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# Customer information packet

## ZDNM2238T

10HP, 1770RPM, 3PH, 60HZ, 256TC, 0948M, TENV

Class - None

Division - Not Applicable

## Specifications

|                                |                                          |
|--------------------------------|------------------------------------------|
| Enclosure                      | TENV                                     |
| Frame                          | 256TC                                    |
| Frame Material                 | Iron                                     |
| Frequency                      | 60.00 Hz                                 |
| Haz Area Class and Group       | None                                     |
| Haz Area Division              | Not Applicable                           |
| Motor Letter Type              | Three Phase                              |
| Output @ Frequency             | 10.000 HP @ 60 HZ                        |
| Phase                          | 3                                        |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                         |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ       |
| Agency Approvals               | UR<br>CSA                                |
| Ambient Temperature            | 40 °C                                    |
| Auxiliary Box                  | NO AUXILLARY BOX                         |
| Auxiliary Box Lead Termination | None                                     |
| Base Indicator                 | Rigid                                    |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                  |
| Blower                         | None                                     |
| Current @ Voltage              | 13.000 A @ 460.0 V<br>26.000 A @ 230.0 V |
| Design Code                    | A                                        |
| Drip Cover                     | No Drip Cover                            |
| Duty Rating                    | CONT                                     |
| Efficiency @ 100% Load         | 91.7 %                                   |
| Electrically Isolated Bearing  | Not Electrically Isolated                |
| Feedback Device                | ENCODER                                  |
| Front Face Code                | Encoder/Feedback Device                  |
| Front Shaft Indicator          | None                                     |
| Heater Indicator               | No Heater                                |
| High Voltage Full Load Amps    | 13.0 a                                   |

## Part detail

|              |            |
|--------------|------------|
| Revision     | AJ         |
| Type         | AC         |
| Mech. spec.  | 09F277     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 09WGY402   |
| Layout       | 09LYF277   |
| Eff. date    | 11-14-2023 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#12       |
| Proprietary  | False      |
| Created date | 01-01-0001 |

|                               |                            |
|-------------------------------|----------------------------|
| Insulation Class              | H                          |
| Inverter Code                 | Inverter Duty              |
| KVA Code                      | K                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 5000 rpm                   |
| Motor Lead Exit               | Ko Box                     |
| Motor Lead Quantity/Wire Size | 9 @ 12 AWG                 |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 0948M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 24.05 IN                   |
| Power Factor                  | 78                         |
| Product Family                | General Purpose            |
| Pulley End Bearing Type       | Ball                       |
| Pulley Face Code              | C-Face                     |
| Pulley Shaft Indicator        | Standard                   |
| Rodent Screen                 | None                       |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.625 IN                   |
| Shaft Extension Location      | Pulley End                 |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Shaft Slinger Indicator       | Shaft Slinger              |
| Speed                         | 1770 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |
| Vibration Sensor Indicator    | No Vibration Sensor        |
| Winding Thermal 1             | None                       |
| Winding Thermal 2             | None                       |

## Nameplate

| NP1168L      |              |        |         |         |     |       |       |   |     |
|--------------|--------------|--------|---------|---------|-----|-------|-------|---|-----|
| CAT NO       | ZDNM2238T    |        |         |         |     |       |       |   |     |
| SPEC.        | 09F277Y402Z1 |        |         |         |     |       |       |   |     |
| FRAME        | 256TC        |        |         | HP      |     | 10 TE |       |   |     |
| VOLTS        | 230/460      |        |         |         |     |       |       |   |     |
| MAG CUR      | 11.2/5.6     |        |         |         | FLA |       | 26/13 |   |     |
| RPM          | 1770         |        |         | RPM MAX |     |       | 5000  |   |     |
| HZ           | 60           |        | PH      |         | 3   |       | CLASS |   | H   |
| SER.F.       | 1.00         |        | DES     |         | A   |       | SL HZ |   | 0.9 |
| NEMA-NOM-EFF | 91.7         |        | WK2     |         | 2.1 |       |       |   |     |
| BLWR V       |              | PH     |         |         | HZ  |       |       | A |     |
| RATING       | 40C AMB-CONT |        |         |         |     |       |       |   |     |
| DE BRG       | 6309         |        | ODE BRG |         |     | 6208  |       |   |     |
| CC           | 010A         | SER.NO |         |         |     |       |       |   |     |
|              |              |        |         |         |     |       |       |   |     |

