ABB BALDOR RELIANCE

# Customer information packet

## ECP4114T-4

50HP, 3540RPM, 3PH, 60HZ, 326TS, 1252M, TEFC, F
Class - CLI GP A,B,C,D
Division - Division II

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 326TS |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | CLI GP A,B,C,D |
| **Haz Area Division** | Division II |
| **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 |
| **Agency Approvals** | CCSA US |
| | CSA EEV |
| | NEMA PREMIUM |
| | NEMA_PREMIUM |
| | UR |
| **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 |
| **Constant Torque Speed Range** | 6 |
| **Current @ Voltage** | 56.000 A @ 460.0 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 Shaft Indicator** | None |
| **Haz Area Temp Code** | T3 |

## Part Detail

| | |
|---|---|
| **Revision** | G |
| **Type** | AC |
| **Mech. spec.** | 12G154 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 12WGY318 |
| **Layout** | 12LYG154 |
| **Eff. date** | 11-03-2025 |
| **CD Diagram** | CD0006 |
| **Poles** | 02 |
| **Leads** | 3#8 |
| **Proprietary** | False |
| **Created date** | 06-20-2018 |

| | |
|---|---|
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 56.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |
| **KVA Code** | H |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Max Speed** | 5400 rpm |
| **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** | 29.15 IN |
| **Power Factor** | 90 |
| **Product Family** | Super-E Chemical Processing |
| **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 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**

**NP3241**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | ECP4114T-4 | | | **P/N** | | | | **ENCLOSURE** | TEFC | | | | |
| **SPEC.** | 12G154Y318G7 | **CC** | 010A | **FRAME** | 326TS | | | **S/N** | | | | | |
| **HP** | 50 | | | **CLASS** | F | **HZ** | 60 | **DES** | A | | | | |
| **RPM** | 3540 | | | **RPM MAX** | 5400 | | | **PH** | 3 | **KVA-CODE** | H | | |
| **VOLT** | 460 | | | | | **MOTOR WEIGHT** | 610 | | | | | | |
| **AMP** | 56 | | | **SER.F.** | 1.15 | **PF** | 90 | | | **ODE BRG** | 6312 | **DE BRG** | 6312 |
| **RATING** | 40C AMB-CONT | | | | | **NEMA-NOM-EFF** | 93 | | | **GREASE** | POLYREX EM | | |
| | | | | | | | | | | | | | |
| | | | | | | | | **INV.TYPE** | PWM | | | | |
| **TEMP CODE** | T3 | | | **INVERTER-TEMP-CODE** | 200 | | | | | | | | |
| **TEMP =** | 200 | **C HP FR** | 60 | | | **C HP TO** | 90 | | | | | | |
| **CT HZ FROM** | 6 | | | **CT HZ TO** | 60 | | | | | | | | |
| **HTR-VOLTS** | | **HTR-AMPS** | | | | **HTR-WATTS** | | | | **MAX. SPACE HEATER TEMP.** | | **VT HZ FROM** | 6 **VT HZ TO** 60 |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA357423 | SA 12G154Y318G7 | 1.000 ea |
| RA346418 | RA 12G154Y318G7 | 1.000 ea |
| 37FN3002C04 | EXFN, PLASTIC, 6.00 OD, 2.003 ID | 1.000 ea |
| 10CB1000A203P | KOBX W/2.00 NPT & .31 GND MTG, EPOXY PRI | 1.000 ea |
| 09GS1010 | GASKET, DWG, LEADWIRE SEPERATOR | 1.000 ea |
| 10XN3118K16 | 5/16-18 X 1' GRADE #5, STL, ZINC PLATE | 4.000 ea |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 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 |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 1.000 ea |
| HA4017A10 | 1/8X1.25 GREASE EXT (F/S) | 1.000 ea |
| HW4019A01 | PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING | 1.000 ea |
| HA4017A01 | 1/8 X 4 GREASE EXT (F/S) | 1.000 ea |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 ea |
| HA3400A32 | STUD, 1/2-13 X 7.38 | 4.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| 10CB1503P | CONDUIT BOX LIPPED, CAST W/EPOXY PRIMER | 1.000 ea |
| HA1005A04 | SLINGER, OD 3.620, ID 1.98, | 1.000 ea |
| HW5100A15 | W4997-050 WVY WSHR (WB) | 1.000 ea |
| 10XN3118K42 | 5/16-18 X 2.63" HEX HD, GRADE 5 | 4.000 ea |
| 12EP1111A30P | SPL PUEP 312 BRG W/EPOXY | 1.000 ea |
| 10XN5013K28 | 1/2-13 X 1.75 HEX HEAD MACH SCREW,GRAD | 4.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 ea |
| HW4600B41 | V-RING SLINGER 2.125 X 2.880 X 0.280 | 1.000 ea |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 ea |
| 12FH1002A33P | FAN COVER, MACH ,EPOXY PRIMER | 1.000 ea |
| XY5013A12 | NUT,1/2-13,HEX,STEEL,ZINCPLATED | 4.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| 14GS1003 | GASKET CONDUIT BOX LID, NEOP | 1.000 ea |
| 10XN2520K16 | 1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P | 4.000 ea |

