

# ABB BALDOR RELIANCE III

---

## Customer information packet

### CD5350

.5HP, 1750RPM, DC, 56C, 3520D, TEFC, F1

Class - None

Division -

**Specifications**

|                                      |                          |
|--------------------------------------|--------------------------|
| <b>Armature Voltage</b>              | 90 V                     |
| <b>Base Speed</b>                    | 1750 rpm                 |
| <b>Enclosure</b>                     | TEFC                     |
| <b>Field Voltage</b>                 | 100 V                    |
|                                      | 50 V                     |
| <b>Frame</b>                         | 56C                      |
| <b>Frame Material</b>                | Steel                    |
| <b>Haz Area Class and Group</b>      | None                     |
| <b>Output Power</b>                  | 0.500 HP                 |
| <b>Agency Approvals</b>              | CSA                      |
|                                      | UR                       |
| <b>Ambient Temperature</b>           | 40 °C                    |
| <b>Armature Current</b>              | 5.0 a                    |
| <b>Armature Inertia</b>              | 7.804 lb-ft <sup>2</sup> |
| <b>Base Indicator</b>                | Rigid                    |
| <b>Bearing Grease Type</b>           | Polyrex EM (-20F +300F)  |
| <b>Drip Cover</b>                    | No Drip Cover            |
| <b>Duty Rating</b>                   | CONT                     |
| <b>Feedback Device</b>               | NO FEEDBACK              |
| <b>Field Winding Type</b>            | SHUNT                    |
| <b>Heater Indicator</b>              | No Heater                |
| <b>Lifting Lugs</b>                  | No Lifting Lugs          |
| <b>Motor Lead Exit</b>               | Lead Hole                |
| <b>Motor Lead Quantity/Wire Size</b> | 4 @ 18 AWG               |
|                                      | 2 @ 14 AWG               |
| <b>Motor Lead Termination</b>        | Flying Leads             |
| <b>Motor Standards</b>               | NEMA                     |
| <b>Mounting Arrangement</b>          | F1                       |
| <b>Overall Length</b>                | 14.91 IN                 |
| <b>Product Family</b>                | General Purpose          |
| <b>Pulley End Bearing Type</b>       | Sealed Bearing           |
| <b>RoHS Status</b>                   | ROHS COMPLIANT           |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | P          |
| <b>Type</b>         | DC         |
| <b>Mech. spec.</b>  | 35P442     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGZ388   |
| <b>Layout</b>       | 35LYP442   |
| <b>Eff. date</b>    | 10-28-2024 |
| <b>CD Diagram</b>   | CD0860C01  |
| <b>Poles</b>        | 00         |
| <b>Leads</b>        |            |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 01-01-0001 |

|                          |                    |
|--------------------------|--------------------|
| Service Factor           | 1.00               |
| Shaft Diameter           | 0.625 IN           |
| Shaft Extension Location | Pulley End         |
| Shaft Ground Indicator   | No Shaft Grounding |
| Shaft Rotation           | Reversible         |
| Shaft Slinger Indicator  | No Slinger         |

**Nameplate**

| NP0111L         |             |                |         |
|-----------------|-------------|----------------|---------|
| <b>CAT.NO.</b>  | CD5350      |                |         |
| <b>SPEC.</b>    | 35P442Z388  |                |         |
| <b>HP</b>       | .5          | <b>ENCL</b>    | TEFC    |
| <b>RPM</b>      | 1750        |                |         |
| <b>FRAME</b>    | 56C         | <b>TYPE</b>    | 3520D   |
| <b>ARM V</b>    | 90          | <b>ARM A</b>   | 5       |
| <b>FLD V</b>    | 100/50      | <b>FLD A</b>   | .44/.88 |
| <b>INSUL</b>    | F           | <b>AMB.</b>    | 40      |
| <b>DUTY</b>     | CONT        | <b>SUPPLY</b>  | 1.3     |
| <b>BRG/DE</b>   | 6205        | <b>BRG/ODE</b> | 6203    |
| <b>BRUSHES</b>  | 2/BP5000T07 |                |         |
|                 | BLANK       |                |         |
| <b>SER.</b>     |             |                |         |
| <b>BLANK</b>    |             |                |         |
| <b>APRV-CSA</b> |             | <b>APRV-UL</b> |         |

