

# ABB BALDOR RELIANCE III

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## Customer information packet

### EHM4110T

40HP, 1775RPM, 3PH, 60HZ, 324T, 1264M, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                                 |
|---------------------------------------|-----------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                            |
| <b>Frame</b>                          | 324T                                                            |
| <b>Frame Material</b>                 | Iron                                                            |
| <b>Frequency</b>                      | 60.00 Hz                                                        |
| <b>Haz Area Class and Group</b>       | None                                                            |
| <b>Haz Area Division</b>              | Not Applicable                                                  |
| <b>Motor Letter Type</b>              | Three Phase                                                     |
| <b>Output @ Frequency</b>             | 40.000 HP @ 60 HZ                                               |
| <b>Phase</b>                          | 3                                                               |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                                |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                              |
| <b>Agency Approvals</b>               | CSA<br>CSA EEV<br>UR                                            |
| <b>Ambient Temperature</b>            | 40 °C                                                           |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                                                |
| <b>Auxiliary Box Lead Termination</b> | None                                                            |
| <b>Base Indicator</b>                 | Rigid                                                           |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                         |
| <b>Blower</b>                         | None                                                            |
| <b>Current @ Voltage</b>              | 48.000 A @ 460.0 V<br>96.000 A @ 230.0 V<br>102.000 A @ 208.0 V |
| <b>Design Code</b>                    | A                                                               |
| <b>Drip Cover</b>                     | No Drip Cover                                                   |
| <b>Duty Rating</b>                    | CONT                                                            |
| <b>Efficiency @ 100% Load</b>         | 94.1 %                                                          |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                       |
| <b>Feedback Device</b>                | NO FEEDBACK                                                     |
| <b>Front Face Code</b>                | Standard                                                        |
| <b>Front Shaft Indicator</b>          | None                                                            |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | V          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 12G122     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 12WGY225   |
| <b>Layout</b>       | 12LYG122   |
| <b>Eff. date</b>    | 02-17-2025 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 12-05-2011 |

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Heater Indicator</b>              | No Heater                |
| <b>High Voltage Full Load Amps</b>   | 48.0 a                   |
| <b>Insulation Class</b>              | F                        |
| <b>Inverter Code</b>                 | Inverter Ready           |
| <b>KVA Code</b>                      | J                        |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs    |
| <b>Locked Bearing Indicator</b>      | Locked Bearing           |
| <b>Motor Lead Exit</b>               | Ko Box                   |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 8 AWG                |
| <b>Motor Lead Termination</b>        | Flying Leads             |
| <b>Motor Standards</b>               | NEMA                     |
| <b>Motor Type</b>                    | 1264M                    |
| <b>Mounting Arrangement</b>          | F1                       |
| <b>Number of Poles</b>               | 4                        |
| <b>Overall Length</b>                | 30.28 IN                 |
| <b>Power Factor</b>                  | 82                       |
| <b>Product Family</b>                | General Purpose          |
| <b>Pulley End Bearing Type</b>       | Ball                     |
| <b>Pulley Face Code</b>              | Standard                 |
| <b>Pulley Shaft Indicator</b>        | Standard                 |
| <b>Rodent Screen</b>                 | None                     |
| <b>Service Factor</b>                | 1.15                     |
| <b>Shaft Diameter</b>                | 2.125 IN                 |
| <b>Shaft Extension Location</b>      | Pulley End               |
| <b>Shaft Ground Indicator</b>        | Mounting Provisions Only |
| <b>Shaft Rotation</b>                | Reversible               |
| <b>Shaft Slinger Indicator</b>       | No Slinger               |
| <b>Speed</b>                         | 1775 rpm                 |
| <b>Speed Code</b>                    | Single Speed             |
| <b>Starting Method</b>               | Direct on line           |
| <b>Thermal Device - Bearing</b>      | NONE (OLD)               |
| <b>Thermal Device - Winding</b>      | None                     |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor      |
| <b>Winding Thermal 1</b>             | None                     |

