

**BALDOR® • RELIANCE™**

---

# Customer information packet

## CD7502

2HP, 1750RPM, DC, 213C, 3646D, TEFC, F1, N

Class - None

Division -

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.

2/22/2024 8:04:29 AM

## Specifications

|                               |                           |
|-------------------------------|---------------------------|
| Armature Voltage              | 180 V                     |
| Base Speed                    | 1750 rpm                  |
| Enclosure                     | TEFC                      |
| Field Voltage                 | 100 V                     |
|                               | 200 V                     |
| Frame                         | 213C                      |
| Frame Material                | Steel                     |
| Output Power                  | 2.000 HP                  |
| XP Class and Group            | None                      |
| Agency Approvals              | CSA                       |
|                               | UR                        |
| Ambient Temperature           | 40 °C                     |
| Armature Current              | 9.5 a                     |
| Armature Inertia              | 38.770 lb-ft <sup>2</sup> |
| Base Indicator                | Rigid                     |
| Bearing Grease Type           | Polyrex EM (-20F +300F)   |
| Drip Cover                    | No Drip Cover             |
| Duty Rating                   | CONT                      |
| Feedback Device               | NO FEEDBACK               |
| Field Winding Type            | SHUNT                     |
| Heater Indicator              | No Heater                 |
| Lifting Lugs                  | Standard Lifting Lugs     |
| Motor Lead Exit               | Ko Box                    |
| Motor Lead Quantity/Wire Size | 2 @ 12 AWG                |
|                               | 4 @ 18 AWG                |
| Motor Lead Termination        | Flying Leads              |
| Motor Standards               | NEMA                      |
| Mounting Arrangement          | F1                        |
| Overall Length                | 19.79 IN                  |
| Product Family                | General Purpose           |
| Pulley End Bearing Type       | Sealed Bearing            |
| Service Factor                | 1.00                      |

## Part detail

|              |            |
|--------------|------------|
| Revision     | K          |
| Type         | DC         |
| Mech. spec.  | 36-5580    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 36WGZ105   |
| Layout       | 36LY5580   |
| Eff. date    | 06-23-2023 |
| CD Diagram   | CD0860C01  |
| Poles        | 00         |
| Leads        |            |
| Proprietary  | False      |
| Created date | 11-20-2008 |

|                                 |                    |
|---------------------------------|--------------------|
| <b>Shaft Diameter</b>           | 1.125 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>  | No Slinger         |

**Nameplate**

| <b>NP0111L</b>  |             |                |       |
|-----------------|-------------|----------------|-------|
| <b>CAT.NO.</b>  | CD7502      |                |       |
| <b>SPEC.</b>    | 36-5580Z105 |                |       |
| <b>HP</b>       | 2           | <b>ENCL</b>    | TEFC  |
| <b>RPM</b>      | 1750        |                |       |
| <b>FRAME</b>    | 213C        | <b>TYPE</b>    | 3646D |
| <b>ARM V</b>    | 180         | <b>ARM A</b>   | 9.5   |
| <b>FLD V</b>    | 200/100     | <b>FLD A</b>   | .4/.8 |
| <b>INSUL</b>    | F           | <b>AMB.</b>    | 40    |
| <b>DUTY</b>     | CONT        | <b>SUPPLY</b>  | K     |
| <b>BRG/DE</b>   | 6207        | <b>BRG/ODE</b> | 6205  |
| <b>BRUSHES</b>  | 2/BP5125A01 |                |       |
|                 | BLANK       |                |       |
| <b>SER.</b>     |             |                |       |
| <b>BLANK</b>    |             |                |       |
| <b>APRV-CSA</b> | APRV-UL     |                |       |

**Accessories**

| <b>Part number</b> | <b>Description</b>            | <b>Multiplier</b> |
|--------------------|-------------------------------|-------------------|
| TK7500             | TEFC TACH MTG. CONVERSION KIT | A8                |

