

BALDOR® • RELIANCE 

Product Information Packet

EM2543T-G

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

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | T | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 42GW387 | CD Diagram: | CD0180 | Mfg Plant: | |
| Mech. Spec: | 42E245 | Layout: | 42LYE245 | Poles: | 04 | Created Date: | 08-24-2010 |
| Base: | RG | Eff. Date: | 09-06-2017 | Leads: | 9#8 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number: | EM2543T-G | Insulation Class: | H |
| Enclosure: | OPSB | Inverter Code: | Inverter Ready |
| Frame: | 326T | KVA Code: | G |
| Frame Material: | Steel | Lifting Lugs: | Standard Lifting Lugs |
| Output @ Frequency: | 50.000 HP @ 60 HZ | Locked Bearing Indicator: | No Locked Bearing |
| Synchronous Speed @ Frequency: | 1800 RPM @ 60 HZ | Motor Lead Quantity/Wire Size: | 9 @ 8 AWG |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | Motor Lead Exit: | Ko Box |
| | 230.0 V @ 60 HZ | Motor Lead Termination: | Flying Leads |
| Agency Approvals: | CSA | Motor Type: | 4256M |
| | CSA EEV | Mounting Arrangement: | F1 |
| | UR | Power Factor: | 87 |
| Auxillary Box: | No Auxillary Box | Product Family: | General Purpose |
| Auxillary Box Lead Termination: | None | Pulley End Bearing Type: | Ball |
| Base Indicator: | Rigid | Pulley Face Code: | Standard |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Pulley Shaft Indicator: | Standard |
| Blower: | None | Rodent Screen: | None |
| Current @ Voltage: | 57.000 A @ 460.0 V | Shaft Extension Location: | Pulley End |
| | 120.000 A @ 208.0 V | Shaft Ground Indicator: | Shaft Grounding |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| | 114.000 A @ 230.0 V | Shaft Rotation: | Reversible |
| Design Code: | A | Shaft Slinger Indicator: | No Slinger |
| Drip Cover: | No Drip Cover | Speed Code: | Single Speed |
| Duty Rating: | CONT | Motor Standards: | NEMA |
| Electrically Isolated Bearing: | Not Electrically Isolated | Starting Method: | Direct on line |
| Feedback Device: | NO FEEDBACK | Thermal Device - Bearing: | NONE (OLD) |
| Front Face Code: | Standard | Thermal Device - Winding: | None |
| Front Shaft Indicator: | None | Vibration Sensor Indicator: | No Vibration Sensor |
| Heater Indicator: | No Heater | Winding Thermal 1: | None |
| | | Winding Thermal 2: | None |

| Nameplate NP3554L | | | | | | | | | | | |
|-------------------|--------------|--|----------|----------------|------|-------------------------|---------|------------|---------|--------|------|
| CAT.NO. | EM2543T-G | | | P/N | | | | ENCL | OPSB | | |
| SPEC. | 42E245W387G1 | | CC | 010A | | FRAME | 326T | | SER.NO. | | |
| HP | 50 | | CLASS | H | | HZ | 60 | | | | |
| RPM | 1775 | | PH | 3 | | DES | A | | | | |
| VOLTS | 230/460 | | | CODE | G | | ODE BRG | 6311 | | DE BRG | 6312 |
| AMPS | 114/57 | | | USABLE AT 208V | 120 | | | | | | |
| RATING | 40C AMB-CONT | | | NEMA-NOM-EFF | 94.5 | | GREASE | POLYREX EM | | | |
| PF | 87 | | SER.F. | 1.15 | | VPWM INVERTER READY | | | | | |
| HTR-VOLTS | | | HTR-AMPS | | | MAX. SPACE HEATER TEMP. | | | | | |

