

**BALDOR • RELIANCE**

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# Customer information packet

## EM2543T-BG

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F1

## Specifications

|                                |  |
|--------------------------------|--|
| Enclosure                      | OPSB   |
| Frame                          | 326T   |
| Frame Material                 | Steel  |
| Frequency                      | 60.00 Hz   |
| Motor Letter Type              | Three Phase  |
| Output @ Frequency             | 50.000 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               | CSA<br>CSA EEV<br>UR   |
| Ambient Temperature            | 40 °C  |
| Auxillary Box                  | No Auxillary Box   |
| Auxillary Box Lead Termination | None   |
| Base Indicator                 | Rigid  |
| Bearing Grease Type            | Polyrex EM (-20F +300F)  |
| Blower                         | None   |
| Current @ Voltage              | 120.000 A @ 208.0 V<br>57.000 A @ 460.0 V<br>114.000 A @ 230.0 V |
| Design Code                    | A  |
| Drip Cover                     | No Drip Cover  |
| Duty Rating                    | CONT   |
| Efficiency @ 100% Load         | 94.5 %   |
| Electrically Isolated Bearing  | Not Electrically Isolated  |
| Feedback Device                | NO FEEDBACK  |
| Front Face Code                | Standard   |
| Front Shaft Indicator          | None   |
| Heater Indicator               | No Heater  |
| High Voltage Full Load Amps    | 57.0 a   |

## Part detail

|              |            |
|--------------|------------|
| Revision     | P          |
| Type         | AC         |
| Mech. spec.  | 42E307     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 42WGW387   |
| Layout       | 42LYE307   |
| Eff. date    | 06-27-2024 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 9#8        |
| Proprietary  | False      |
| Created date | 10-08-2013 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Insulation Class</b>              | H                     |
| <b>Inverter Code</b>                 | Inverter Ready        |
| <b>KVA Code</b>                      | G                     |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>      | No Locked Bearing     |
| <b>Motor Lead Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 8 AWG             |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 4256M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 27.69 IN              |
| <b>Power Factor</b>                  | 87                    |
| <b>Product Family</b>                | General Purpose       |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | Standard              |
| <b>Pulley Shaft Indicator</b>        | Standard              |
| <b>Rodent Screen</b>                 | None                  |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 2.125 IN              |
| <b>Shaft Extension Location</b>      | Pulley End            |
| <b>Shaft Ground Indicator</b>        | Shaft Grounding       |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | No Slinger            |
| <b>Speed</b>                         | 1775 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Direct on line        |
| <b>Thermal Device - Bearing</b>      | None                  |
| <b>Thermal Device - Winding</b>      | None                  |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor   |
| <b>Winding Thermal 1</b>             | None                  |
| <b>Winding Thermal 2</b>             | None                  |

**Nameplate**

**NP3554LUA**

|                  |                            |                                |            |                                  |            |                |      |
|------------------|----------------------------|--------------------------------|------------|----------------------------------|------------|----------------|------|
| <b>CAT.NO.</b>   | EM2543T-BG                 |                                | <b>P/N</b> |                                  |            | <b>ENCL</b>    | OPSB |
| <b>SPEC.</b>     | 42E307W387G1               | <b>CC</b>                      | 010A       | <b>FRAME</b>                     | 326T       | <b>SER.NO.</b> |      |
| <b>HP</b>        | 50                         | <b>CLASS</b>                   | H          | <b>HZ</b>                        | 60         |                |      |
| <b>RPM</b>       | 1775                       | <b>PH</b>                      | 3          | <b>DES</b>                       | A          |                |      |
| <b>VOLTS</b>     | 230/460                    | <b>CODE</b>                    | G          | <b>ODE BRG</b>                   | 6311       | <b>DE BRG</b>  | 6312 |
| <b>AMPS</b>      | 114/57                     |                                |            |                                  |            |                |      |
| <b>RATING</b>    | 40C AMB-CONT               | <b>NEMA-NOM-EFF</b>            | 94.5       | <b>GREASE</b>                    | POLYREX EM |                |      |
| <b>PF</b>        | 87                         | <b>SER.F.</b>                  | 1.15       | <b>CT30-60(2:1) VT3-60(20:1)</b> |            |                |      |
| <b>USABLE AT</b> | 50HZ 50HP 190/380V 136/68A |                                |            | SF1.0                            |            |                |      |
| <b>HTR-VOLTS</b> | <b>HTR-AMPS</b>            | <b>MAX. SPACE HEATER TEMP.</b> |            |                                  |            |                |      |