**DC Motor Performance Data**

Record # 306

Typical performance - not guaranteed values

| <b>Winding: 36WGZ105-R001</b> |              | <b>Type: 3646D</b>                    | <b>Enclosure: TEFC</b>  |
|-------------------------------|--------------|---------------------------------------|-------------------------|
| <b>Nameplate Data</b>         |              | <b>General Characteristics</b>        |                         |
| Rated Output (HP)             | 2            | Armature Resistance @ 25°C            | 0.631 Ω                 |
| R.P.M.                        | 1750         | Commutating Winding Resistance @ 25°C | 0.451 Ω                 |
| Armature Volts                | 180          |                                       |                         |
| Armature Amps                 | 9.5          | Shunt Winding Resistance @ 25°C       | 428 Ω                   |
| Field Volts                   | 200 / 100    |                                       |                         |
| Field Amps                    | 0.4 / 0.8    | Armature Inertia                      | 38.7702 LI <sup>2</sup> |
| Rating - Duty                 | 40C AMB-CONT |                                       |                         |
| Power Supply Code             | K            |                                       |                         |

**Load Characteristics at 180 Armature Volts, 200 Field Volts, 0.42 Field Amps**

| Load Point       | 1    | 2    | 3    | 4    | 5    | 6    | 7    |
|------------------|------|------|------|------|------|------|------|
| Armature Amps    | 0.6  | 2.7  | 4.6  | 6.5  | 8.75 | 10.8 | 13   |
| R.P.M.           | 1683 | 1669 | 1647 | 1637 | 1615 | 1602 | 1588 |
| Torque ( LB-FT ) | 0    | 1.5  | 3    | 4.5  | 6    | 7.5  | 9    |

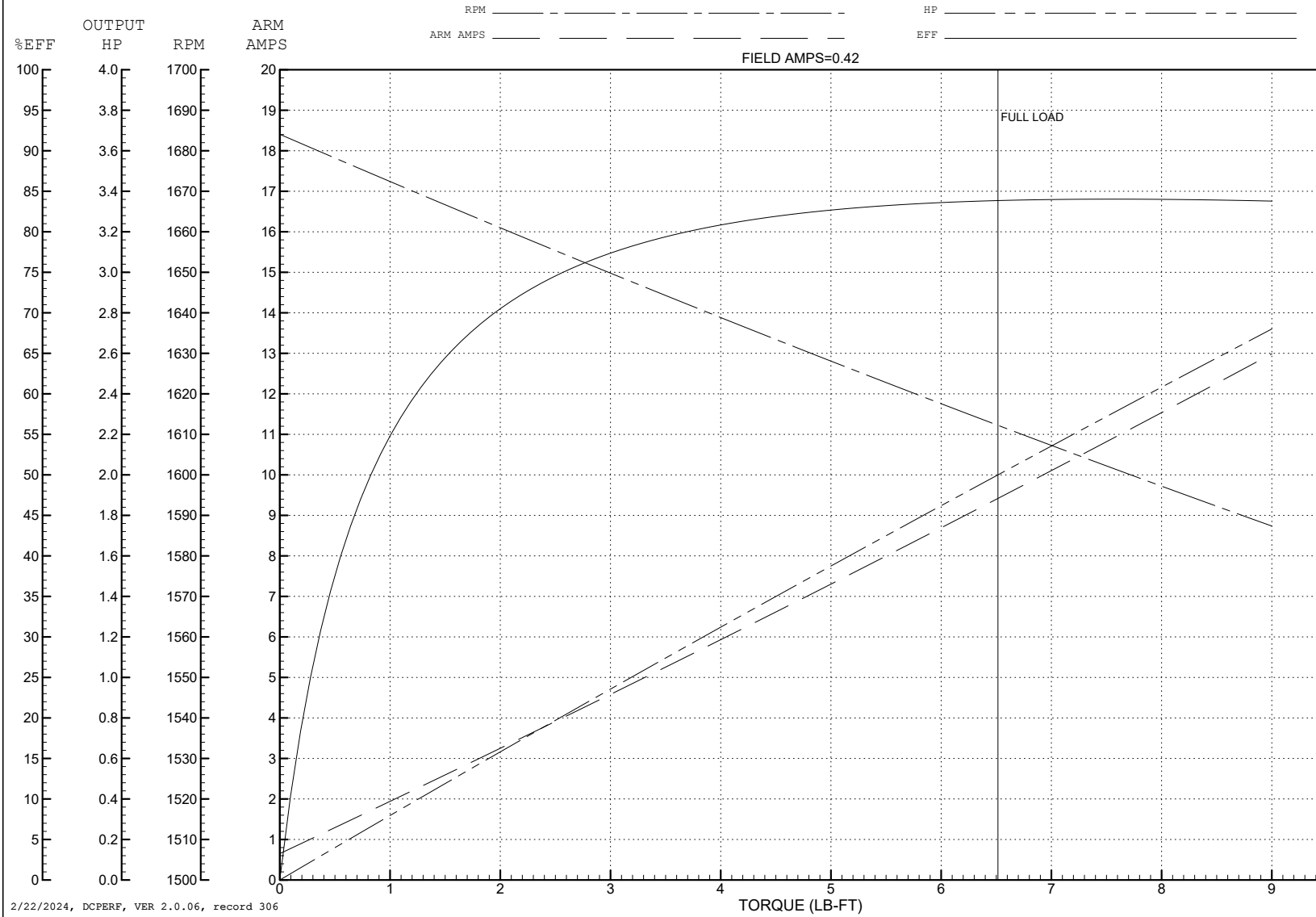
ABB Motors and Mechanical Inc.

