

# ABB BALDOR RELIANCE III

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## Customer information packet

### VECP3586T-4

2HP, 3450RPM, 3PH, 60HZ, 145TC, 0532M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                                       |                                                          |
|---------------------------------------|----------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                     |
| <b>Frame</b>                          | 145TC                                                    |
| <b>Frame Material</b>                 | Iron                                                     |
| <b>Frequency</b>                      | 60.00 Hz                                                 |
| <b>Haz Area Class and Group</b>       | CL I GP A,B,C,D                                          |
| <b>Haz Area Division</b>              | Division II                                              |
| <b>Motor Letter Type</b>              | Three Phase                                              |
| <b>Output @ Frequency</b>             | 2.000 HP @ 60 HZ                                         |
| <b>Phase</b>                          | 3                                                        |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                                         |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ                                          |
| <b>Agency Approvals</b>               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<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>                 | No Mounting                                              |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                  |
| <b>Blower</b>                         | None                                                     |
| <b>Constant Torque Speed Range</b>    | 6                                                        |
| <b>Current @ Voltage</b>              | 2.500 A @ 460.0 V                                        |
| <b>Design Code</b>                    | B                                                        |
| <b>Drip Cover</b>                     | Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                     |
| <b>Efficiency @ 100% Load</b>         | 86.5 %                                                   |
| <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>     | W          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 05F006     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 05WGW090   |
| <b>Layout</b>       | 05LYF006   |
| <b>Eff. date</b>    | 03-10-2021 |
| <b>CD Diagram</b>   | CD0006     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 3#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-20-2011 |

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Haz Area Temp Code</b>            | T4                           |
| <b>Heater Indicator</b>              | No Heater                    |
| <b>High Voltage Full Load Amps</b>   | 2.5 a                        |
| <b>Insulation Class</b>              | F                            |
| <b>Inverter Code</b>                 | Inverter Ready               |
| <b>KVA Code</b>                      | N                            |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs        |
| <b>Locked Bearing Indicator</b>      | Locked Bearing               |
| <b>Max Speed</b>                     | 5400 rpm                     |
| <b>Motor Lead Exit</b>               | Ko Box                       |
| <b>Motor Lead Quantity/Wire Size</b> | 3 @ 18 AWG                   |
| <b>Motor Lead Termination</b>        | Flying Leads                 |
| <b>Motor Standards</b>               | NEMA                         |
| <b>Motor Type</b>                    | 0532M                        |
| <b>Mounting Arrangement</b>          | F1                           |
| <b>Number of Poles</b>               | 2                            |
| <b>Overall Length</b>                | 14.57 IN                     |
| <b>Power Factor</b>                  | 85                           |
| <b>Product Family</b>                | Chemical Processing (Not DC) |
| <b>Pulley End Bearing Type</b>       | Ball                         |
| <b>Pulley Face Code</b>              | C-Face                       |
| <b>Pulley Shaft Indicator</b>        | Standard                     |
| <b>Rodent Screen</b>                 | None                         |
| <b>Service Factor</b>                | 1.15                         |
| <b>Shaft Diameter</b>                | 0.875 IN                     |
| <b>Shaft Extension Location</b>      | Pulley End                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding           |
| <b>Shaft Rotation</b>                | Reversible                   |
| <b>Shaft Slinger Indicator</b>       | Shaft Slinger                |
| <b>Speed</b>                         | 3450 rpm                     |
| <b>Speed Code</b>                    | Single Speed                 |
| <b>Starting Method</b>               | Direct on line               |
| <b>Thermal Device - Bearing</b>      | None                         |
| <b>Thermal Device - Winding</b>      | None                         |

| Vibration Sensor Indicator | No Vibration Sensor |
|----------------------------|---------------------|
| Winding Thermal 1          | None                |
| Winding Thermal 2          | None                |

**Nameplate**

| NP3258       |              |      |      |      |    |  |    |  |   |
|--------------|--------------|------|------|------|----|--|----|--|---|
| CAT.NO.      | VECP3586T-4  |      |      |      |    |  |    |  |   |
| SPEC.        | 05F006W090G1 |      |      |      |    |  |    |  |   |
| HP           | 2 TE         |      |      |      |    |  |    |  |   |
| VOLTS        | 460          |      |      |      |    |  |    |  |   |
| AMP          | 2.5          |      |      |      |    |  |    |  |   |
| RPM          | 3450         |      |      |      |    |  |    |  |   |
| FRAME        | 145TC        | HZ   | 60   |      | PH |  | 3  |  |   |
| SER.F.       | 1.15         | CODE | N    | DES  | B  |  | CL |  | F |
| RATING       | 40C AMB-CONT |      |      |      |    |  |    |  |   |
| SN           |              |      |      |      |    |  |    |  |   |
| DE           | 6205         | ODE  |      | 6205 |    |  |    |  |   |
| NEMA-NOM-EFF | 86.5         | PF   | 85   |      |    |  |    |  |   |
| G.MIN.EFF    | 84           | CC   | 010A |      |    |  |    |  |   |
| T. CODE      | T4           | T=   | 135  |      |    |  |    |  |   |