|            |         |                                       |      |                                                   |       |           |
|------------|---------|---------------------------------------|------|---------------------------------------------------|-------|-----------|
| NP VOLTS   | 230/460 | MAX SAFE RPM                          | 5000 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) |       |           |
| NP AMPS    | 26/13   | Base Volt                             | 460  | R1                                                | 0.355 | X1 1.360  |
| HP         | 10HP    | NL AMPS                               | 5.6  | R2                                                | 0.289 | X2 1.650  |
| BASE SPEED | 1770    | Slips (Hz)                            | 0.90 |                                                   |       | XM 45.200 |
| PHASE/HZ   | 3/60    | WK <sup>2</sup> (lb-ft <sup>2</sup> ) | 2.1  |                                                   |       |           |

Rated Full Load Data

|            | RPM  | HP   | Torque | Volts | Freq-Hz | Amps |
|------------|------|------|--------|-------|---------|------|
| Base Speed | 1773 | 10.1 | 29.8   | 460   | 60      | 13.0 |
| Max Speed  | 2659 | 10.0 | 19.8   | 460   | 90      | 12.2 |
| Min Speed  | 0    | 0.0  | 29.8   | 21.51 | 0.90    | 13.0 |

Load Performance at Base Speed

|           | RPM  | HP   | Torque | Volts | Freq-Hz | Amps |
|-----------|------|------|--------|-------|---------|------|
| No Load   | 1799 | 0.0  | 0.0    | 460   | 60      | 5.6  |
| 1/4       | 1793 | 2.5  | 7.5    | 460   | 60      | 6.6  |
| 1/2       | 1787 | 5.1  | 14.9   | 460   | 60      | 8.1  |
| 3/4       | 1780 | 7.6  | 22.4   | 460   | 60      | 10.4 |
| Full Load | 1773 | 10.1 | 29.8   | 460   | 60      | 13.0 |
| O/L       | 1748 | 20.1 | 60.3   | 460   | 60      | 24.6 |

| Blower Data | Volts | Ph/Hz | FL Amps | L/R Amps | Frame | CFM |
|-------------|-------|-------|---------|----------|-------|-----|
|             |       |       |         |          |       |     |