Winding Thermal 2

None

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Nameplate

| NP2138L      |              |    |          |        |       |      |        |     |            |   |           |  |         |  |      |        |      |
|--------------|--------------|----|----------|--------|-------|------|--------|-----|------------|---|-----------|--|---------|--|------|--------|------|
| CAT.NO.      | EHM4110T     |    |          |        | P/N   |      |        |     |            |   | ENCLOSURE |  | TEFC    |  |      |        |      |
| SPEC.        | 12G122Y225G1 |    |          | CC     | 010A  |      | FRAME  |     | 324T       |   | S/N       |  |         |  |      |        |      |
| HP           | 40           |    |          |        | CLASS |      | F      |     | HZ         |   | 60        |  |         |  |      |        |      |
| RPM          | 1775         |    |          |        | PH    | 3    |        | DES |            | A |           |  |         |  |      |        |      |
| VOLT         | 230/460      |    |          |        |       |      |        |     | KVA-CODE   |   | J         |  | ODE BRG |  | 6311 | DE BRG | 6312 |
| AMP          | 96/48        |    |          |        |       |      |        |     |            |   |           |  |         |  |      |        |      |
| RATING       | 40C AMB-CONT |    |          |        |       |      | GREASE |     | POLYREX EM |   |           |  |         |  |      |        |      |
| NEMA-NOM-EFF | 94.1         | PF | 82       | SER.F. |       | 1.15 |        |     |            |   |           |  |         |  |      |        |      |
|              |              |    |          |        |       |      |        |     |            |   |           |  |         |  |      |        |      |
| HTR-VOLTS    |              |    | HTR-AMPS |        |       |      |        |     |            |   |           |  |         |  |      |        |      |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA235200      | SA 12G122Y225G1                          | 1.000 ea |
| RA222162      | RA 12G122Y225G1                          | 1.000 ea |
| 09FN3001B03SP | EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO | 1.000 ea |
| 10CB3001      | CONDUIT BOX CAST W/2.500 LEAD HOLE       | 1.000 ea |
| 09GS1000      | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE    | 1.000 ea |
| 10XN3118K12   | 5/16-18 X .75 GRADE 5, ZINC PLATED       | 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 |
| 12EP1107A05   | FR ENDPLATE, MACH                        | 1.000 ea |
| HA3400A13     | STUD, 1/2-13 X 7" WELKER                 | 4.000 ea |
| HA4017A01     | 1/8 X 4 GREASE EXT (F/S)                 | 1.000 ea |
| HW1001A50     | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| HW5100A13     | W4627-047 WVY WSHR                       | 1.000 ea |
| 10XN3118K40   | 5/16-18 X 2.25" HEX HD, GRADE 5          | 2.000 ea |
| HW1001A31     | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 2.000 ea |
| 12EP1106A69   | PU ENDPLATE, MACH                        | 1.000 ea |
| 84XN0632J08   | #6-32 X .50 SOCK HD, BK OX               | 2.000 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 |
| 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 |
| 12FH1002SP    | FAN COVER, CAST                          | 1.000 ea |
| HW1001A50     | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| XY5013A12     | NUT,1/2-13,HEX,STEEL,ZINCPLATED          | 4.000 ea |
| 10CB3500SP    | CONDUIT BOX LID, CAST                    | 1.000 ea |
| 10GS1000      | GASKET, CONDUIT BOX LID                  | 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 |
| 84XN0540J08   | 5-40 X 1/2" SHCS, BLACK OXIDE            | 2.000 ea |
| MN416A01      | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| LB1350      | BAR CODE LABEL FOR YORK                  | 1.000 ea |
| HW4500A35   | 1/8 NPT STEEL HEX CAP, ZINC              | 1.000 ea |
| HW4500A20   | 1/8NPT SL PIPE PLUG                      | 1.000 ea |
| HA4054      | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.200 lb |
| HW4500A20   | 1/8NPT SL PIPE PLUG                      | 2.000 ea |
| HA4054      | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| HW2500A25   | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB                | 1.000 ea |
| MG1050G01   | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.080 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0181      | CONNECTION LABEL                         | 1.000 ea |
| NP2138L     | ALUM SUPER-E UL PREM CC (300             | 1.000 ea |
| 12PA1000    | PACKAGING GROUP PRINT PK1024A07          | 1.000 ea |
| FE-0000022  | ZRTG FE ASSEMBLY                         | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 53033