| NP3261      |              |                         |      |
|-------------|--------------|-------------------------|------|
| SPEC.       | 05F006W090G1 |                         |      |
| D.E. BRG.   | 25BC02XP30X  |                         |      |
| O.D.E. BRG. | 25BC02XP30X  |                         |      |
| GREASE      | POLYREX EM   |                         |      |
| RPM MAX     | 5400         | MAX. KVAR               | 0.23 |
| BLANK       |              |                         |      |
| INV.TYPE    | PWM          |                         |      |
| T=          | 135          |                         |      |
| C HP FR     | 60           | C HP TO                 | 90   |
| CT HZ FROM  | 6            | CT HZ TO                | 60   |
| VT HZ FROM  | 3            | VT HZ TO                | 60   |
| HTR-VOLTS   |              | HTR-AMPS                |      |
| HTR-WATTS   |              | MAX. SPACE HEATER TEMP. |      |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA217869     | SA 05F006W090G1                          | 1.000 ea |
| RA205048     | RA 05F006W090G1                          | 1.000 ea |
| HW3201A05    | 3/8-16 EYEBOLT                           | 1.000 ea |
| 06CB1000A02G | CONDUIT BOX, MACH GRAY                   | 1.000 ea |
| RM1016       | LEAD SEPARATOR GASKET - 305/306 C.P.MOTO | 1.000 ea |
| 51XW2520A12  | SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75  | 2.000 ea |
| 11XW1032G06  | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| HW3001B01    | BRASS CUP WASHER, FOR #10 SCREW          | 1.000 ea |
| 10XN2520S06  | 1/4 20X3/8 HX HD CAP S.S.                | 2.000 ea |
| WD1000B16    | T&B CX70TN OR L70P TERMINAL LUG          | 1.000 ea |
| 35EP1102B03G | FREP TEFC 205 BRG,GRSR,RLF,.125 NPT DRAI | 1.000 ea |
| HW4500A19    | 1/4-28X1/4 SLOTTED PLUG F/S              | 1.000 ea |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054       | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| HW5100A05    | WVY WSHR F/205 & 304 BRGS                | 1.000 ea |
| 35EP1329A16G | PUEP ENCL 143-5TC 205 BRG,GRSR,RLF,NPT D | 1.000 ea |
| HW4500A19    | 1/4-28X1/4 SLOTTED PLUG F/S              | 1.000 ea |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054       | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| 06CB1502G    | LIPPED CONDUIT BOX LID CAST, GRAY EPOXY  | 1.000 ea |
| HA3100A28    | THRUBOLT 10-32 X 8.187                   | 4.000 ea |
| 51XB1214A16  | 12-14X1.00 HXWSSLD SERTYB                | 1.000 ea |
| 35FH1000A04G | FAN COVER 35FH1000 - (GRAY)              | 1.000 ea |
| 10XN2520A18  | 1/4-20 X 1-1/8 HEX CAP SCREW.            | 3.000 ea |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 3.000 ea |
| WD4100A03    | DE-750 HEYCO PLUG 62MP0750 MICRO PLASTIC | 1.000 ea |
| 35FH4500A01  | DRIP COVER, STAMPED X - W/PRIMED         | 1.000 ea |
| HA2001A13    | 35-10103 SPACER WELKER                   | 3.000 ea |
| 51XN1032A20  | 10-32 X 1 1/4 HX WS SL SR                | 3.000 ea |
| 06GS1003     | GASKET, KOBX LID, 1/8" THICK BLACK NEOPR | 1.000 ea |