| | | |
|---|---|---|
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| HW2501H18 | KEY, 1/2 SQ X 2.000 | 1.000 ea |
| MJ5001A27 | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL | 0.031 qt |
| MJ5002A01 | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.033 ea |
| MJ5002A01 | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.025 ea |
| 12EP1111A35LP5 | FREP, MACH W/EPOXY PRIMER & MG1025L14 | 1.000 ea |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 ea |
| HW4500A21 | 1618BALEMITE FITTING 825 UNIVERSAL | 1.000 ea |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 ea |
| HA4001A01SP | DRAIN PLUG, PLASTIC (MICRO PLAS) | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.200 lb |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 ea |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 ea |
| HA4001A01SP | DRAIN PLUG, PLASTIC (MICRO PLAS) | 1.000 ea |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 ea |
| MG1025N19 | WILKOFAST, 778.50, RELIANCE BLUE-GREEN 8 | 0.080 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 4.000 ea |
| LB1002N | LABEL,MARINE DUTY (ON ROLLS) | 1.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0006 | CONNECTION LABEL | 1.000 ea |
| NP3241 | SS SUPER-E INV UL CSA-EEV PREM CC | 1.000 ea |
| 14PA2000 | PKGP, CTN ID 42X34X25, STD BASE | 1.000 ea |
| LB1449 | DIV-2/NEC WARNING LABEL | 1.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |

**Accessories**

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

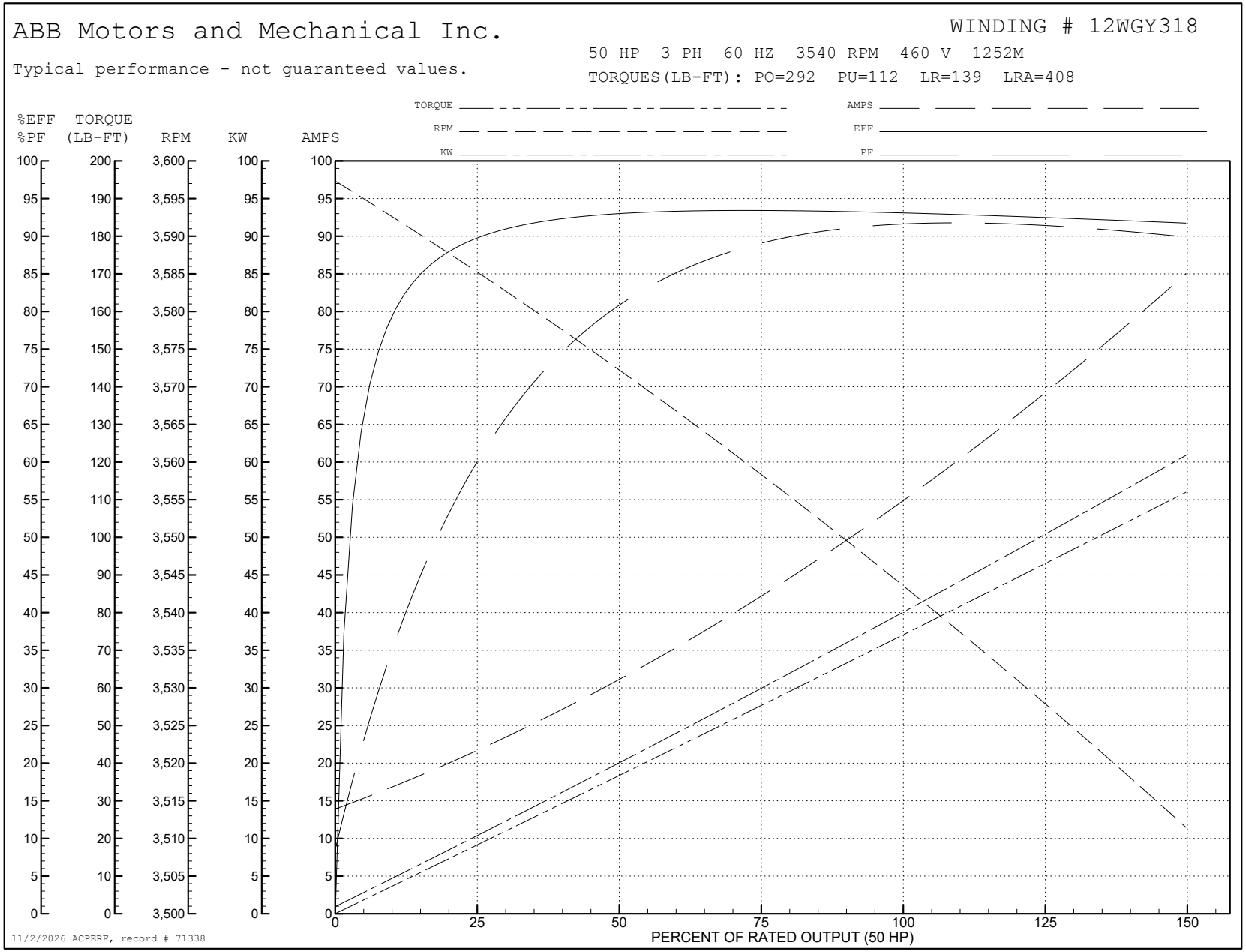
**AC Induction Motor Performance Data**
Record # 71338
Typical performance - not guaranteed values