| Parts List | | |
|----------------|--|----------|
| Part Number | Description | Quantity |
| SA202066 | SA 42E245W387G1 | 1.000 EA |
| RA189352 | RA 42E245W387G1 | 1.000 EA |
| S/P107-000-004 | SUPER-E(284 FR. & UP)-CL PLANT,POLYREX E | 1.000 EA |
| HA6360 | LIFTING LUG FOR 42 FRAME MOTORS. | 2.000 EA |
| HA6017 | CAST ADAPTER, 40,42 KOBX | 1.000 EA |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II | 2.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 2.000 EA |
| WD1000B25 | GND LUG, BURNDY L125HP OR T&B L125HP-BB | 1.000 EA |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN | 1.000 EA |
| 10CB3001 | CONDUIT BOX CAST W/2.500 LEAD HOLE | 1.000 EA |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 42EP3200A01 | FR ENDPLATE, MACH | 1.000 EA |
| HW5100A13 | W4627-047 WVY WSHER | 1.000 EA |
| 42EP3200B01 | PU ENDPLATE, MACH | 1.000 EA |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| XY5013A12 | NUT,1/2-13,HEX,STEEL,ZINCPLATED | 8.000 EA |
| 10CB3500SP | CONDUIT BOX LID, CAST | 1.000 EA |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 4.000 EA |
| HW2501H33 | KEY, 1/2 SQ X 3.875 | 1.000 EA |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| MN416A01 | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |

| Parts List (continued) | | |
|-------------------------------|--|-----------------|
| Part Number | Description | Quantity |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| MJ1000A02 | GREASE, POLYREX EM EXXON (USe 4824-15A) | 0.030 LB |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| MG1000Y03 | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20, | 0.080 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 4.000 EA |
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS | 1.000 EA |
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS | 1.000 EA |
| HA3151A03 | THRUBOLT STUD 1/2-13 X 20.5 | 4.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0181 | CONNECTION LABEL | 1.000 EA |
| NP3554L | SS SUPER-E UL CSA-EEV PREM CC | 1.000 EA |
| 42PA1000 | PACKAGING GROUP PRINT PK1024A06 | 1.000 EA |

AC Induction Motor Performance Data

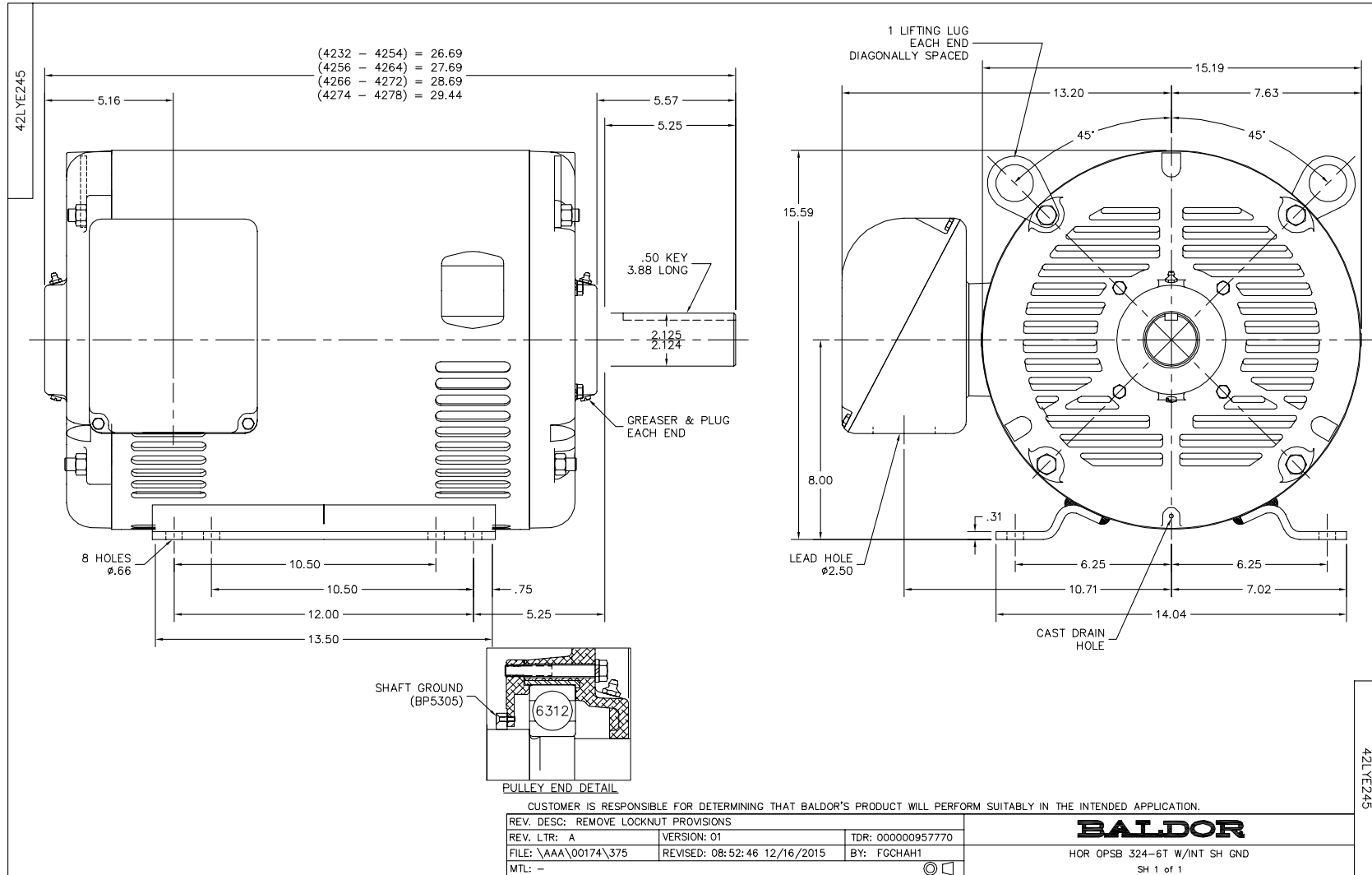
Record # 35575 - Typical performance - not guaranteed values

