ABB BALDOR RELIANCE

# Customer information packet

## EM4114T-5

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** | 575.0 V @ 60 HZ |
| **Agency Approvals** | NEMA PREMIUM (OLD LOGO)<br>CURUSEEV<br>NEMA PREMIUM |
| **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** | 45.000 A @ 575.0 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 |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 45.0 a |
| **Insulation Class** | F |

## Part Detail

| | |
|---|---|
| **Revision** | W |
| **Type** | AC |
| **Mech. spec.** | 12M09 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 12WGY278 |
| **Layout** | 12LYM009 |
| **Eff. date** | 06-27-2024 |
| **CD Diagram** | CD0006 |
| **Poles** | 02 |
| **Leads** | 3#8 |
| **Proprietary** | False |
| **Created date** | 04-22-2010 |

| | |
|---|---|
| **Inverter Code** | Inverter Ready |
| **KVA Code** | H |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Motor Lead Exit** | Ko Box |
| **Motor Lead Quantity/Wire Size** | 3 @ 8 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 1252M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 2 |
| **Overall Length** | 28.84 IN |
| **Power Factor** | 89 |
| **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.** | EM4114T-5 | | | **CUST. P/N** | | | | | | **ENCL** | TEFC | |
| **SPEC.** | 12M009Y278G1 | **CC** | 010A | **FRAME** | 326TS | | **SER.NO.** | | | | | |
| **HP** | 50 | **CLASS** | F | **HZ** | 60 | | | | | | | |
| **R.P.M.** | 3540 | **PH** | 3 | **DES** | A | | | | | | | |
| **VOLTS** | 575 | **CODE** | H | **ODE BRG** | 6311 | **DE BRG** | 6312 | | | | | |
| **AMPS** | 45 | | | | | | | | | | | |
| **RATING** | 40C AMB-CONT | | | **NEMA NOM. EFF.** | 93 | | **GREASE** | POLYREX EM | | | | |
| **P.F.** | 89 | **SER.F.** | 1.15 | **VPWM INVERTER READY** | | | | | | | | |
| **HTR-VOLTS** | | **HTR-AMPS** | | **HTR-WATTS** | | | | | | | | |

**Accessories**

| Part number | Description | Multiplier |
|---|---|---|
| 12-1105 | C FACE KIT | A8 |
| 12EP1501A03SP | D-FLANGE KIT | A8 |

**AC Induction Motor Performance Data**
Record # 30951
Typical performance - not guaranteed values

| **Winding:** 12WGY278-R001 | **Type:** 1252M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **575 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 50 | **Full Load Torque** | 74.2 LB-FT |
| **Volts** | | | 575 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 45 | **Breakdown Torque** | 292 LB-FT |
| **R.P.M.** | | | 3540 | **Pull-up Torque** | 98.7 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 135 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | H | **Starting Current** | 325 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 13.9 A |
| **NEMA Nom. Eff.** | 93 | **Power Factor** | 89 | **Line-line Res. @ 25ºC** | 0.174 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 80°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 98°C |
| | | | | **Locked-rotor Power Factor** | 21 |
| | | | | **Rotor inertia** | 4.07 LB-FT2 |

**Load Characteristics 575 V, 60 Hz, 50 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 58 | 79 | 86 | 89 | 90 | 90 | 90 |
| **Efficiency** | 90.6 | 93.6 | 94.3 | 94.1 | 93.3 | 92.7 | 93.6 |
| **Speed** | 3585 | 3573 | 3561 | 3550 | 3538 | 3526 | 3543 |
| **Line amperes** | 17.7 | 25.4 | 34.6 | 44.8 | 55.7 | 66.6 | 51.3 |