|               |                                          |          |
|---------------|------------------------------------------|----------|
| 10XN2520A12   | 1/4-20 X 3/4 HEX HEAD CAP                | 2.000 ea |
| HW1001A25     | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 ea |
| HW4600B32SP   | V-RING SLINGER 1.000 X 1.540 X .24 VITON | 1.000 ea |
| HA1005A03SP   | SLINGER, OD 1.750, ID .938, 205 BRG      | 1.000 ea |
| HW2501D13     | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A01     | KEY RETAINER 7/8" DIA SHAFT              | 1.000 ea |
| LB1624        | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| MJ5001A27     | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL  | 0.001 qt |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| MJ1000A02     | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| 34FN3002A01SP | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/  | 1.000 ea |
| MG1025N19     | WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8  | 0.022 ga |
| MG1500Y02     | WILKOPON PRIMER YELLOW                   | 0.022 ga |
| WD1000D21     | TRM,T&B #B71M,RING,18-14,.25,NON-INSL    | 9.000 ea |
| LC0006        | CONNECTION LABEL                         | 1.000 ea |
| LB1449        | DIV-2/NEC WARNING LABEL                  | 1.000 ea |
| NP3258        | SS CP SUPER-E DIV-2 UL CSA-C US EEV CC   | 1.000 ea |
| NP3261        | SS CP SUPER-E AUX DATA INFORMATION       | 1.000 ea |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| 36PA1000      | PKG GRP, PRINT PK1016A08                 | 1.000 ea |
| PK3083        | STYROFOAM PACKING CRADLE                 | 1.000 ea |
| LB1002N       | LABEL,MARINE DUTY (ON ROLLS)             | 1.000 ea |
| MN416A01      | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| PK3088        | MICROFOAM, 8"X"8 PERF. SHEETS            | 1.000 ea |
| PE-0000001    | ZRTG PE ASSEMBLY                         | 1.000 ea |



**AC Induction Motor Performance Data**

Record # 55

Typical performance - not guaranteed values

| Winding: 05WGW090-R001 |    |              | Type: 0532M                           |                         | Enclosure: TEFC |               |
|------------------------|----|--------------|---------------------------------------|-------------------------|-----------------|---------------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>Single Voltage Motor |                         |                 |               |
| Rated Output (HP)      |    | 2            | Full Load Torque                      |                         | 3 LB-FT         |               |
| Volts                  |    | 460          | Start Configuration                   |                         | direct on line  |               |
| Full Load Amps         |    | 2.5          | Breakdown Torque                      |                         | 16 LB-FT        |               |
| R.P.M.                 |    | 3450         | Pull-up Torque                        |                         | 12.5 LB-FT      |               |
| Hz                     | 60 | Phase        | 3                                     | Locked-rotor Torque     |                 | 16 LB-FT      |
| NEMA Design Code       |    | B            | KVA Code                              |                         | N               |               |
| Service Factor (S.F.)  |    | 1.15         | Starting Current                      |                         | 30 A            |               |
| NEMA Nom. Eff.         |    | 86.5         | Power Factor                          |                         | 85              |               |
| Rating - Duty          |    | 40C AMB-CONT |                                       | Temp. Rise @ Rated Load |                 | 31°C          |
| S.F. Amps              |    |              |                                       | Temp. Rise @ S.F. Load  |                 | 36°C          |
|                        |    |              |                                       | Rotor inertia           |                 | 0.0885 LB-FT2 |

**Load Characteristics 460 V, 60 Hz, 2 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 50   | 70   | 80   | 85   | 88   | 89   | 87   |
| Efficiency      | 75.2 | 83.8 | 86.2 | 86.5 | 86.4 | 85.5 | 86.5 |
| Speed           | 3571 | 3548 | 3525 | 3501 | 3476 | 3448 | 3486 |
| Line amperes    | 1.28 | 1.65 | 2.09 | 2.55 | 3.08 | 3.64 | 2.9  |

