

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM3158T-BG

3HP, 3450RPM, 3PH, 60HZ, 145T, 3530M, OPSB, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | OPSB                                                        |
| <b>Frame</b>                          | 145T                                                        |
| <b>Frame Material</b>                 | Steel                                                       |
| <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>             | 3.000 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<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>              | 7.600 A @ 230.0 V<br>8.000 A @ 208.0 V<br>3.800 A @ 460.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | No Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 85.5 %                                                      |
| <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>     | R          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E2261    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGP988   |
| <b>Layout</b>       | 35LYE2261  |
| <b>Eff. date</b>    | 06-11-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 10-30-2013 |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Heater Indicator</b>              | No Heater           |
| <b>High Voltage Full Load Amps</b>   | 3.8 a               |
| <b>Insulation Class</b>              | H                   |
| <b>Inverter Code</b>                 | Inverter Ready      |
| <b>KVA Code</b>                      | K                   |
| <b>Lifting Lugs</b>                  | No Lifting Lugs     |
| <b>Locked Bearing Indicator</b>      | Locked Bearing      |
| <b>Motor Lead Exit</b>               | Ko Box              |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 18 AWG          |
| <b>Motor Lead Termination</b>        | Flying Leads        |
| <b>Motor Standards</b>               | NEMA                |
| <b>Motor Type</b>                    | 3530M               |
| <b>Mounting Arrangement</b>          | F1                  |
| <b>Number of Poles</b>               | 2                   |
| <b>Overall Length</b>                | 13.00 IN            |
| <b>Power Factor</b>                  | 87                  |
| <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>RoHS Status</b>                   | ROHS COMPLIANT      |
| <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>        | Shaft Grounding     |
| <b>Shaft Rotation</b>                | Reversible          |
| <b>Shaft Slinger Indicator</b>       | No 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                |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

Nameplate

| NP3553L                   |               |      |     |      |   |       |    |   |  |
|---------------------------|---------------|------|-----|------|---|-------|----|---|--|
| CAT.NO.                   | EM3158T-BG    |      |     |      |   |       |    |   |  |
| SPEC                      | 35E2261P988G1 |      |     |      |   |       |    |   |  |
| HP                        | 3             |      |     |      |   |       |    |   |  |
| VOLTS                     | 230/460       |      |     |      |   |       |    |   |  |
| AMPS                      | 7.6/3.8       |      |     |      |   |       |    |   |  |
| RPM                       | 3450          |      |     |      |   |       |    |   |  |
| FRAME                     | 145T          |      | HZ  | 60   |   |       | PH | 3 |  |
| SF                        | 1.15          | CODE | K   | DES  | B | CLASS | H  |   |  |
| NEMA NOM. EFF             | 85.5          | PF   | 87  |      |   |       |    |   |  |
| RATING                    | 40C AMB-CONT  |      |     |      |   |       |    |   |  |
| CC                        | 010A          |      |     |      |   |       |    |   |  |
| ENCL                      | OPSB          | SER  |     |      |   |       |    |   |  |
| DE                        | 6205          |      | ODE | 6203 |   |       |    |   |  |
| VPWM INVERTER READY       |               |      |     |      |   |       |    |   |  |
| CT30-60(2:1) VT3-60(20:1) |               |      |     |      |   |       |    |   |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA271724    | SA 35E2261P988G1                         | 1.000 ea |
| RA258348    | RA 35E2261P988G1                         | 1.000 ea |
| HA6362ZP    | LIFTING LUG FOR 36 FRAME MOTORS.         | 2.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| NS2512A01   | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 35CB3009    | 35 CB W/1.09 DIA. LEAD HOLE @ 6:         | 1.000 ea |
| 51XB1016A07 | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 35EP3209G00 | MASTER ODE,203 BRG                       | 1.000 ea |
| HW5100A03   | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 35EP3210C00 | MASTER DE,205 BRG,1.000SH,LCK BRG        | 1.000 ea |
| 51XN1032A18 | 10-32 X 1 1/8 HX WS SL SR (ESKAY)        | 2.000 ea |
| XY1032A02   | 10-32 HEX NUT DIRECTIONAL SERRATION      | 4.000 ea |
| 35CB4521    | 35 LIPPED CB LID (GALV & PHOSPH)         | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| HW2501D13   | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A01   | KEY RETAINER 7/8" DIA SHAFT              | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LB1508      | LABEL "SHAFT GROUNDING BRUSH" 1.50 X .81 | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.050 lb |
| MG1050Y01   | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.017 ga |
| HA3100A23   | THRUBOLT 10-32 X 10.375                  | 4.000 ea |
| 35AD2016A01 | BAFFLE PLATE,MOD 35 OPSB-INT SHAFT GRD   | 1.000 ea |
| 35AD2005A01 | BAFFLE PLATE,MOD 35-SLTD BAND MTRS TDR   | 1.000 ea |
| LC0005      | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| NP3553L     | ALUM SUPER-E,VPWM INV READY,UL EV,CC,NEM | 1.000 ea |
| 36PA1000    | PKG GRP, PRINT PK1016A08                 | 1.000 ea |
| FE-0000001  | ZRTG FE ASSEMBLY                         | 1.000 ea |
| PE-0000001  | ZRTG PE ASSEMBLY                         | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 36078