Typical performance - not guaranteed values

| Winding: 12WGY225-R002 |    |              | Type: 1264M  |                                          | Enclosure: TEFC |                |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------|----------------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                 |                |
| Rated Output (HP)      |    | 40           |              | Full Load Torque                         |                 | 118 LB-FT      |
| Volts                  |    | 230/460      |              | Start Configuration                      |                 | direct on line |
| Full Load Amps         |    | 96/48        |              | Breakdown Torque                         |                 | 413 LB-FT      |
| R.P.M.                 |    | 1775         |              | Pull-up Torque                           |                 | 192 LB-FT      |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                 | 205 LB-FT      |
| NEMA Design Code       |    | A            | KVA Code     | Starting Current                         |                 | 370 A          |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                 | 20.3 A         |
| NEMA Nom. Eff.         |    | 94.1         | Power Factor | Line-line Res. @ 25°C                    |                 | 0.112 Ω        |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                 | 49°C           |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                 | 58°C           |
|                        |    |              |              | Locked-rotor Power Factor                |                 | 26             |
|                        |    |              |              | Rotor inertia                            |                 | 8.53 LB-FT2    |

**Load Characteristics 460 V, 60 Hz, 40 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 45   | 66   | 76   | 82   | 83   | 85   | 83   |
| Efficiency      | 89.8 | 93.7 | 94.6 | 94.8 | 94.3 | 94.2 | 94.5 |
| Speed           | 1796 | 1791 | 1787 | 1783 | 1778 | 1772 | 1780 |
| Line amperes    | 23.6 | 30.7 | 39.2 | 48.5 | 59.2 | 69.8 | 54.9 |



