

BALDOR • RELIANCE

Customer information packet

EFM2543T

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F2

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 | 460.0 V @ 60 HZ 230.0 V @ 60 HZ |
| Agency Approvals | CSA EEV NEMA PREMIUM NEMA_PREMIUM 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 | 57.000 A @ 460.0 V 121.000 A @ 208.0 V 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 |

Part detail

| | |
|--------------|------------|
| Revision | W |
| Type | AC |
| Mech. spec. | 42E214 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 42WGW387 |
| Layout | 42LYE214 |
| Eff. date | 06-27-2024 |
| CD Diagram | CD0180 |
| Poles | 04 |
| Leads | 9#8 |
| Proprietary | False |
| Created date | 07-13-2009 |

| | |
|-------------------------------|-----------------------|
| High Voltage Full Load Amps | 57.0 a |
| Insulation Class | F |
| Inverter Code | Inverter Ready |
| KVA Code | G |
| Lifting Lugs | Standard Lifting Lugs |
| Locked Bearing Indicator | No Locked Bearing |
| Motor Lead Exit | Ko Box |
| Motor Lead Quantity/Wire Size | 9 @ 8 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 4256M |
| Mounting Arrangement | F2 |
| Number of Poles | 4 |
| Overall Length | 27.69 IN |
| Power Factor | 87 |
| Product Family | General Purpose |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | Standard |
| Pulley Shaft Indicator | Standard |
| Rodent Screen | None |
| Service Factor | 1.15 |
| Shaft Diameter | 2.125 IN |
| Shaft Extension Location | Pulley End |
| Shaft Ground Indicator | No Shaft Grounding |
| Shaft Rotation | Reversible |
| Shaft Slinger Indicator | No Slinger |
| Speed | 1775 rpm |
| Speed Code | Single Speed |
| Starting Method | Direct on line |
| Thermal Device - Bearing | None |
| Thermal Device - Winding | None |
| Vibration Sensor Indicator | No Vibration Sensor |
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

Nameplate

NP3554L

| | | | | | | | |
|------------------|-----------------|--------------------------------|------|----------------------------|------------|----------------|------|
| CAT.NO. | EFM2543T | P/N | | | | ENCL | OPSB |
| SPEC. | 42E214W387 | CC | 010A | FRAME | 326T | SER.NO. | |
| HP | 50 | CLASS | F | HZ | 60 | | |
| RPM | 1775 | PH | 3 | DES | A | | |
| VOLTS | 230/460 | CODE | G | ODE BRG | 6311 | DE BRG | 6312 |
| AMPS | 114/57 | | | | | | |
| 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. | | | | | |

Accessories

| Part number | Description | Multiplier |
|--------------------|--|-------------------|
| 42-1300 | C FACE KIT | A8 |
| 42EP1601A01 | SP'L D-FLANGE MTD. PU. E.P. MDL.42 W/BFL | |

AC Induction Motor Performance Data

Record # 53755

Typical performance - not guaranteed values

| Winding: 42WGW387-R001 | | 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 | 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 | 0.12266 Ω | |
| Rating - Duty | | 40C AMB-CONT | Temp. Rise @ Rated Load | 39°C | |
| S.F. Amps | | | Temp. Rise @ S.F. Load | 47°C | |

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 | 88 |
| Efficiency | 92 | 94.5 | 94.9 | 94.7 | 94.2 | 93.4 | 94.4 |
| Speed | 1791 | 1786.1 | 1781.1 | 1775.2 | 1769.2 | 1762.1 | 1772 |
| Line amperes | 24.4 | 33.4 | 44.7 | 57.4 | 71 | 85.6 | 65.6 |