Typical performance - not guaranteed values

| Winding: 35WGP988-R005 |    |              | Type: 3530M                              |                           | Enclosure: OPSB       |               |          |
|------------------------|----|--------------|------------------------------------------|---------------------------|-----------------------|---------------|----------|
| Nameplate Data         |    |              | 460 V, 60 Hz:<br>High Voltage Connection |                           |                       |               |          |
| Rated Output (HP)      |    | 3            | Full Load Torque                         |                           | 4.515 LB-FT           |               |          |
| Volts                  |    | 230/460      | Start Configuration                      |                           | direct on line        |               |          |
| Full Load Amps         |    | 7.6/3.8      | Breakdown Torque                         |                           | 18.1 LB-FT            |               |          |
| R.P.M.                 |    | 3450         | Pull-up Torque                           |                           | 11.3 LB-FT            |               |          |
| Hz                     | 60 | Phase        | 3                                        | Locked-rotor Torque       |                       | 15.1 LB-FT    |          |
| NEMA Design Code       |    | B            | KVA Code                                 | K                         | Starting Current      |               | 32.5 A   |
| Service Factor (S.F.)  |    | 1.15         |                                          | No-load Current           |                       | 1.55 A        |          |
| NEMA Nom. Eff.         |    | 85.5         | Power Factor                             | 87                        | Line-line Res. @ 25°C |               | 5.8893 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                          | Temp. Rise @ Rated Load   |                       | 33°C          |          |
| S.F. Amps              |    |              |                                          | Temp. Rise @ S.F. Load    |                       | 40°C          |          |
|                        |    |              |                                          | Locked-rotor Power Factor |                       | 58            |          |
|                        |    |              |                                          | Rotor inertia             |                       | 0.0822 LB-FT2 |          |

**Load Characteristics 460 V, 60 Hz, 3 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 50     | 72     | 82     | 87     | 90     | 91     | 89   |
| Efficiency      | 76.1   | 84.3   | 86     | 85.8   | 84.7   | 83     | 85.1 |
| Speed           | 3569.1 | 3541.6 | 3510.6 | 3478.3 | 3442.7 | 3400.2 | 3457 |
| Line amperes    | 1.77   | 2.29   | 2.97   | 3.73   | 4.58   | 5.53   | 4.24 |