**Accessories**

| Part number | Description              | Multiplier |
|-------------|--------------------------|------------|
| TK3500      | TACHO MOUTING KIT TK3500 | A8         |

**DC Motor Performance Data**

Record # 276

Typical performance - not guaranteed values

| Winding: 35WGZ388-R001 |              | Type: 3520D                              | Enclosure: TEFC |
|------------------------|--------------|------------------------------------------|-----------------|
| Nameplate Data         |              | General Characteristics                  |                 |
| Rated Output (HP)      | 0.5          | Armature Resistance<br>@ 25°C            | 1.146 Ω         |
| R.P.M.                 | 1750         | Commutating Winding Resistance<br>@ 25°C | 0.7655 Ω        |
| Armature Volts         | 90           |                                          |                 |
| Armature Amps          | 5            | Shunt Winding Resistance<br>@ 25°C       | 213.9 Ω         |
| Field Volts            | 100 / 50     |                                          |                 |
| Field Amps             | 0.44 / 0.88  |                                          |                 |
| Rating - Duty          | 40C AMB-CONT |                                          |                 |
| Form Factor            | 1.3          |                                          |                 |
|                        |              | Temp. Rise @ Rated Load                  | 96°C            |

**Load Characteristics at 90 Armature Volts, 100 Field Volts, 0.47 Field Amps**

| Load Point       | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|------------------|------|------|------|------|------|------|------|
| Armature Amps    | 0.9  | 1.69 | 3.21 | 4.45 | 5.59 | 7.46 | 9.21 |
| R.P.M.           | 1941 | 1923 | 1901 | 1866 | 1841 | 1789 | 1760 |
| Torque ( LB-FT ) | 0    | 0.38 | 0.75 | 1.13 | 1.5  | 1.88 | 2.25 |

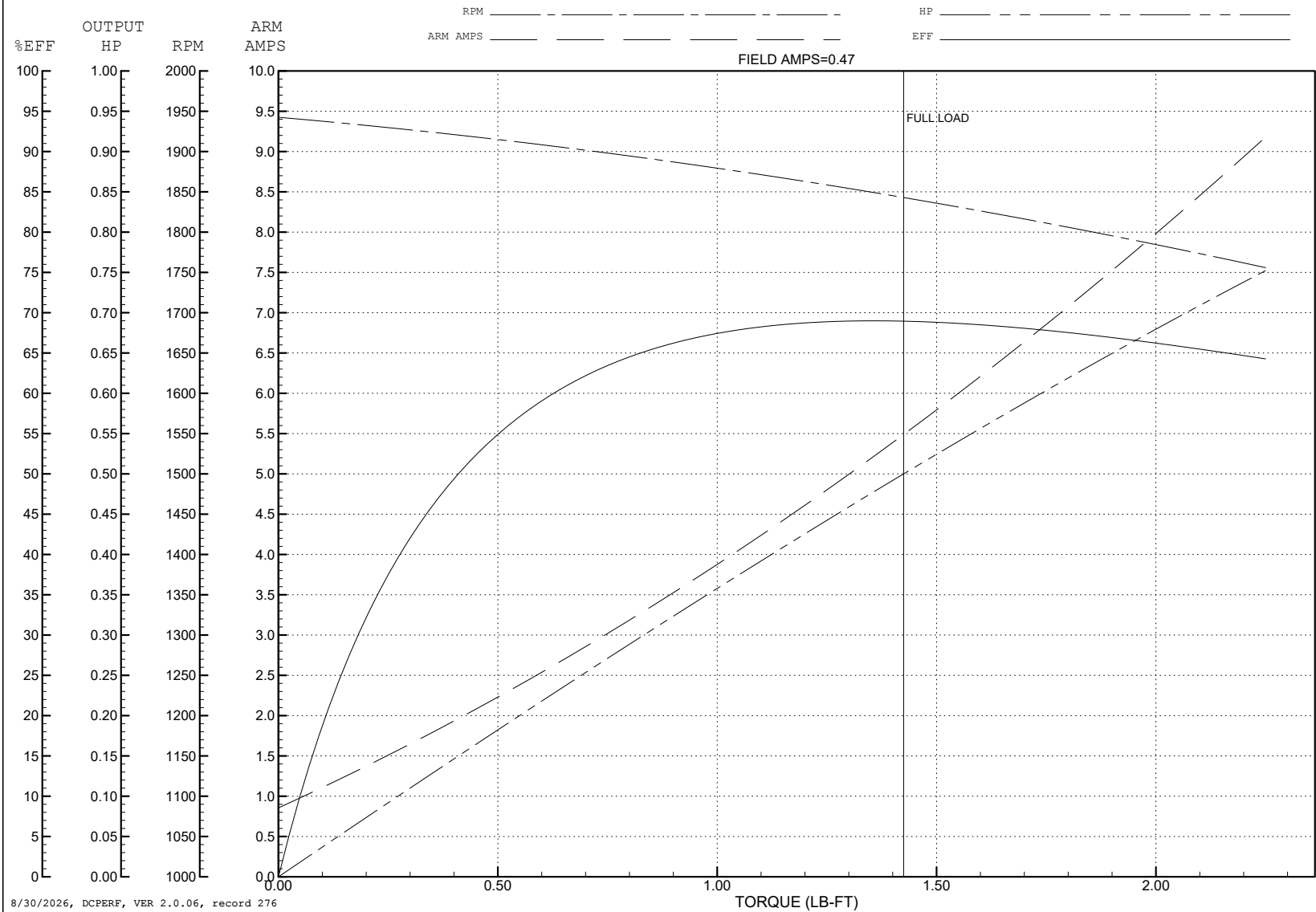
ABB Motors and Mechanical Inc.

