ABB BALDOR RELIANCE

# Customer information packet

## EFM4114T

50HP, 3540RPM, 3PH, 60HZ, 326TS, 1252M, TEFC, F
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 326TS |
| **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** | 50.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 3600 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| | 230.0 V @ 60 HZ |
| **Agency Approvals** | CURUSEEV |
| | NEMA PREMIUM |
| | NEMA PREMIUM (OLD LOGO) |
| **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** | 122.000 A @ 208.0 V |
| | 56.000 A @ 460.0 V |
| | 112.000 A @ 230.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 93.0 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Front Face Code** | Standard |
| **Front Shaft Indicator** | None |

## Part Detail

| | |
|---|---|
| **Revision** | U |
| **Type** | AC |
| **Mech. spec.** | 12E347 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 12WGY291 |
| **Layout** | 12LYE347 |
| **Eff. date** | 06-27-2024 |
| **CD Diagram** | CD0180 |
| **Poles** | 02 |
| **Leads** | 9#8 |
| **Proprietary** | False |
| **Created date** | 12-01-2010 |

| | |
|---|---|
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 56.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **IP Rating** | NONE |
| **KVA Code** | H |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | 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** | 1252M |
| **Mounting Arrangement** | F2 |
| **Number of Poles** | 2 |
| **Overall Length** | 28.84 IN |
| **Power Factor** | 90 |
| **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** | 1.875 IN |
| **Shaft Extension Location** | Pulley End |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **Speed** | 3540 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**

| NP3443L | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | EFM4114T | | | **CUST. P/N** | | | | | | **ENCL** | TEFC |
| **SPEC.** | 12E347Y291G1 | **CC** | 010A | **FRAME** | 326TS | | **SER.NO.** | | | | |
| **HP** | 50 | **CLASS** | F | **HZ** | 60 | | | | | | |
| **R.P.M.** | 3540 | **PH** | 3 | **DES** | A | | | | | | |
| **VOLTS** | 230/460 | **CODE** | H | **ODE BRG** | 6311 | **DE BRG** | 6312 | | | | |
| **AMPS** | 112/56 | | | | | | | | | | |
| **RATING** | 40C AMB-CONT | **NEMA NOM. EFF.** | 93 | **GREASE** | POLYREX EM | | | | | | |
| **P.F.** | 90 | **SER.F.** | 1.15 | **VPWM INVERTER READY** | | | | | | | |
| **HTR-VOLTS** | | **HTR-AMPS** | | **HTR-WATTS** | | | | | | | |

**AC Induction Motor Performance Data**
Record # 35504
Typical performance - not guaranteed values

| **Winding:** 12WGY291-R005 | **Type:** 1252M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 50 | **Full Load Torque** | 74.4 LB-FT |
| **Volts** | | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 112/56 | **Breakdown Torque** | 292 LB-FT |
| **R.P.M.** | | | 3540 | **Pull-up Torque** | 112 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 139 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | H | **Starting Current** | 408 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 14.9 A |
| **NEMA Nom. Eff.** | 93 | **Power Factor** | 90 | **Line-line Res. @ 25ºC** | 0.11257 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 77°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 95°C |
| | | | | **Locked-rotor Power Factor** | 20.9 |
| | | | | **Rotor inertia** | 4.07 LB-FT2 |

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

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 66 | 82 | 88 | 90 | 91 | 90 | 91 |
| **Efficiency** | 91.1 | 93.8 | 94.2 | 93.9 | 93.2 | 92.3 | 93.5 |
| **Speed** | 3584.1 | 3571.8 | 3558.2 | 3544.1 | 3528.2 | 3511.2 | 3535 |
| **Line amperes** | 20.4 | 30.8 | 42.9 | 55.8 | 69.5 | 84.6 | 64 |