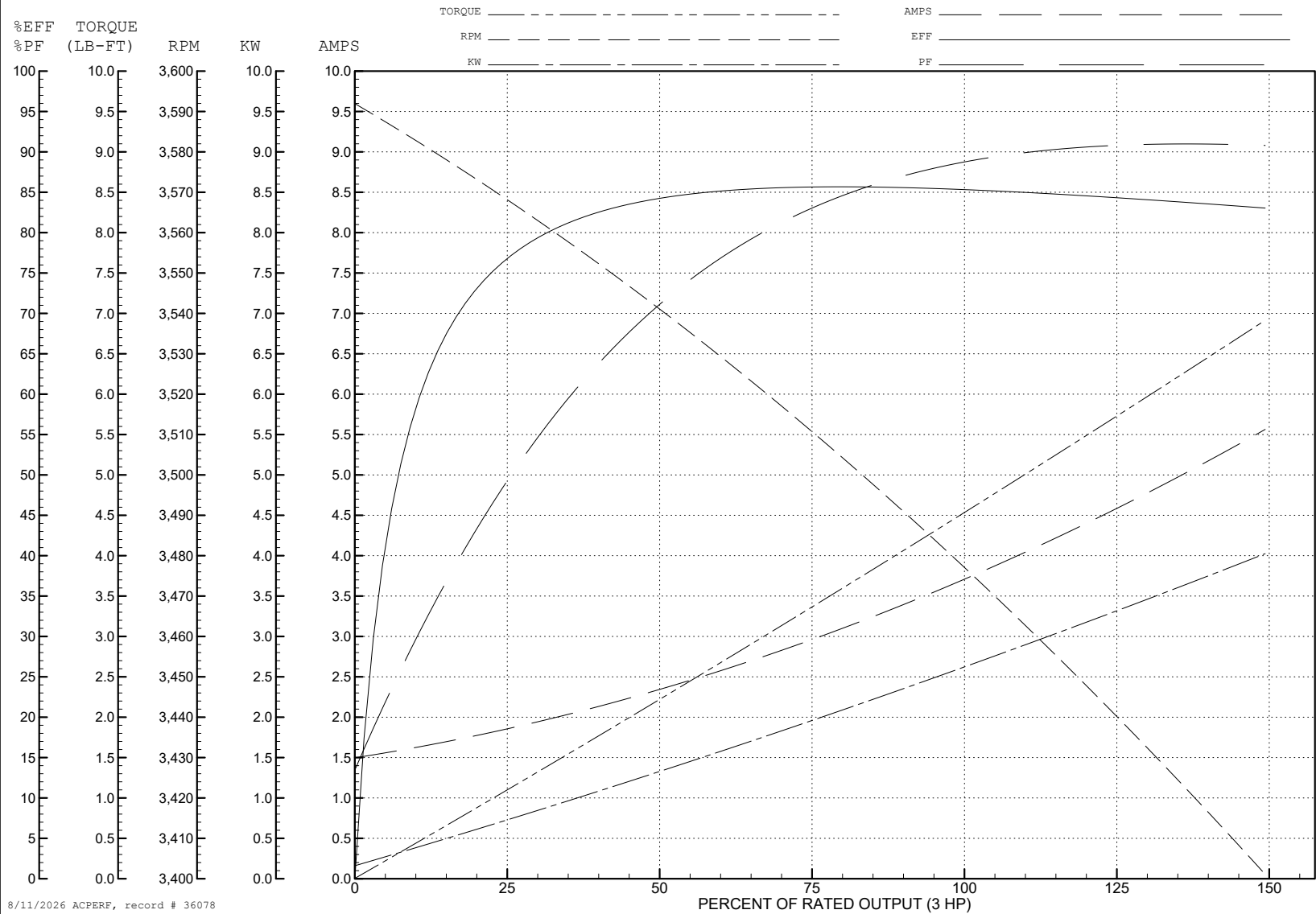
ABB Motors and Mechanical Inc.