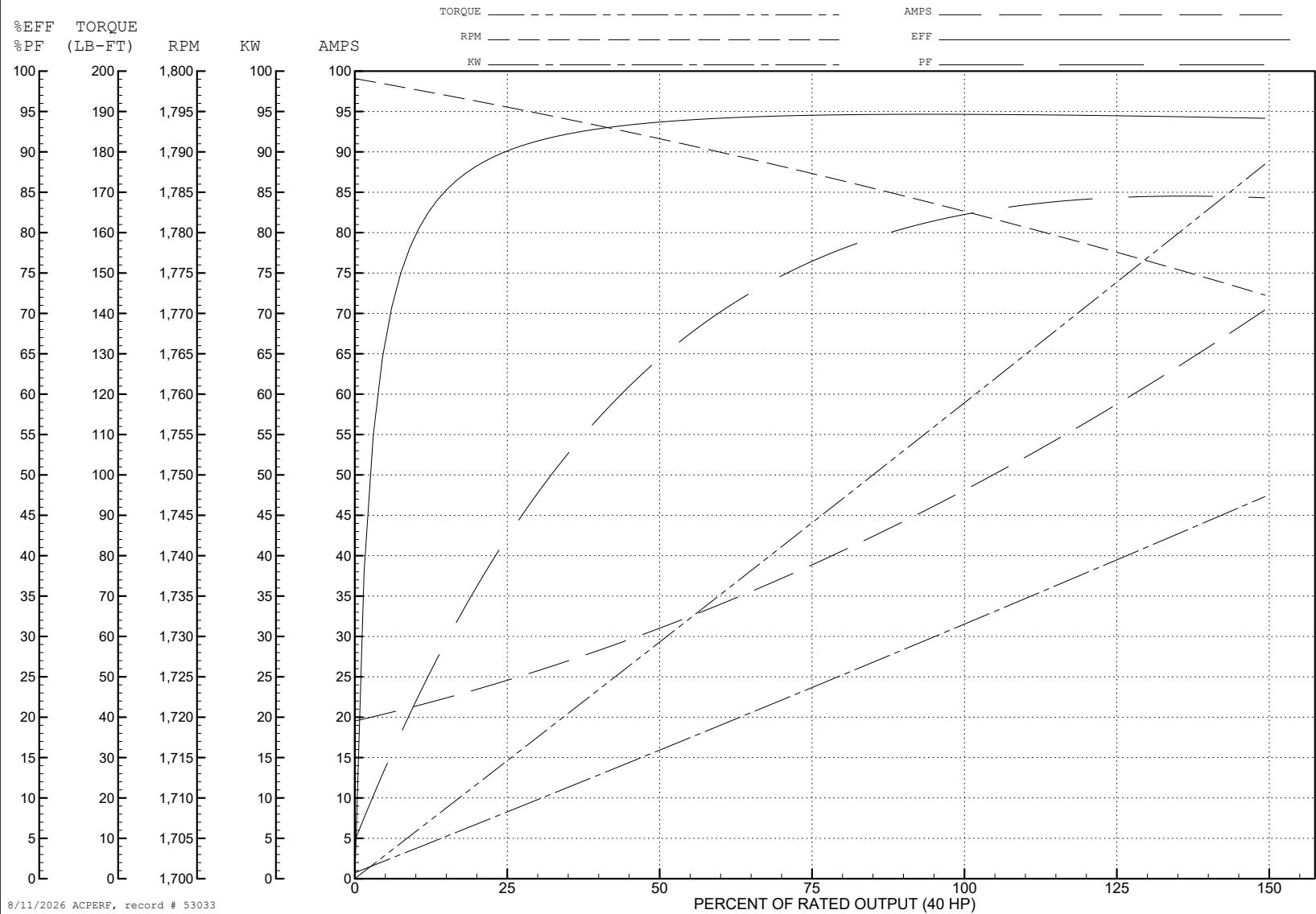
ABB Motors and Mechanical Inc.