WINDING # 36WGZ105

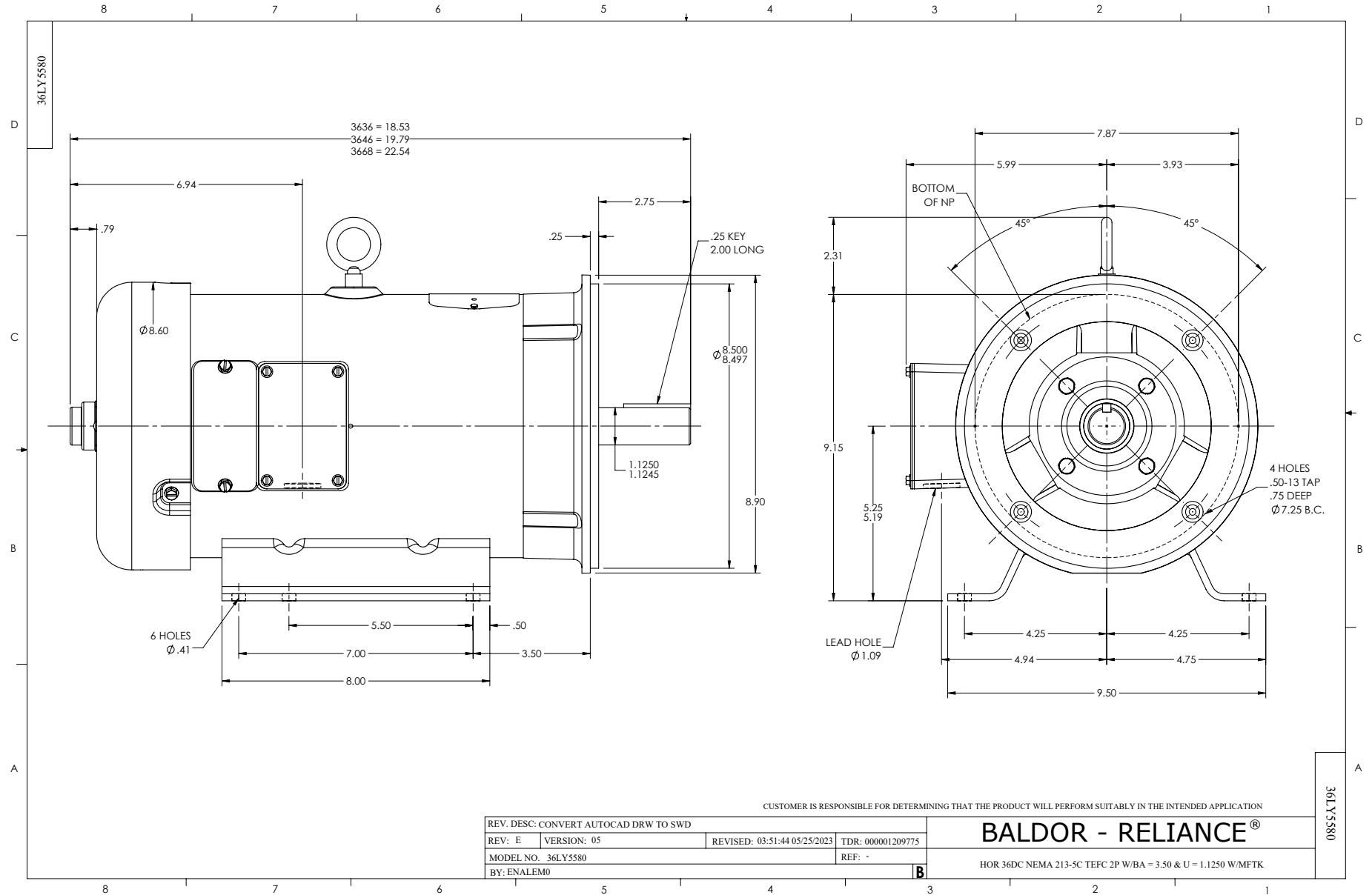
Typical performance - not guaranteed values.