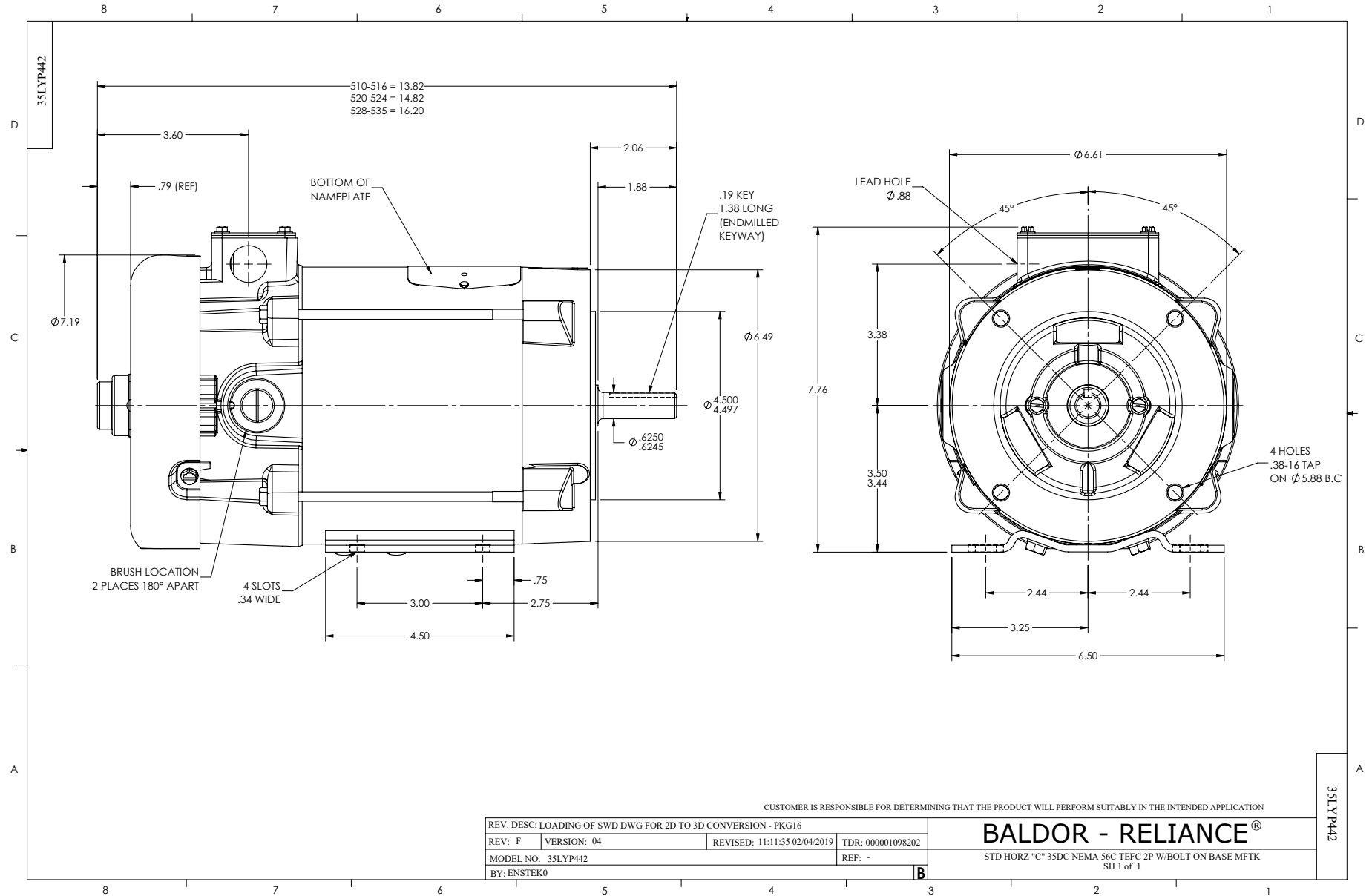
WINDING # 35WGZ388

Typical performance - not guaranteed values.

0.5 HP DC 1750 RPM 90 V ARM 100/50 V FLD 3520D

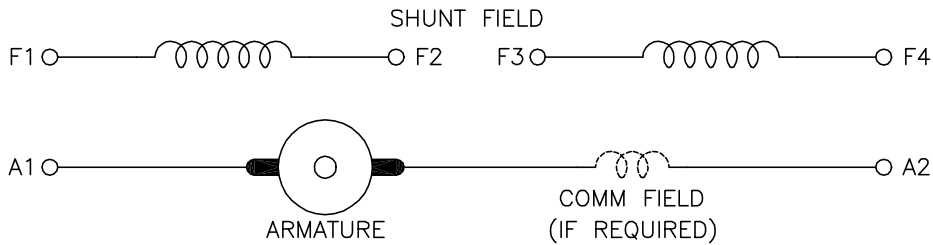
ENCL: TEFC DUTY: CONT CL: F





SHUNT WOUND

CD0860C01



| CONNECTION      | DIRECTION OF ROTATION |                 |                 |                 |
|-----------------|-----------------------|-----------------|-----------------|-----------------|
|                 | CWDE                  |                 | CCWDE           |                 |
|                 | POS TERM<br>(+)       | NEG TERM<br>(-) | POS TERM<br>(+) | NEG TERM<br>(-) |
| HIGH<br>VOLTAGE | A1                    | A2              | A2              | A1              |
|                 | F1                    | F4              | F1              | F4              |
|                 | CONNECT F2 & F3       |                 | CONNECT F2 & F3 |                 |
| LOW<br>VOLTAGE  | A1                    | A2              | A2              | A1              |
|                 | F1 & F3               | F2 & F4         | F1 & F3         | F2 & F4         |

- NOTES:
- 1. LIMIT STARTING INRUSH CURRENT TO NOT MORE THAN 3 TIMES RATED AMPERES BY ENERGIZING THE FULL SHUNT FIELD BEFORE BRINGING THE ARMATURE VOLTAGE UP SLOWLY OR IN STEPS.
  - 2. OPTIONAL FIELD REOSTAT MAY BE CONNECTED IN SERIES WITH THE SHUNT FIELD.
  - 3. OPTIONAL THERMOSTAT LEADS ARE MARKED J,J.

|                                |         |                              |                |
|--------------------------------|---------|------------------------------|----------------|
| REV. DESC: NEW, REPLACE CD0860 |         |                              |                |
| REV. LTR: -                    | BY: JLP | REVISED: 15:35:22 11/03/2004 | TDR: 347796    |
| 10C0980C0                      |         | FILE: AAA00121477            | REF: CD0860C01 |
|                                |         | MTL: -                       |                |

**BALDOR ELECTRIC Co.**

DC CONNECTION DIAGRAM, SHUNT FIELD, 6 LEAD, DUAL VOLTAGE

CD0860C01