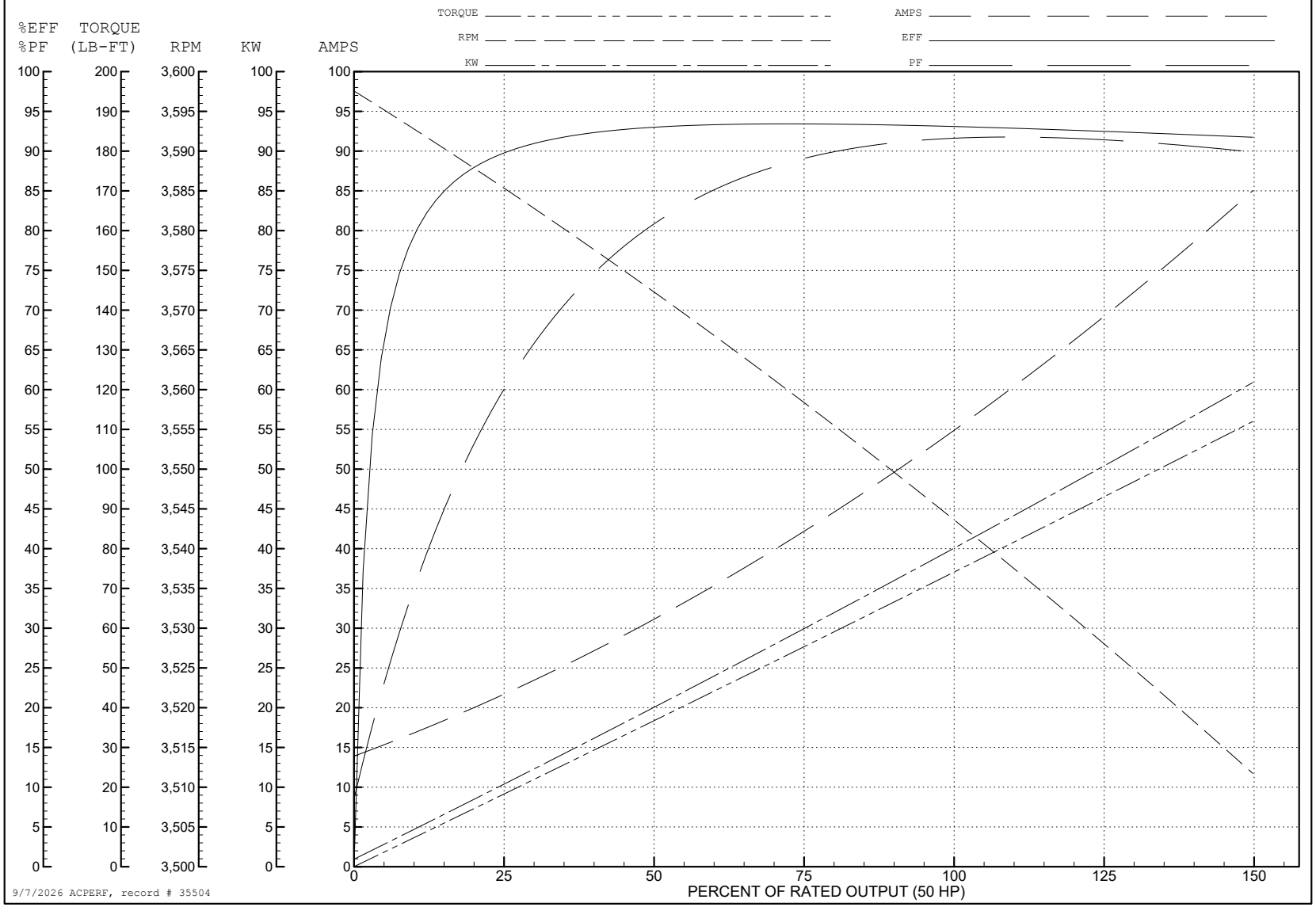
ABB Motors and Mechanical Inc.