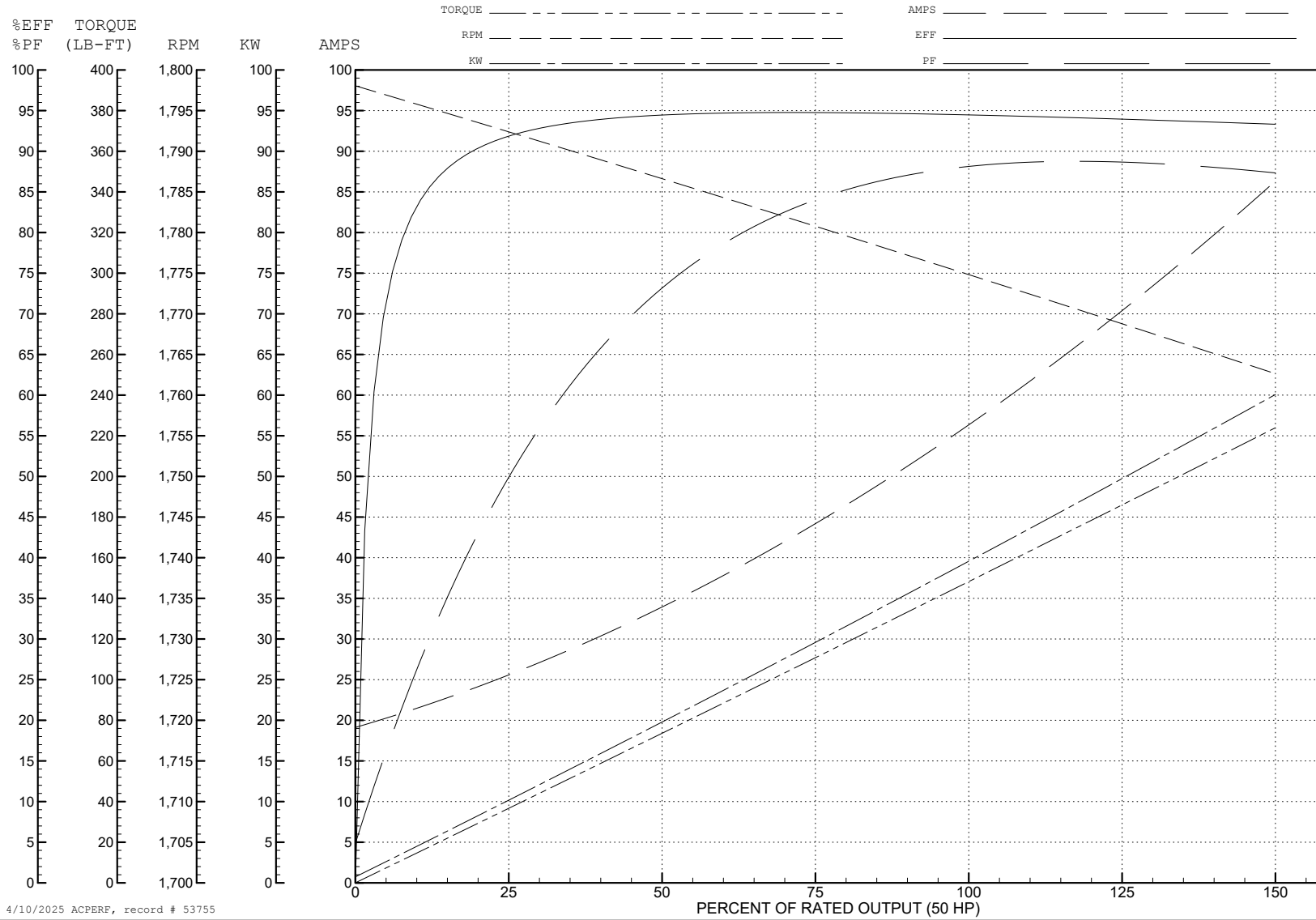
ABB Motors and Mechanical Inc.