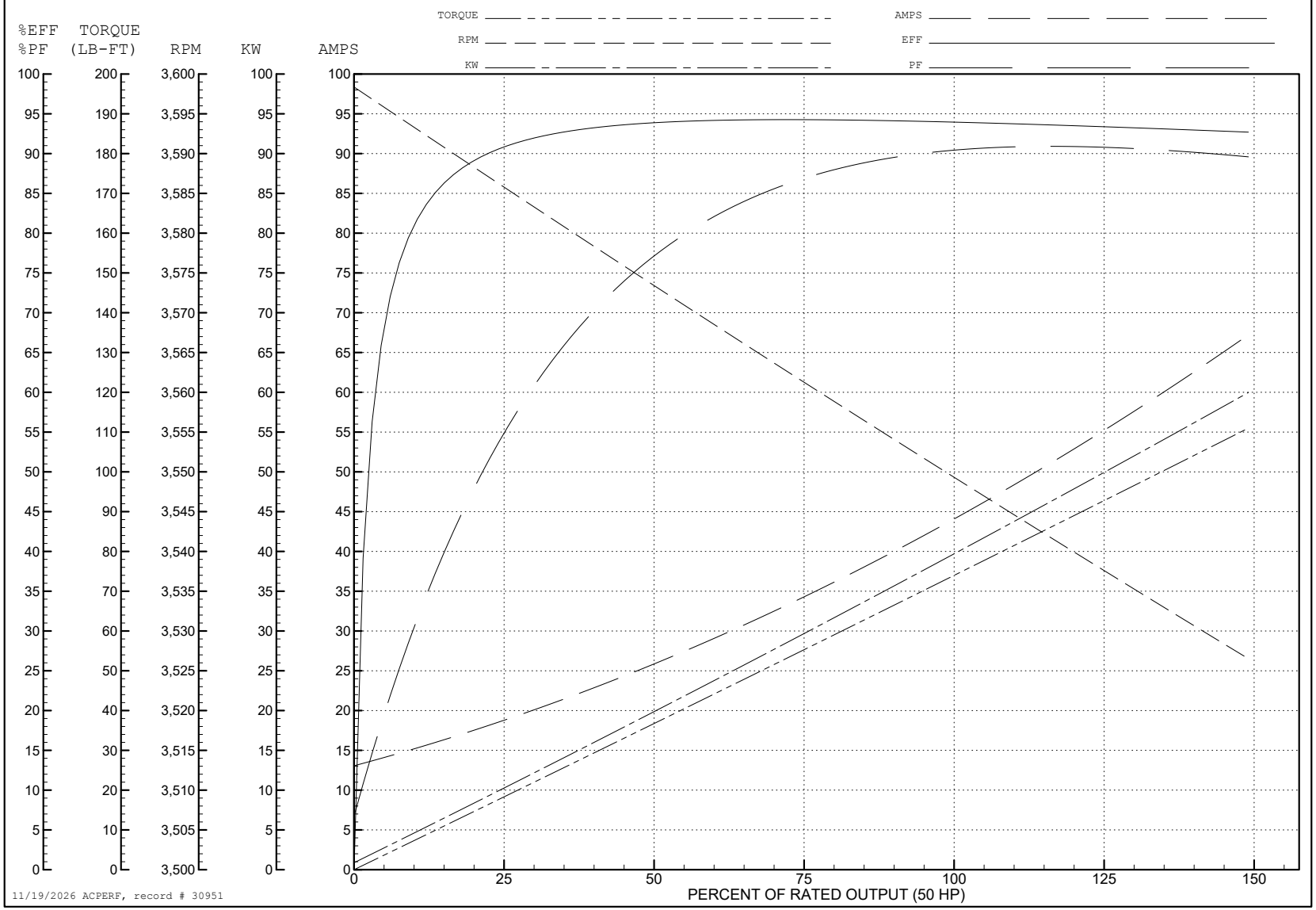
ABB Motors and Mechanical Inc.