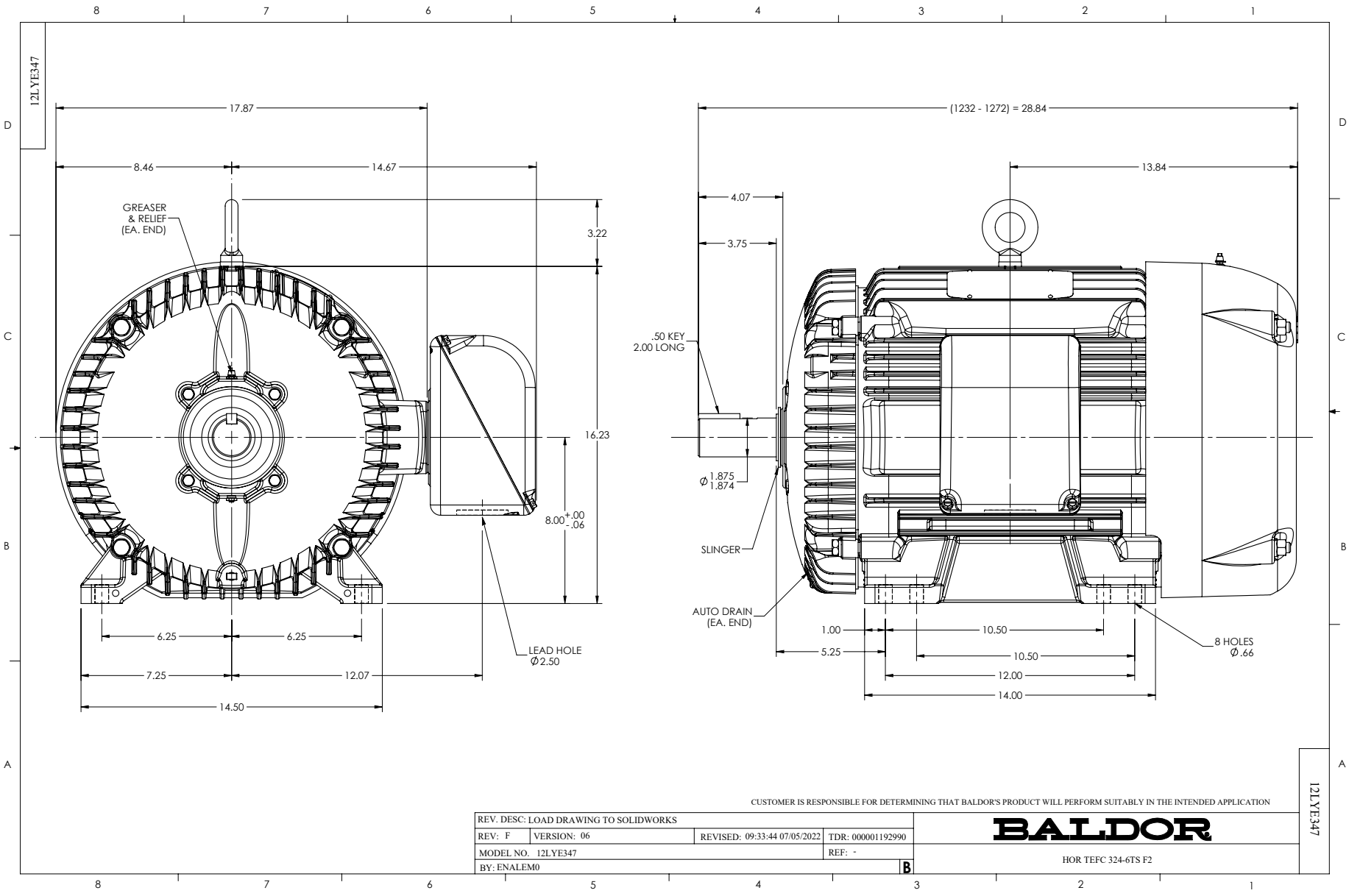
WINDING # 12WGY291

50 HP 3 PH 60 HZ 3540 RPM 460 V 1252M

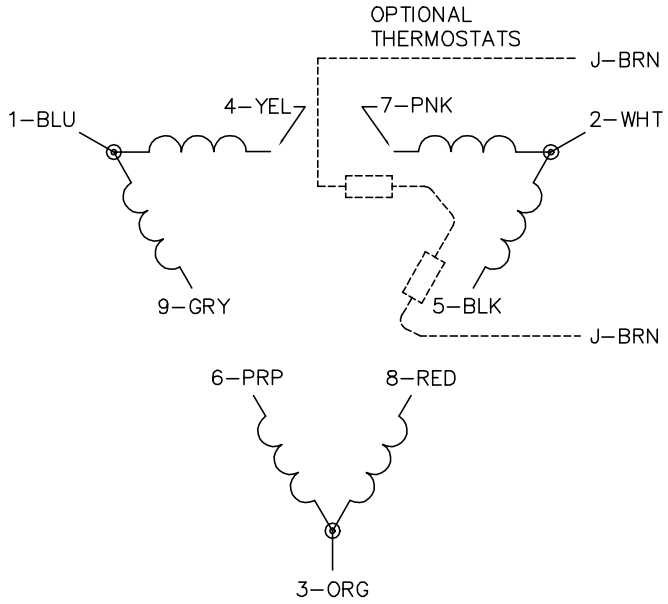
Typical performance - not guaranteed values.

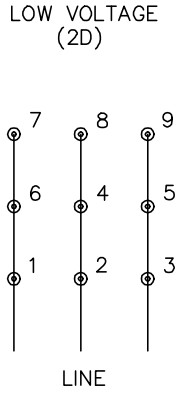
TORQUES(LB-FT): PO=292 PU=112 LR=139 LRA=408

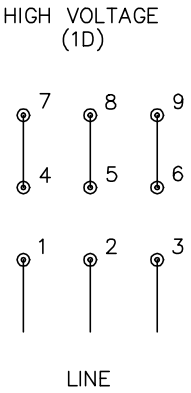



12LYE347
17.87
8.46
14.67
GREASER & RELIEF (EA. END)
3.22
16.23
8.00 +.00 -.06
6.25
6.25
7.25
12.07
14.50
LEAD HOLE Ø2.50
(1232 - 1272) = 28.84
13.84
4.07
3.75
.50 KEY 2.00 LONG
Ø 1.875 1.874
SLINGER
AUTO DRAIN (EA. END)
1.00
10.50
5.25
10.50
12.00
14.00
8 HOLES Ø.66
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: F
VERSION: 06
REVISED: 09:33:44 07/05/2022
TDR: 000001192990
MODEL NO. 12LYE347
REF: -
BY: ENALEM0
B
BALDOR
HOR TEFC 324-6TS F2
12LYE347

CD0180




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: ENBRIR0 |
| MTL: – | | |

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1