| | | |
|-------------------------------|--------------------|------------------------|
| Winding: 42WGW387-R005 | Type: 4256M | Enclosure: OPSB |
|-------------------------------|--------------------|------------------------|

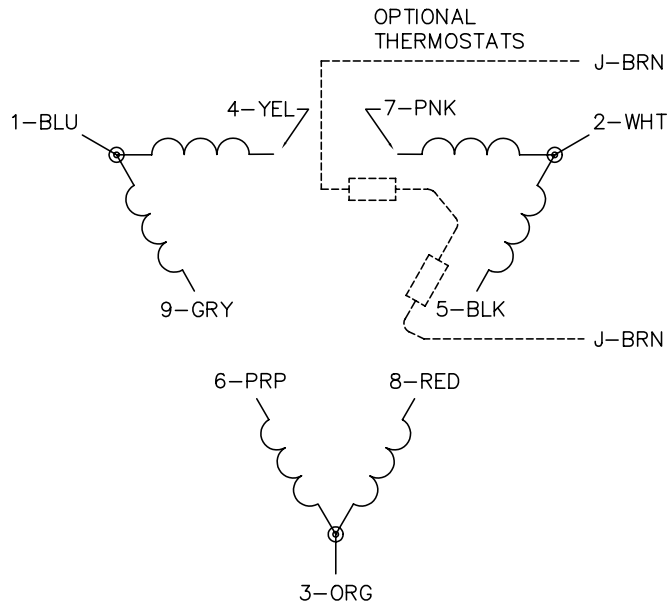
| Nameplate Data | | | | 460 V, 60 Hz: High Voltage Connection | |
|-----------------------|--------------|--------------|----|--|-------------------------|
| Rated Output (HP) | 50 | | | Full Load Torque | 149 LB-FT |
| Volts | 230/460 | | | Start Configuration | direct on line |
| Full Load Amps | 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 | B | 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 ² |

Load Characteristics 460 V, 60 Hz, 50 HP

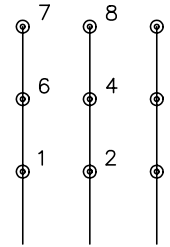
| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor | 54 | 75 | 83 | 87 | 88 | 88 | 87 |
| Efficiency | 92 | 94.5 | 94.5 | 94.7 | 93.9 | 93.3 | 94.4 |
| Speed | 1791 | 1786 | 1781 | 1775 | 1769 | 1762 | 1771 |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



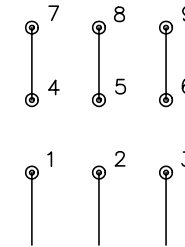
CD0180



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.

| | | | |
|---|---------|------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | |
| REV. LTR: C | BY: JLP | REVISED: 01/21/99 2:28 | TDR: 0171435 |
| 0810D0 | | FILE: AAA00005148 | MDL: - |
| | | MTL: - | |

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS, DELTA CONNECTION

CD0180