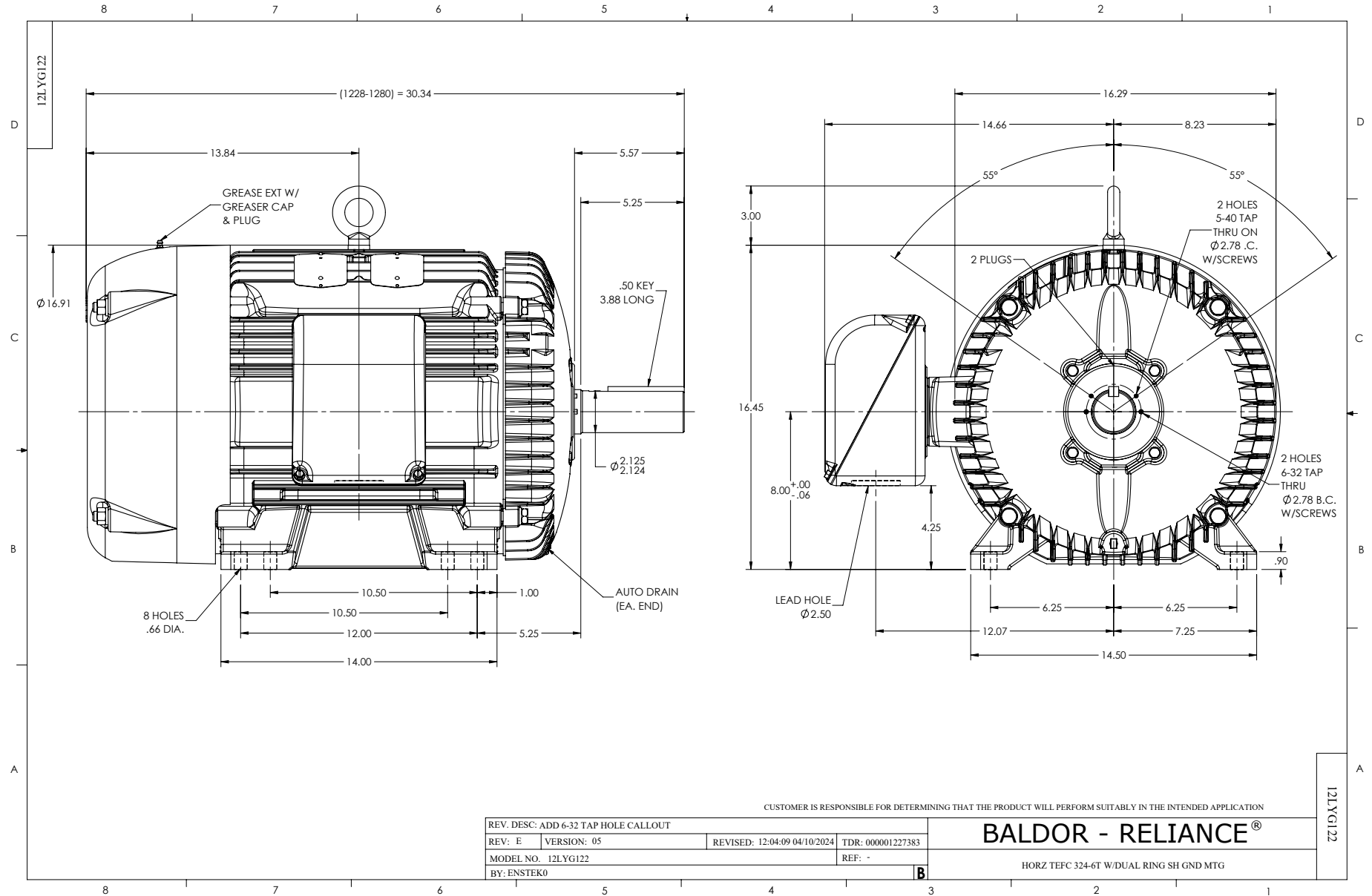
WINDING # 12WGY225

Typical performance - not guaranteed values.

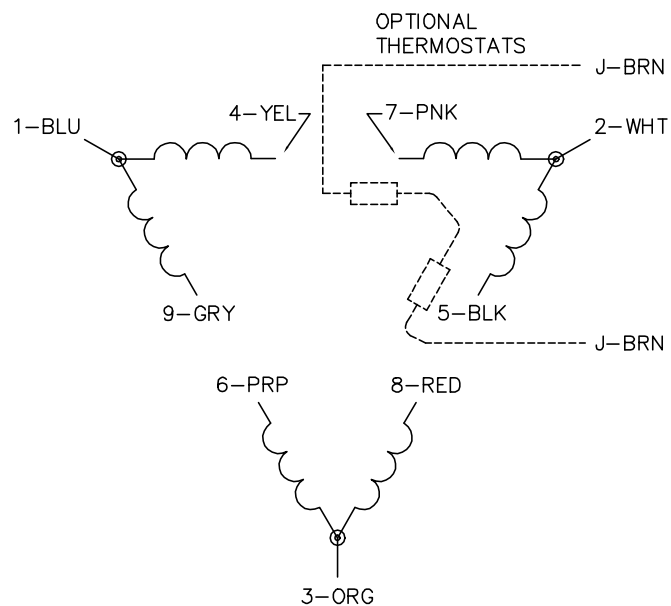
40 HP 3 PH 60 HZ 1775 RPM 460 V 1264M

TORQUES (LB-FT): PO=413 PU=192 LR=205 LRA=370

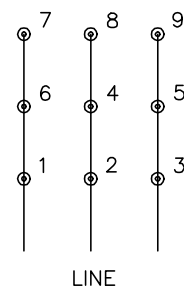




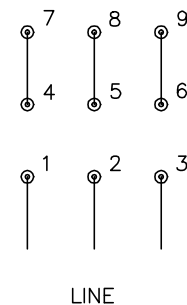
CD0180



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

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

SH 1 of 1