WINDING # 42WGW387

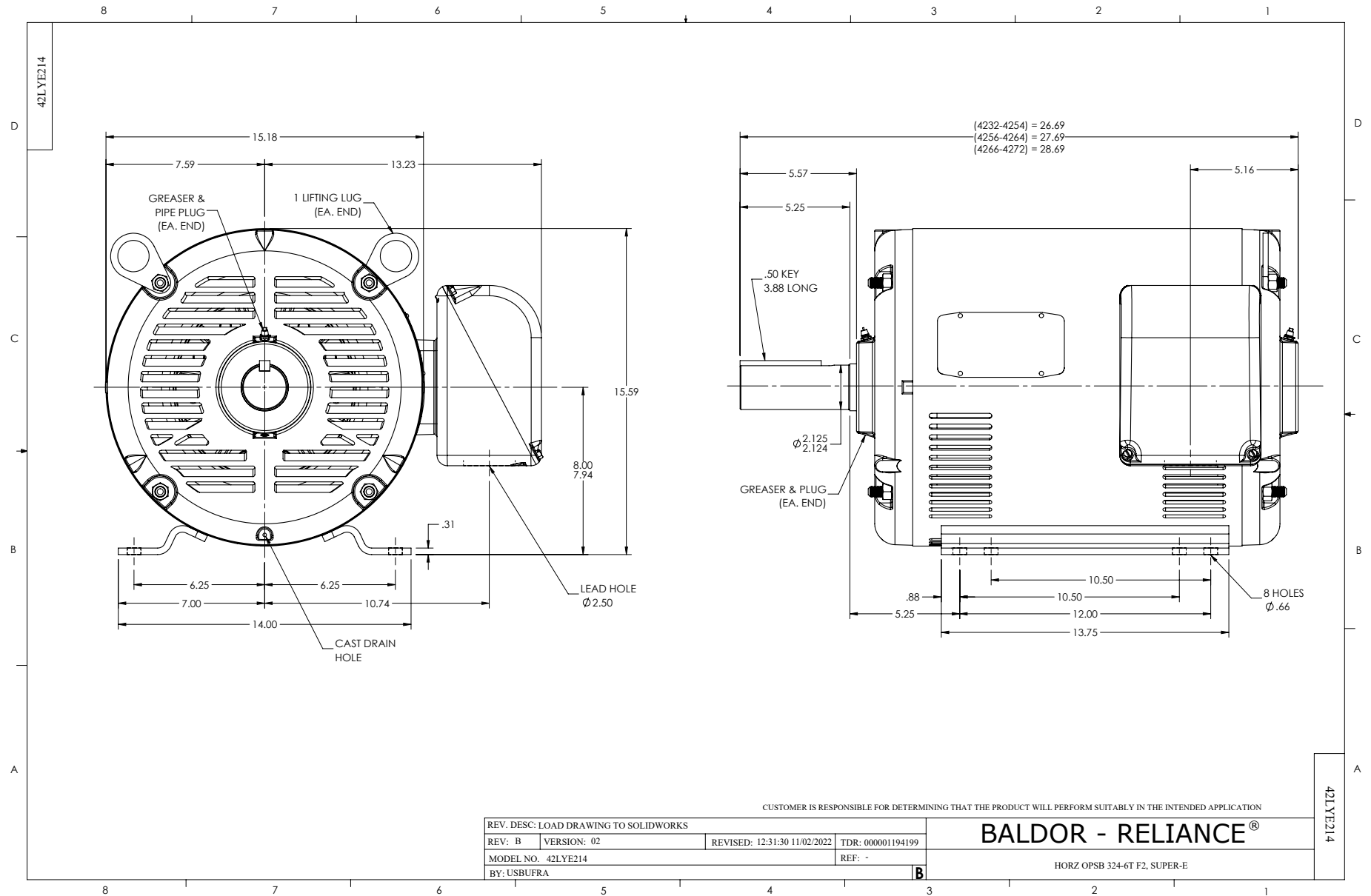
Typical performance - not guaranteed values.

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

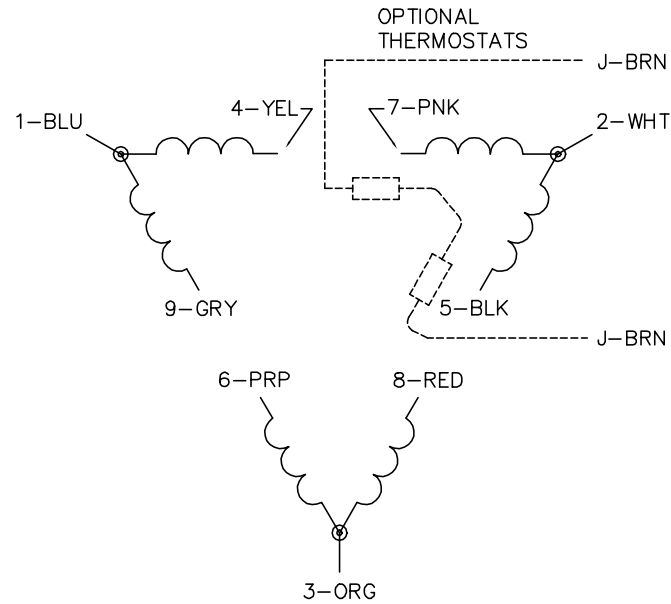
TORQUES (LB-FT): PO=420 PU=217 LR=311 LRA=373



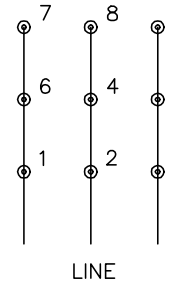
4/10/2025 ACPERF, record # 53755



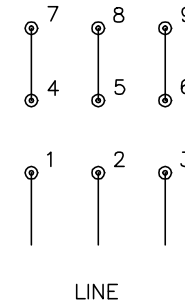
CD0180



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

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|-----------------------------------|------------------------------|-------------------|
| 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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