**AC Induction Motor Performance Data**

Record # 35575

Typical performance - not guaranteed values

| Winding: 42WGW387-R005 |              | Type: 4256M         | Enclosure: OPSB                                  |                         |         |
|------------------------|--------------|---------------------|--|-------------------------|---------|
| <b>Nameplate Data</b>  |              |                     | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                         |         |
| Rated Output (HP)      | 50           | Full Load Torque    | 149 LB-FT  |                         |         |
| Volts                  | 230/460      | Start Configuration | direct on line                                   |                         |         |
| Full Load Amps         | 114/57       | Breakdown Torque    | 420 LB-FT  |                         |         |
| R.P.M.                 | 1775         | Pull-up Torque      | 217 LB-FT  |                         |         |
| Hz                     | 60 Phase     | 3                   | Locked-rotor Torque                              | 311 LB-FT               |         |
| NEMA Design Code       | A            | KVA Code            | G  | Starting Current        | 373 A   |
| Service Factor (S.F.)  | 1.15         | No-load Current     | 20.2 A   |                         |         |
| NEMA Nom. Eff.         | 94.5         | Power Factor        | 87   | Line-line Res. @ 25°C   | 0.127 Ω |
| Rating - Duty          | 40C AMB-CONT |                     | Temp. Rise @ Rated Load                          | 39°C                    |         |
| S.F. Amps              |              |                     | Temp. Rise @ S.F. Load                           | 47°C                    |         |
|                        |              |                     | Locked-rotor Power Factor                        | 27                      |         |
|                        |              |                     | Rotor inertia                                    | 7.46 LB-FT <sup>2</sup> |         |

**Load Characteristics 460 V, 60 Hz, 50 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 54   | 75   | 83   | 87   | 88   | 88   | 87   |
| Efficiency      | 92   | 94.5 | 94.5 | 94.7 | 93.9 | 93.3 | 94.4 |
| Speed           | 1791 | 1786 | 1781 | 1775 | 1769 | 1762 | 1771 |
| Line amperes    | 24.4 | 33.4 | 44.7 | 57.4 | 71   | 85.6 | 65.2 |

