

# Inverter (Vector) Duty Motors

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**Model No:** 215TPNSB10235

**Catalog No:** SY009A

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Inverter (Vector) Duty Motor, 10 HP, 3 Ph, 90 Hz, 230/460 V, 1800 RPM, 215TC Frame, TENV

**Product Information Packet: Model No: 215TPNSB10235, Catalog No: SY009A Inverter (Vector) Duty Motor, 10 HP, 3 Ph, 90 Hz, 230/460 V, 1800 RPM, 215TC Frame, TENV**

#### Nameplate Specifications

|                            |                                 |                        |             |
|----------------------------|---------------------------------|------------------------|-------------|
| Phase                      | 3                               | Output HP              | 10 Hp       |
| Output KW                  | 7.5 kW                          | Voltage                | 230/460 V   |
| Speed                      | 1800 r/min                      | Synchronous RPM        | 1800 r/min  |
| Service Factor             | 1.00                            | Frame                  | 215TC       |
| Enclosure                  | Totally Enclosed Non Ventilated | Thermal Protection     | Thermostat  |
| Efficiency                 | 93.9 %                          | Ambient Temperature    | 40 °C       |
| Frequency                  | 90 Hz                           | Current                | 24.6/12.3 A |
| Power Factor               | 83.5                            | Duty                   | Continuous  |
| Insulation Class           | H                               | Design Code            | PM          |
| KVA Code                   | N/A                             | Drive End Bearing Size | 6309        |
| Opp Drive End Bearing Size | 6208                            | UL                     | Recognized  |
| CSA                        | Y                               | CE                     | N           |
| IP Code                    | 54                              | Number of Speeds       | 1           |

#### Technical Specifications

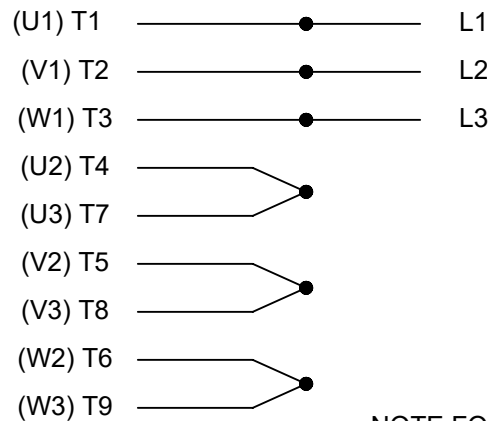
|                       |                     |                       |               |
|-----------------------|---------------------|-----------------------|---------------|
| Electrical Type       | AC Permanent Magnet | Starting Method       | Inverter Only |
| Poles                 | 6                   | Rotation              | Reversible    |
| Resistance Main       | 0 Ω                 | Mounting              | Rigid Base    |
| Motor Orientation     | Horizontal          | Drive End Bearing     | Ball          |
| Opp Drive End Bearing | Ball                | Frame Material        | Cast Iron     |
| Shaft Type            | T                   | Overall Length        | 20.41 in      |
| Frame Length          | 9.12 in             | Shaft Diameter        | 1 3/8 in      |
| Shaft Extension       | 3.12 in             | Assembly/Box Mounting | F1 Only       |
| Inverter Load         | Constant 20:1       |                       |               |

#### Drawings

|                    |         |                 |            |
|--------------------|---------|-----------------|------------|
| Connection Drawing | EE7308T | Outline Drawing | 037797-912 |
|--------------------|---------|-----------------|------------|



LOW VOLTAGE



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

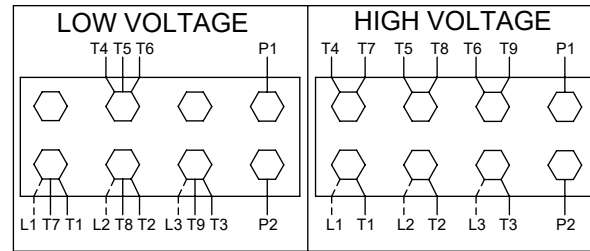
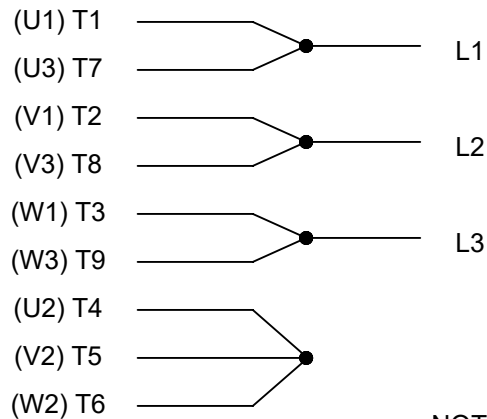


Diagram illustrating the terminal end of a cable with 12 conductors and two thermoprotectors (PROT.). The conductors are labeled T1 through T12, and the thermoprotectors are labeled PROT. The diagram shows the internal wiring and the color coding for each conductor.

Conductor Color Coding:

- T1: RED OR PURPLE
- T4: BLACK
- T7: BLACK
- T9: YELLOW
- T8: BROWN
- T6: ORANGE
- T5: BLACK
- T3: BLACK
- T2: RED
- T12: BLUE
- T11: PURPLE OR RED

Thermoprotectors (PROT.) are connected in series to the conductors T1 and T11.