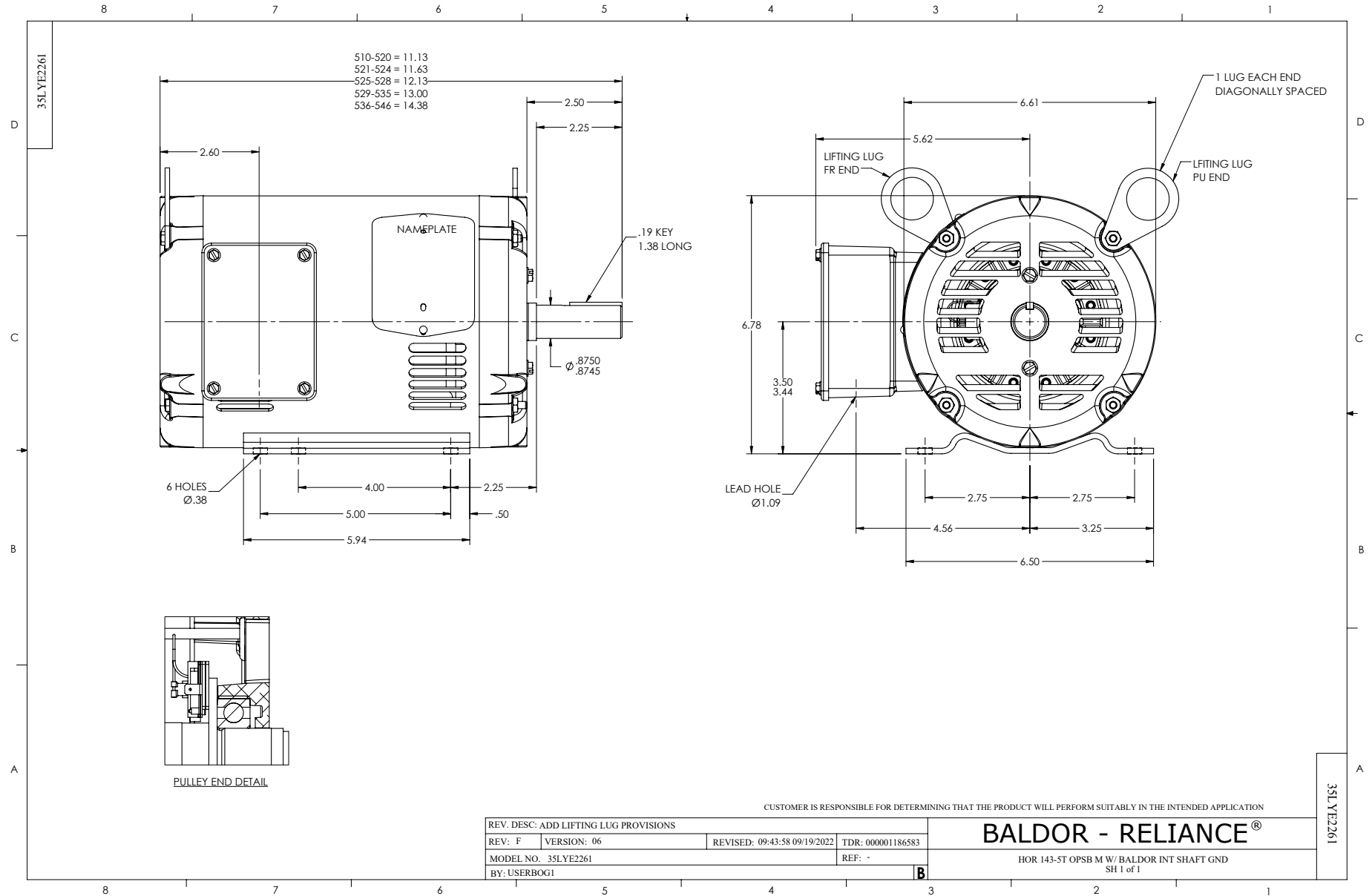
WINDING # 35WGP988

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 3450 RPM 460 V 3530M

TORQUES (LB-FT): PO=18.1 PU=11.3 LR=15.1 LRA=32.5





CD0005



- 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.

|                                           |         |                         |              |
|-------------------------------------------|---------|-------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS |         |                         |              |
| REV. LTR: E                               | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| 900000                                    |         | FILE: AAA00005140       | MDL: -       |
|                                           |         | MTL: -                  |              |

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005