
| Elevation                  | 1,000 feet      |        |        |         |
| Rotor/Shaft wk²            | 3.2 Lb-Ft²      |        |        |         |
| Ref Wdg                    | K2564164 NONE   |        |        |         |
| Sound Pressure @ 1M        | 65 dBA          |        |        |         |
| VFD Rating                 | CONSTANT 2:1    |        |        |         |
| Outline Dwg                | B-SS203001-1225 |        |        |         |
| Conn. Diag                 | A-EE7300T       |        |        |         |
| Additional Specifications: |                 |        |        |         |
| 0                          |                 |        |        |         |
| 365THFS8036                |                 |        |        |         |
| EQUIV CKT (OHMS / PHASE)   |                 |        |        |         |
| R1                         | R2              | X1     | X2     | Xm      |
| 0.4170                     | 0.3240          | 1.5460 | 2.3300 | 44.3750 |



## Speed -Torque Curve



# CERTIFICATE OF COMPLIANCE

**Certificate Number** 20220314- E12044  
**Report Reference** E12044-19950413  
**Issue Date** 2022-MARCH-14

**Issued to:** REGAL BELOIT AMERICA INC  
1946 W COOK RD  
FORT WAYNE IN 46818

Tradename: Marathon

**This certificate confirms that  
representative samples of**

MOTORS FOR USE IN HAZARDOUS LOCATIONS  
Electric motors for use in hazardous locations; Class I,  
Groups C and D; Class II, Groups F and G; Inclusive of  
Model Number 256TTGN16540 (may have prefix and/or  
suffix characters).

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** UL 674 - Electric Motors and Generators for Use in Division  
1 Hazardous (Classified) Locations,  
CSA C22.2 No. 145, Electric Motors and Generators for  
Use in Hazardous (Classified) Locations

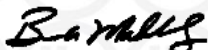
**Additional Information:** See the UL Online Certifications Directory at  
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up  
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Look for the UL Certification Mark on the product.

This is to certify that representative samples of the product as specified on this certificate were tested  
according to the current UL requirements.



Bruce Mahrenholz, Director North American Certification Program

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