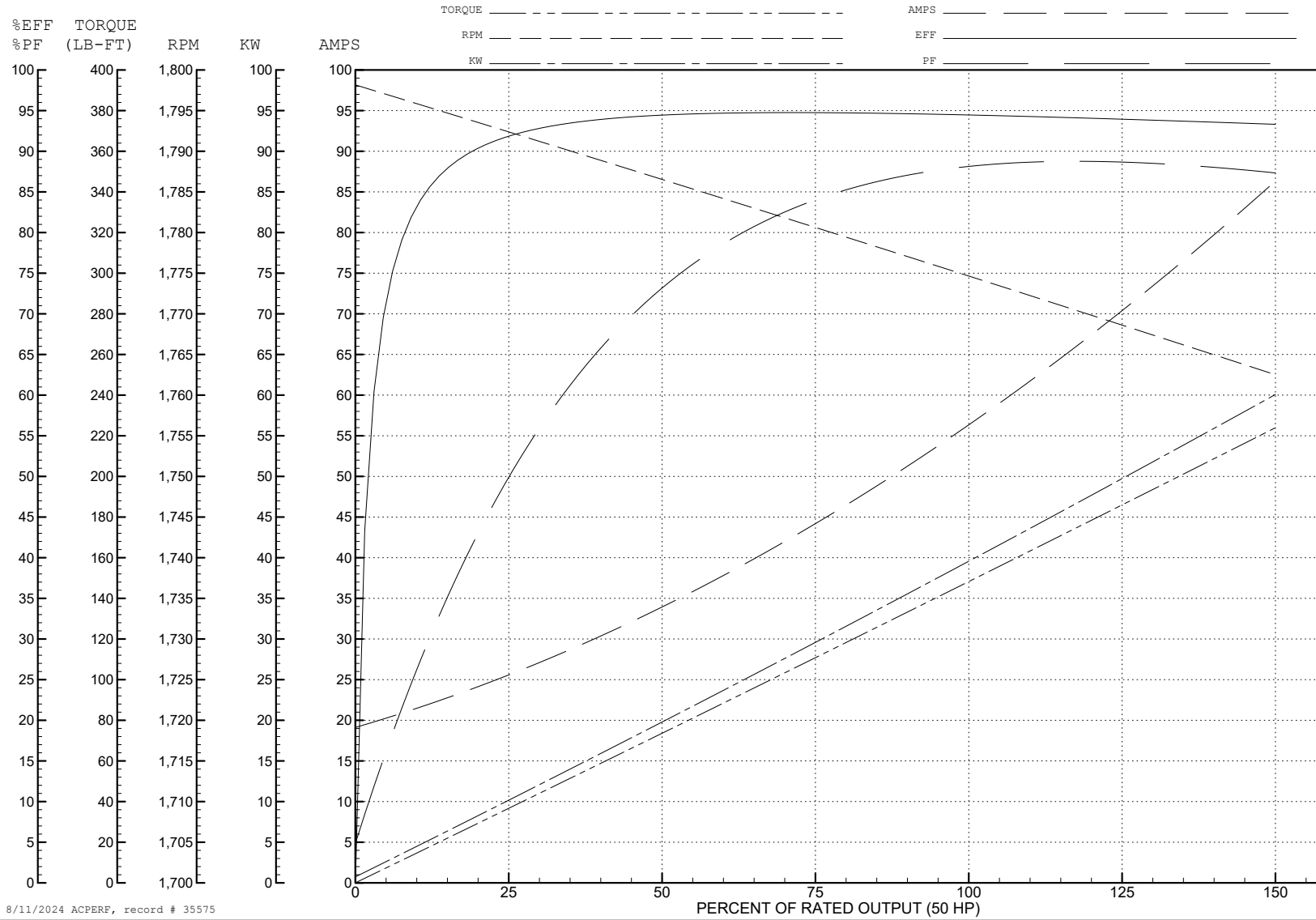
ABB Motors and Mechanical Inc.

WINDING # 42WGW387

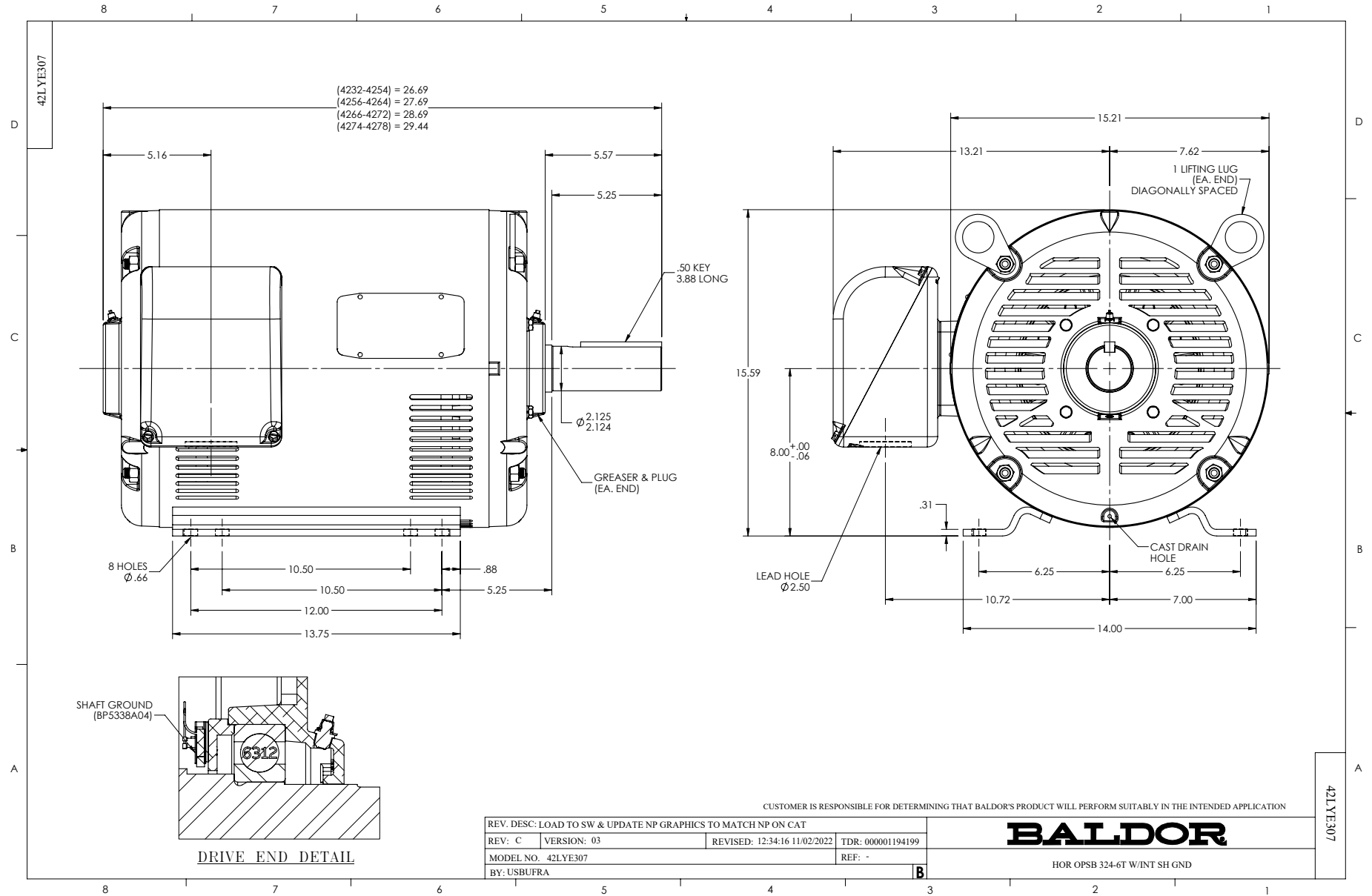
Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1775 RPM 460 V 4256M