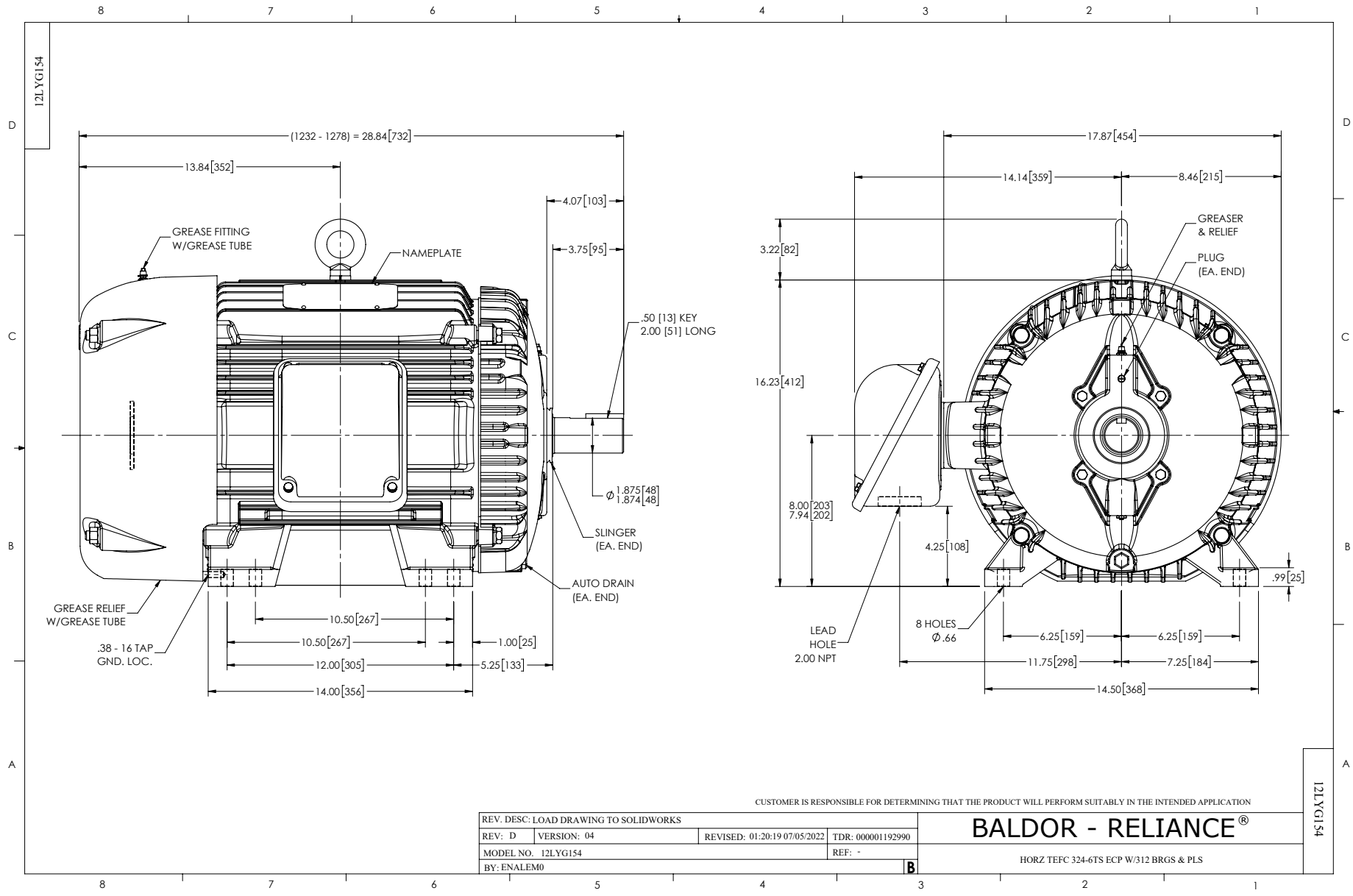
| **Winding:** 12WGY318-R036 | **Type:** 1252M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 50 | **Full Load Torque** | 74.4 LB-FT |
| **Volts** | | | 460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 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** | 0.104 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 77°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 93°C |
| | | | | **Locked-rotor Power Factor** | 20.9 |
| | | | | **Rotor inertia** | 4.07 LB-FT2 |