Remarks: Calculated Data  
Vector PWM Inverter Duty

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A-C MOTOR

PERFORMANCE

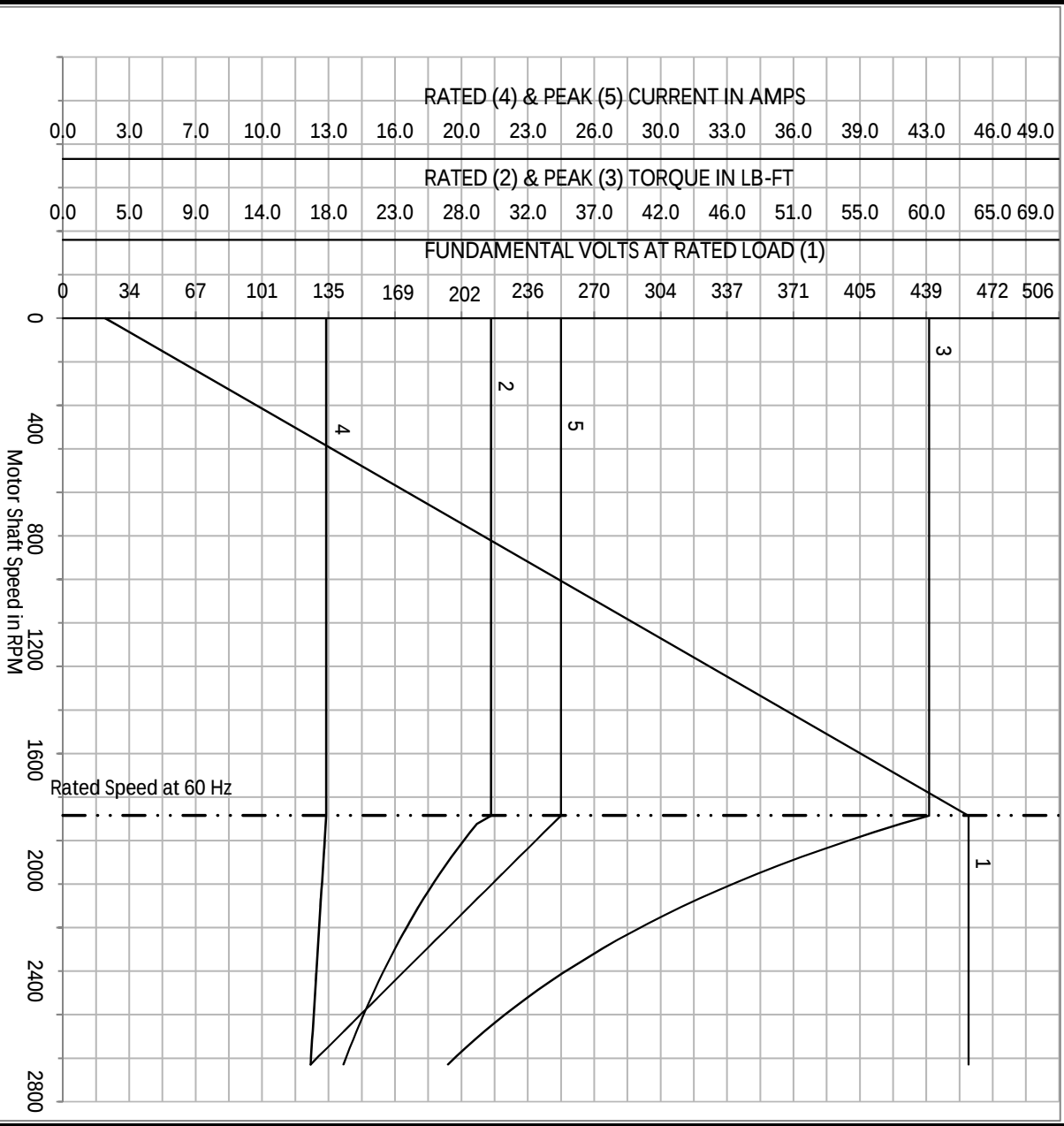
CURVES

09WGY402

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|            |         |              |      |                                                   |
|------------|---------|--------------|------|---------------------------------------------------|
| NP VOLTS   | 230/460 | MAX SAFE RPM | 5000 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) |
| NP AMPS    | 26/13   | Base Volt    | 460  | R1 0.355 X1 1.360                                 |
| HP         | 10HP    | NL AMPS      | 5.6  | R2 0.289 X2 1.650                                 |
| BASE SPEED | 1770    | Slips (Hz)   | 0.90 | XM 45.200                                         |
| PHASE/HZ   | 3/60    | Wk2 (lb-ft2) | 2.1  |                                                   |