2 HP DC 1750 RPM 180 V ARM 200/100 V FLD 3646D

ENCL: TEFC DUTY: CONT CL: F



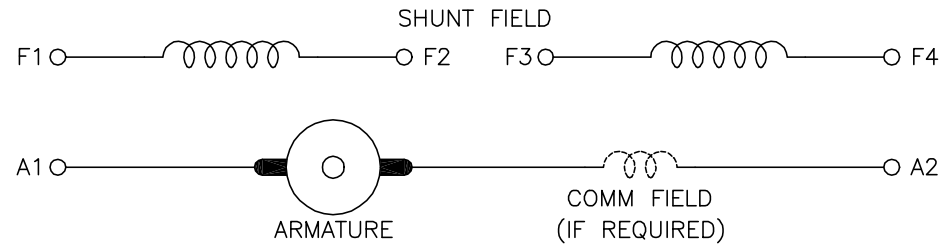
2/22/2024, DCPERF, VER 2.0.06, record 306





CD0860C01

# SHUNT WOUND



| CONNECTION   | DIRECTION OF ROTATION       |                 |                             |                 |
|--------------|-----------------------------|-----------------|-----------------------------|-----------------|
|              | CWDE                        |                 | CCWDE                       |                 |
|              | POS TERM<br>(+)             | NEG TERM<br>(-) | POS TERM<br>(+)             | NEG TERM<br>(-) |
| HIGH VOLTAGE | A1<br>F1<br>CONNECT F2 & F3 | A2<br>F4        | A2<br>F1<br>CONNECT F2 & F3 | A1<br>F4        |
| LOW VOLTAGE  | A1<br>F1 & F3               | A2<br>F2 & F4   | A2<br>F1 & F3               | A1<br>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    |
| 100098000                      |         | FILE: AAA00121477            | REF: CD0860C01 |
|                                |         | MTL: -                       |                |

**BALDOR ELECTRIC Co.**

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

CD0860C01