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

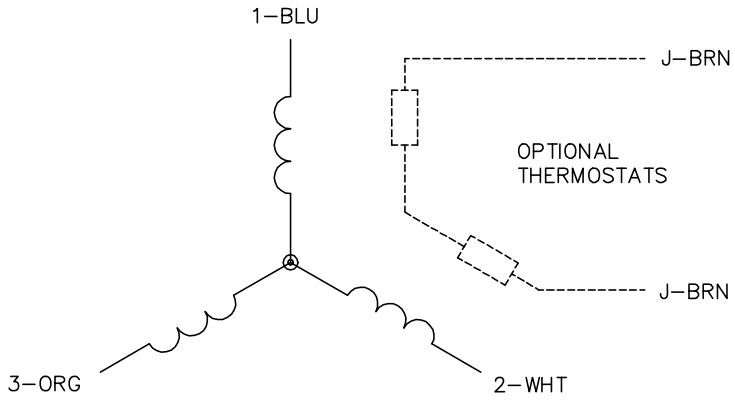
| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 66 | 82 | 88 | 90 | 91 | 90 | 91 |
| **Efficiency** | 88.7 | 92.7 | 93.5 | 93.2 | 92.7 | 91.6 | 92.9 |
| **Speed** | 3584 | 3572 | 3558 | 3544 | 3528 | 3511 | 3534 |
| **Line amperes** | 20.4 | 30.8 | 42.9 | 55.8 | 69.5 | 84.6 | 64 |

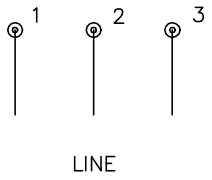

ABB Motors and Mechanical Inc.
WINDING # 12WGY318
Typical performance - not guaranteed values.
50 HP 3 PH 60 HZ 3540 RPM 460 V 1252M
TORQUES(LB-FT): PO=292 PU=112 LR=139 LRA=408
TORQUE
RPM
KW
AMPS
EFF
PF
%EFF
%PF
TORQUE (LB-FT)
RPM
KW
AMPS
PERCENT OF RATED OUTPUT (50 HP)
11/2/2026 ACPERF, record # 71338


12LYG154
(1232 - 1278) = 28.84[732]
13.84[352]
4.07[103]
3.75[95]
GREASE FITTING
W/GREASE TUBE
NAMEPLATE
.50 [13] KEY
2.00 [51] LONG
Ø 1.875[48]
1.874[48]
SLINGER
(EA. END)
AUTO DRAIN
(EA. END)
GREASE RELIEF
W/GREASE TUBE
.38 - 16 TAP
GND. LOC.
10.50[267]
10.50[267]
1.00[25]
12.00[305]
5.25[133]
14.00[356]
17.87[454]
14.14[359]
8.46[215]
GREASER
& RELIEF
PLUG
(EA. END)
3.22[82]
16.23[412]
8.00[203]
7.94[202]
4.25[108]
.99[25]
LEAD
HOLE
2.00 NPT
8 HOLES
Ø.66
6.25[159]
6.25[159]
11.75[298]
7.25[184]
14.50[368]
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: D
VERSION: 04
REVISED: 01:20:19 07/05/2022
TDR: 000001192990
MODEL NO. 12LYG154
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
HORZ TEFC 324-6TS ECP W/312 BRGS & PLS
12LYG154

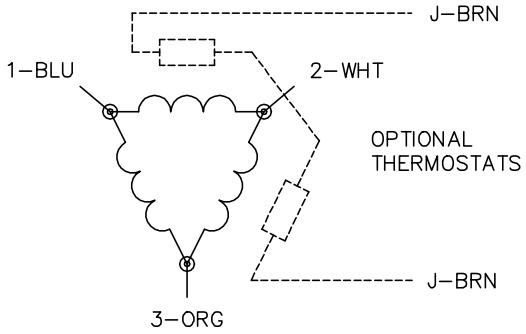
CD0006

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

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