VIEW OF TERMINAL END

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |                               |                                                                                      |                                                                                       |           |                                                                      |  |                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------|-------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------|--|-----------------|
| DRAWING REVISION<br>U                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | REVISION BY<br>SB  | REV DATE/© DATE<br>08/01/2025 | PRIMARY DIMENSIONS ARE INCH<br>mm DIMENSIONS IN [BRACKETS]<br>ARE FOR REFERENCE ONLY | DRAWN BY<br>SMC                                                                       |           | <div>marathon™</div>                                                 |  |                 |
| REQUEST NUMBER<br>CR-0023654                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | APPROVED BY<br>SBD | DATE<br>08/01/2025            |                                                                                      | DATE<br>05-13-1992                                                                    |           |                                                                      |  |                 |
| REQUEST NUMBER DESCRIPTION<br>DRAWING TITLE BLOCK UPDATED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                    |                               |                                                                                      | APPROVED BY<br>TB                                                                     |           | DESCRIPTION<br>CONN DIAGRAM-EXTERNAL<br>3 PHASE - DUAL VOLTAGE MOTOR |  |                 |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |                               |                                                                                      | REFERENCE<br>EE7308/EE7300                                                            |           | MATERIAL                                                             |  | PROCESS/FINISH  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                    |                               | THIRD ANGLE<br>PROJECTION                                                            |  | SIZE<br>A | DRAWING NUMBER<br>EE7308T                                            |  | SHEET<br>1 OF 1 |

## CERTIFICATION DATA SHEET

Model#: 215TPNSB10235 A  
 CONN. DIAGRAM: EE7308T  
 OUTLINE: 037797-912

WINDING#: PM21506026 NONE 1  
 ASSEMBLY: F1 ONLY

## TYPICAL MOTOR PERFORMANCE DATA

| HP | KW  | SYNC. RPM | F.L. RPM | FRAME | ENCLOSURE | KVA CODE    | DESIGN |
|----|-----|-----------|----------|-------|-----------|-------------|--------|
| 10 | 7.5 | 1800      | 1800     | 215TC | TENV      | NO KVA CODE | PM     |

| PH | Hz | VOLTS   | FL AMPS   | START TYPE    | DUTY       | INSL | S.F | AMB°C | ELEVATION |
|----|----|---------|-----------|---------------|------------|------|-----|-------|-----------|
| 3  | 90 | 230/460 | 24.6/12.3 | INVERTER ONLY | CONTINUOUS | H4   | 1.0 | 40    | 3300      |

|                     |                 |                 |          |                     |              |
|---------------------|-----------------|-----------------|----------|---------------------|--------------|
| FULL LOAD EFF: 93.9 | 3/4 LOAD EFF: - | 1/2 LOAD EFF: - | GTD. EFF | ELEC. TYPE          | NO LOAD AMPS |
| FULL LOAD PF: 83.5  | 3/4 LOAD PF: -  | 1/2 LOAD PF: -  | 93.6     | AC PERMANENT MAGNET | 1.2 / .6     |

| F.L. TORQUE  | LOCKED ROTOR AMPS | L.R. TORQUE | B.D. TORQUE | F.L. RISE°C |
|--------------|-------------------|-------------|-------------|-------------|
| 29.178 LB-FT | /                 | - LB-FT -   | - LB-FT -   | 68          |

| SOUND PRESSURE @ 3 FT. | SOUND POWER | ROTOR WK^2   | MAX. WK^2 | SAFE STALL TIME | STARTS /HOUR | APPROX. MOTOR WGT |
|------------------------|-------------|--------------|-----------|-----------------|--------------|-------------------|
| 62 dBA                 | 72 dBA      | 0.74 LB-FT^2 | 0 LB-FT^2 | 0 SEC.          | 0            | 999 LBS.          |

## EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)

| R1 | R2   | X1   | X2   | XM  |
|----|------|------|------|-----|
| 0  | 0.42 | 11.8 | 20.4 | 219 |

| RM | ZREF | XR | TD | TD0 |
|----|------|----|----|-----|
| 0  | 1    | 0  | 0  | 0   |

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

| DE BRACKET TYPE | ODE BRACKET TYPE | MOUNT TYPE | ORIENTATION | SEVERE DUTY         | HAZARDOUS LOCATION | DRIP COVER | SCREENS | PAINT         |
|-----------------|------------------|------------|-------------|---------------------|--------------------|------------|---------|---------------|
| C-FACE          | ENCODER          | RIGID      | HORIZONTAL  | PREMIUM SEVERE DUTY | NONE               | FALSE      | NONE    | BLACK (EPOXY) |

| BEARINGS |      | GREASE     | SHAFT TYPE | SPECIAL DE | SPECIAL ODE | SHAFT MATERIAL          | FRAME MATERIAL |
|----------|------|------------|------------|------------|-------------|-------------------------|----------------|
| DE       | OPE  |            |            |            |             |                         |                |
| BALL     | BALL |            |            |            |             |                         |                |
| 6309     | 6208 | POLYREX EM | T          | NONE       | NONE        | 1045 HOT ROLLED (C-204) | CAST IRON      |

| THERMO-PROTECTORS |            |          |          | THERMISTORS | CONTROL | SPACE /n HEATERS |
|-------------------|------------|----------|----------|-------------|---------|------------------|
| THERMOSTATS       | PROTECTORS | WDG RTDs | BRG RTDs |             |         |                  |
| TSTATS 140(N/C)   | NOT        | NONE     | NONE     | NONE        | FALSE   | NONE VOLTS       |

If Inverter equals NONE, contact factory for further information

|                                                                         |
|-------------------------------------------------------------------------|
| INVERTER TORQUE: CONSTANT 20:1<br>INV. HP SPEED RANGE: 1.2 X BASE SPEED |
| ENCODER: PROVISIONS ONLY<br>DYNAPAR HS35<br>NONE NONE PPR               |
| BRAKE: NONE NONE                                                        |

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|            |      |        |         |
|------------|------|--------|---------|
| NONE       | P/N  | NONE   |         |
| NONE       | NONE |        |         |
| NONE FT-LB |      | NONE V | NONE Hz |

DATE: 06/22/2017 07:12:17 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.