Vector PWM Inverter Duty  
Variable Speed AC Motor Curves



Calculated Data  
Data Valid For Nameplate Speed Range only

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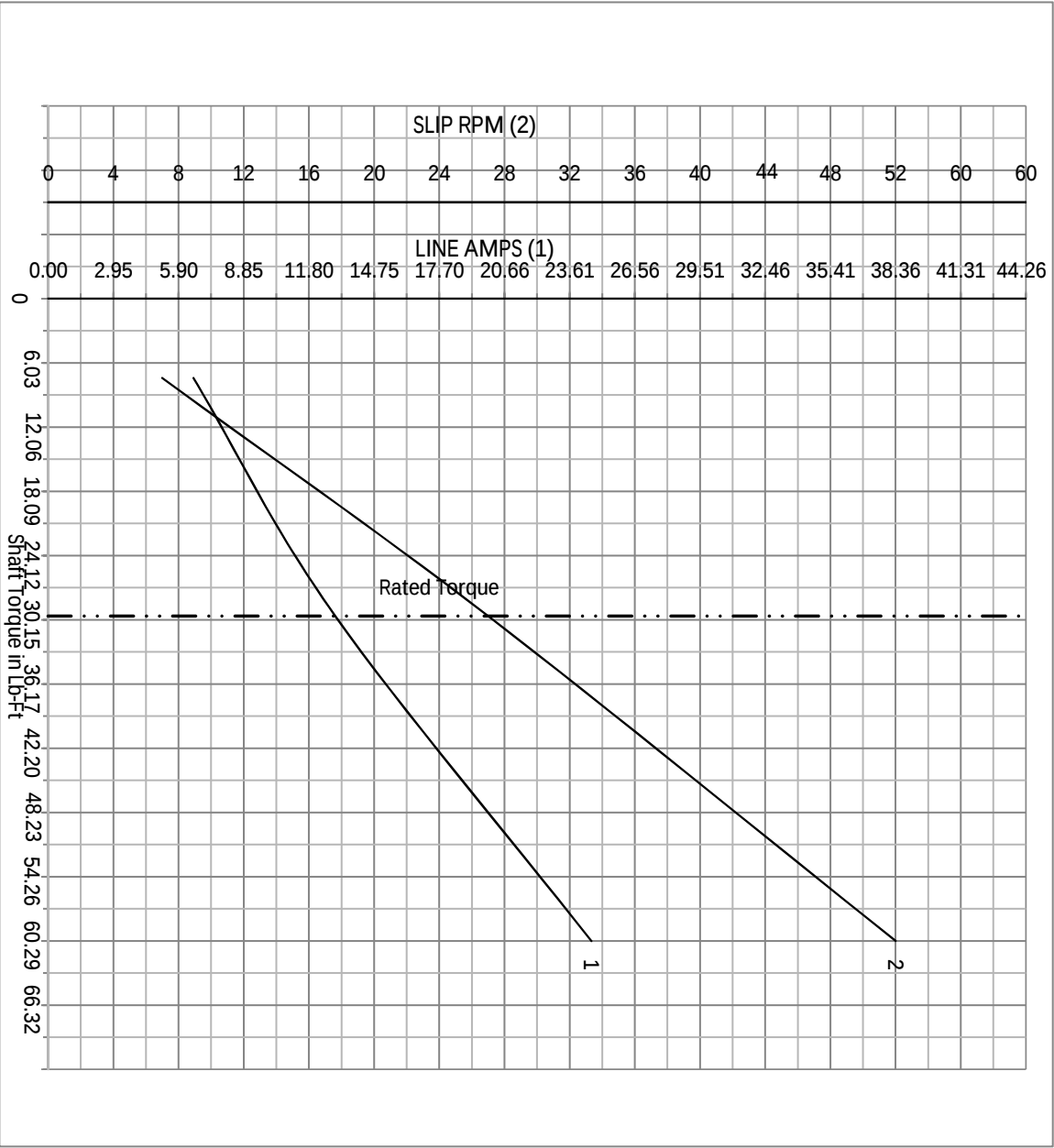
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A-C MOTOR  
PERFORMANCE  
CURVES

09WGY402

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| PHASE/HZ   | 3/60    | WK2 (lb-ft2) | 2.1  |                                                   |

Vector PWM Inverter Duty  
Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only



|        |           |                                    |
|--------|-----------|------------------------------------|
| DR BY  | BR        | A-C MOTOR<br>PERFORMANCE<br>CURVES |
| CK BY  |           |                                    |
| APP BY | BR        |                                    |
| DATE   | 3/28/2017 |                                    |

09WGY402