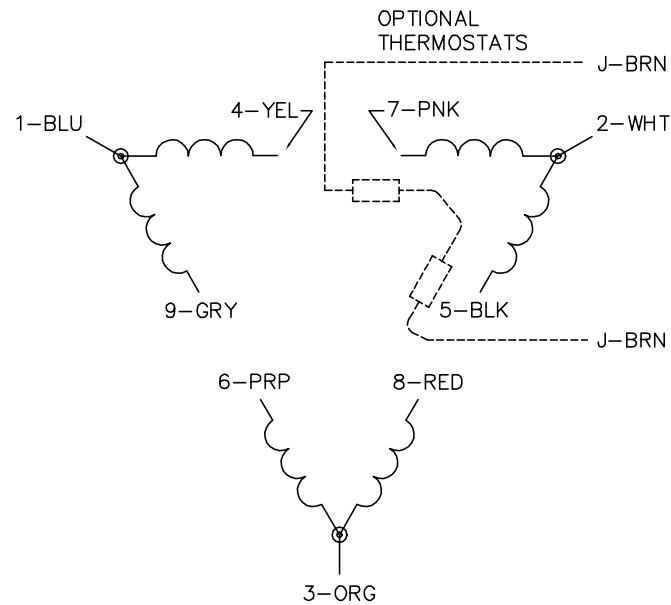
TORQUES (LB-FT): PO=420 PU=217 LR=311 LRA=373



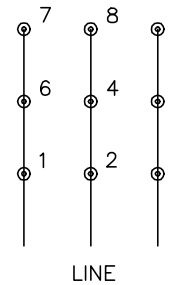
8/11/2024 ACPERF, record # 35575



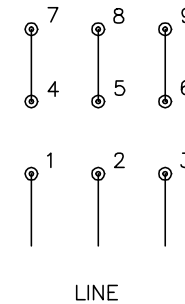
CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0180

|                                   |                                |                   |
|-----------------------------------|--------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                                |                   |
| REV. LTR: D                       | VERSION: 01                    | TDR: 000001099922 |
| FILE: \AAA\00005\148              | REVISED: 10: 25: 29 02/19/2019 | BY: ENBRIRO       |
| MTL: -                            | © □                            |                   |

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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