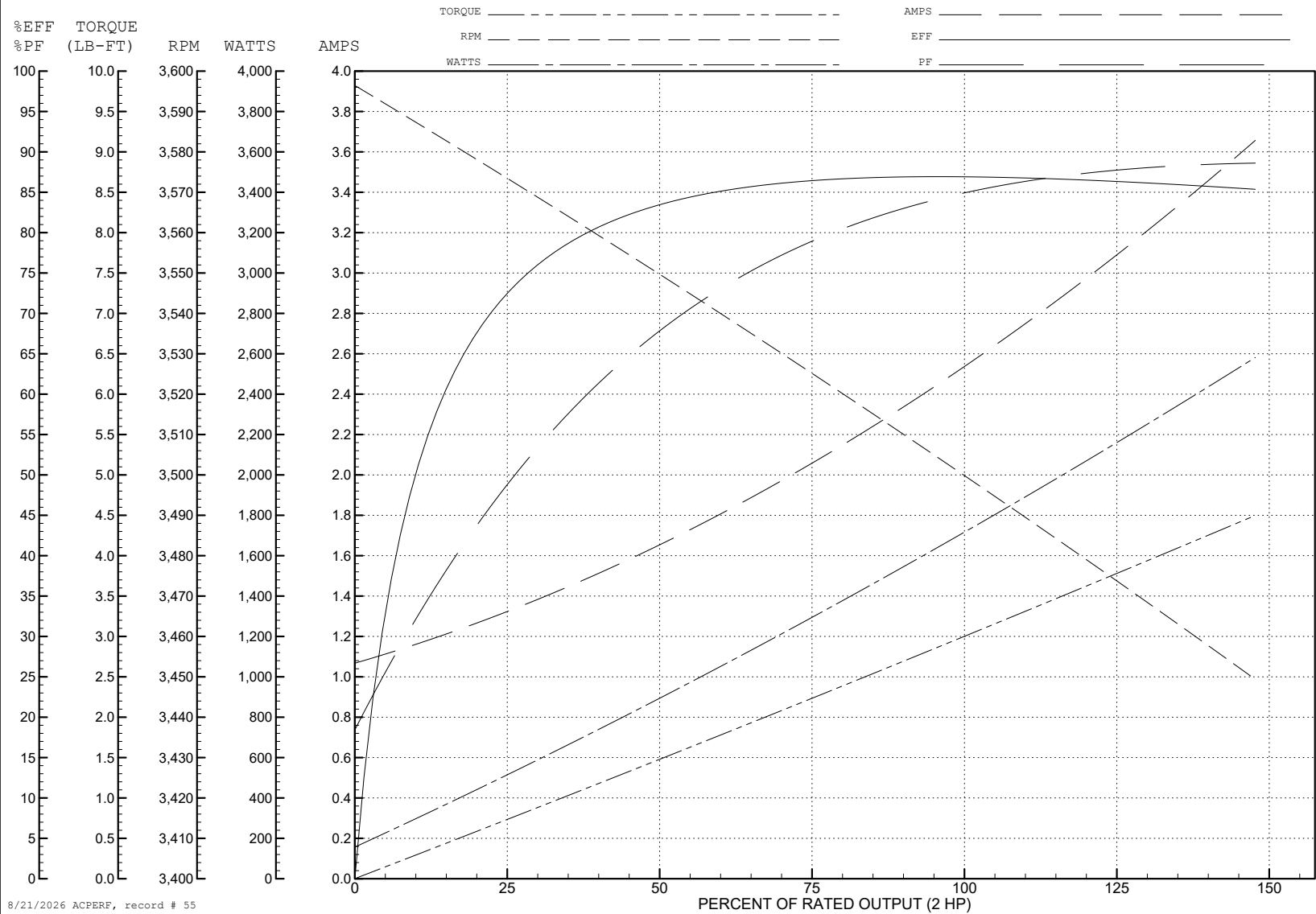
ABB Motors and Mechanical Inc.