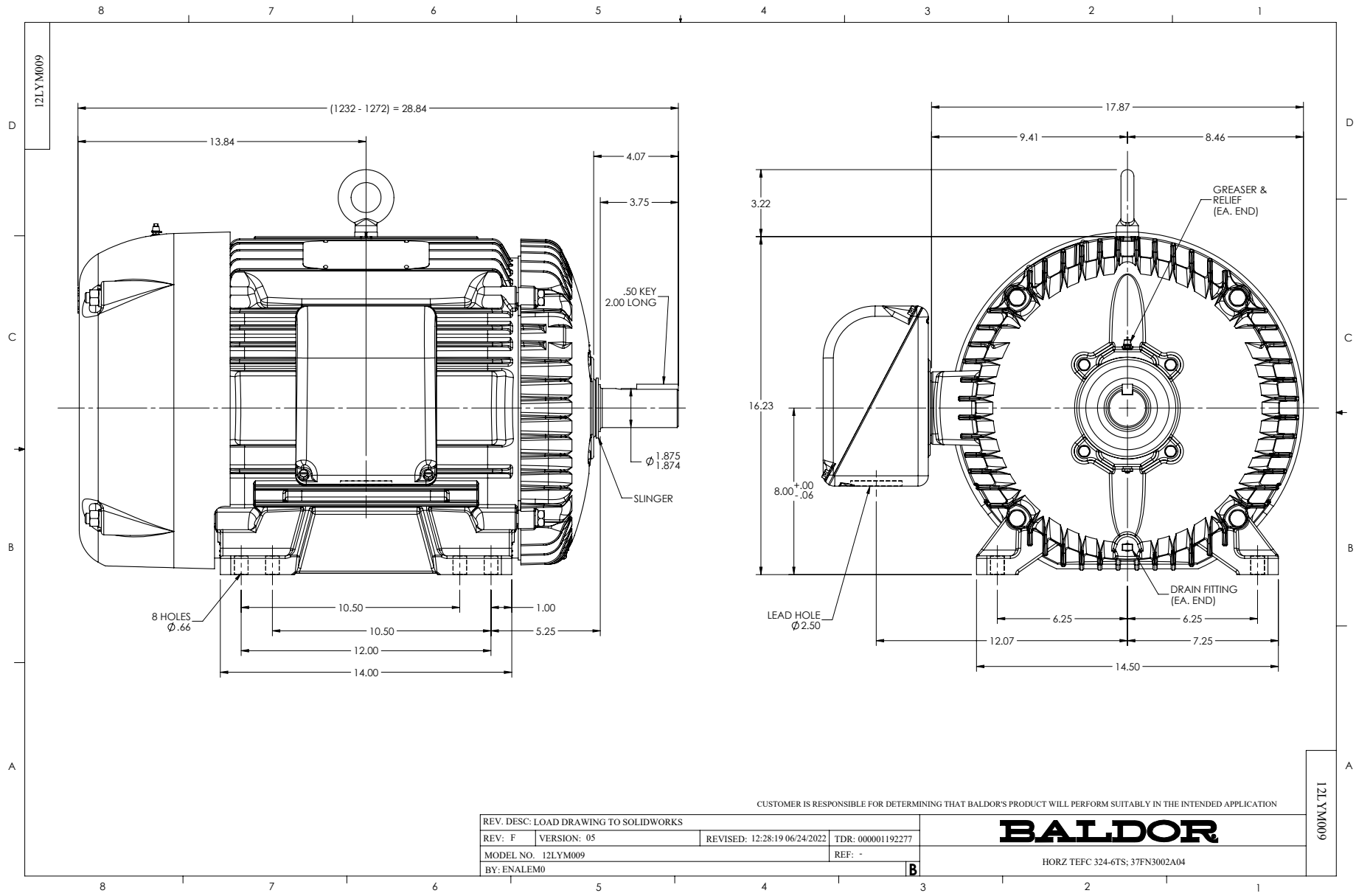
WINDING # 12WGY278

50 HP 3 PH 60 HZ 3540 RPM 575 V 1252M

Typical performance - not guaranteed values.

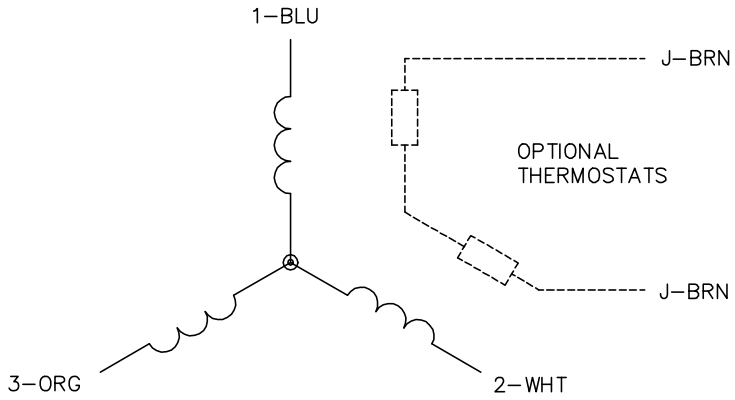
TORQUES(LB-FT): PO=292 PU=98.7 LR=135 LRA=325

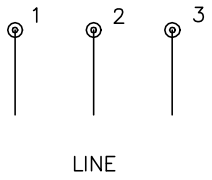



12LYM009
(1232 - 1272) = 28.84
13.84
4.07
3.75
.50 KEY
2.00 LONG
Ø 1.875
1.874
SLINGER
8 HOLES
Ø .66
10.50
1.00
10.50
5.25
12.00
14.00
17.87
9.41
8.46
3.22
GREASER &
RELIEF
(EA. END)
16.23
8.00 +.00 -.06
LEAD HOLE
Ø 2.50
DRAIN FITTING
(EA. END)
6.25
6.25
12.07
7.25
14.50
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: F
VERSION: 05
REVISED: 12:28:19 06/24/2022
TDR: 000001192277
MODEL NO. 12LYM009
REF: -
BY: ENALEM0
B
BALDOR
HORZ TEFC 324-6TS; 37FN3002A04
12LYM009

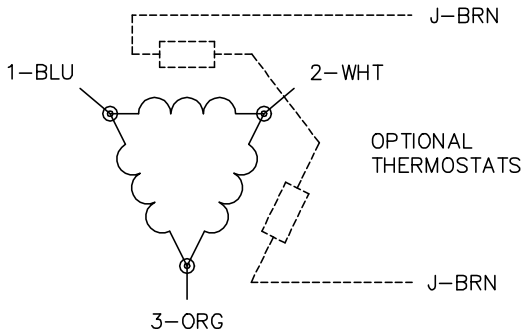
CD0006

TYPICAL WYE–CONNECTED MOTOR




TYPICAL DELTA–CONNECTED MOTOR




NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

| | | |
|---|---|---|
| REV. DESC: ADD CLASS CONN00000007 | | |
| REV. LTR: E | VERSION: 01 | TDR: 000001099922 |
| FILE: \AAA\00005\141 | REVISED: 10:24:49 02/19/2019 | BY: ENBRIR0 |
| MTL: – | | |

BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1