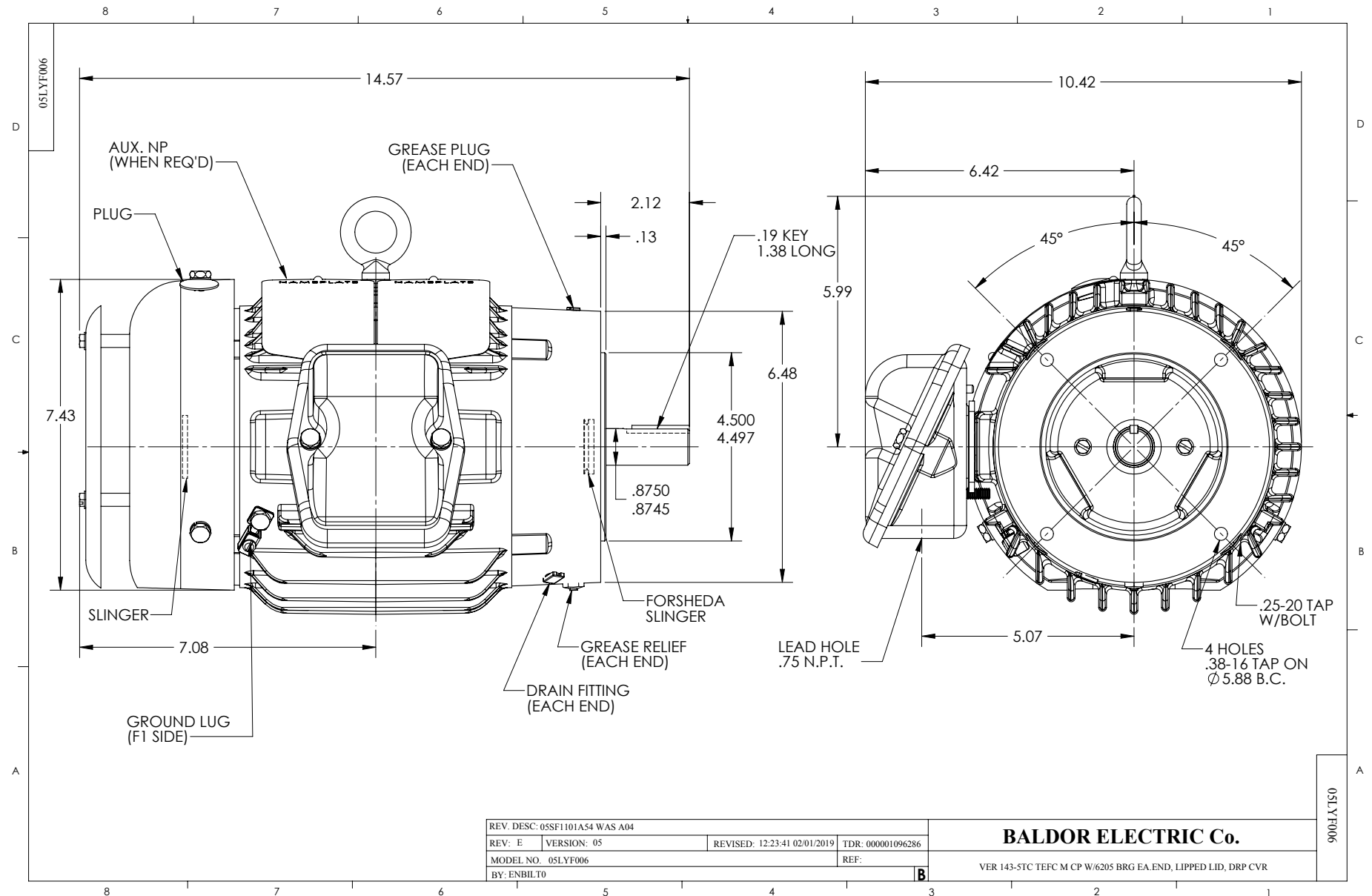
WINDING # 05WGW090

Typical performance - not guaranteed values.

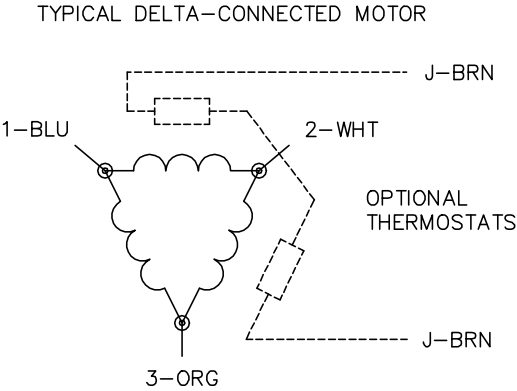
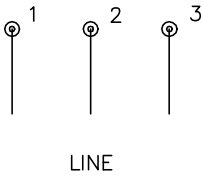
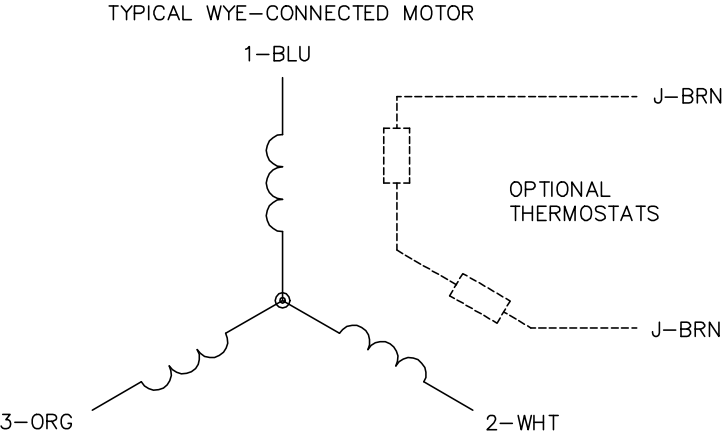
2 HP 3 PH 60 HZ 3450 RPM 460 V 0532M

TORQUES (LB-FT): PO=16 PU=12.5 LR=16 LRA=30





CD0006



- 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: ENBRIRO       |
| MTL: —                            |                                |                   |

**BALDOR - RELIANCE®**

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

SH 1 of 1