

# ABB BALDOR RELIANCE III

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## Customer information packet

### CDPT3605

5HP, 1750RPM, DC, 1810ATC, 3681P, TEFC, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Armature Voltage</b>              | 180 V                      |
| <b>Base Speed</b>                    | 1750 rpm                   |
| <b>Enclosure</b>                     | TEFC                       |
| <b>Frame</b>                         | 1810ATC                    |
| <b>Frame Material</b>                | Steel                      |
| <b>Haz Area Class and Group</b>      | None                       |
| <b>Output Power</b>                  | 5.000 HP                   |
| <b>Agency Approvals</b>              | CE<br>CSA<br>UR<br>WEEE    |
| <b>Ambient Temperature</b>           | 40 °C                      |
| <b>Armature Current</b>              | 24.5 a                     |
| <b>Armature Inertia</b>              | 177.060 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>               | TACHOMETER                 |
| <b>Haz Area Division</b>             | Not Applicable             |
| <b>Heater Indicator</b>              | No Heater                  |
| <b>Insulation Class</b>              | F                          |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs      |
| <b>Motor Lead Quantity/Wire Size</b> | 2 @ 12 AWG                 |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Overall Length</b>                | 30.07 IN                   |
| <b>Product Family</b>                | General Purpose            |
| <b>Pulley End Bearing Type</b>       | Sealed Bearing             |
| <b>RoHS Status</b>                   | ROHS COMPLIANT             |
| <b>Service Factor</b>                | 1.00                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | F          |
| <b>Type</b>         | DC         |
| <b>Mech. spec.</b>  | 36P333     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 36WGZ509   |
| <b>Layout</b>       | 36LYP333   |
| <b>Eff. date</b>    | 03-19-2026 |
| <b>CD Diagram</b>   | CD0194     |
| <b>Poles</b>        | 00         |
| <b>Leads</b>        |            |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 06-19-2019 |

|                         |                    |
|-------------------------|--------------------|
| Shaft Diameter          | 1.125 IN           |
| Shaft Ground Indicator  | No Shaft Grounding |
| Shaft Rotation          | Reversible         |
| Shaft Slinger Indicator | No Slinger         |

**Nameplate**

| NP0891L        |             |                 |       |
|----------------|-------------|-----------------|-------|
| <b>CAT.NO.</b> | CDPT3605    |                 |       |
| <b>SPEC.</b>   | 36P333Z509  |                 |       |
| <b>HP</b>      | 5           | <b>ENCL</b>     | TEFC  |
| <b>RPM</b>     | 1750        |                 |       |
| <b>FRAME</b>   | 1810ATC     | <b>TYPE</b>     | 3681P |
| <b>ARM V</b>   | 180         | <b>ARM A</b>    | 24.5  |
| <b>FLD V</b>   |             | <b>FLD A</b>    |       |
| <b>INSUL</b>   | F           | <b>AMB.</b>     | 40    |
| <b>DUTY</b>    | CONT        | <b>SUPPLY</b>   | K     |
| <b>BRG/DE</b>  | 6206        | <b>BRG/ODE</b>  |       |
| <b>BRUSHES</b> | 2/BP5027A01 |                 |       |
|                |             | <b>BLANK</b>    |       |
| <b>SER.</b>    |             |                 |       |
| <b>BLANK</b>   |             |                 |       |
| <b>APRV-CE</b> | Y           | <b>APRV-CSA</b> | Y     |
|                |             | <b>APRV-UL</b>  | Y     |

**Parts List**

| Part number   | Description                              | Quantity |
|---------------|------------------------------------------|----------|
| SA370981      | SA 36P333Z509                            | 1.000 ea |
| AA018054      | AA 36P333Z509                            | 1.000 ea |
| BP5027A01SP   | BRUSH ASSY, GRADE E45 180 VOLTS          | 1.000 ea |
| BP5028        | BRUSH SPRING FOR 36DC/PM MOTORS          | 2.000 ea |
| HW3201A05     | 3/8-16 EYEBOLT                           | 1.000 ea |
| HW1000A38     | WASHER, 3/8" FLAT, SAE Z/P               | 2.000 ea |
| 19XW3118A08   | .31-18 X .50 HEX WASHER HEAD TAPTITE II  | 8.000 ea |
| 36CB3000SP    | CONDUIT BOX, CAST                        | 1.000 ea |
| 36GS1000SP    | GASKET-CONDUIT BOX, .06 THICK #SV-330 LE | 1.000 ea |
| 51XB1016A07   | 10-16 X 7/16 HWSSLD SERTYB               | 2.000 ea |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| HW3001B02     | BRASS CUP WASHER W/GROUND SYMBOL TAB,    | 1.000 ea |
| 36EP3402A05   | SPL FR. E.P. TEFC 36PM FOR TACH ADATER M | 1.000 ea |
| 26XW1032A08   | 10-32 X 1/2 PHILLIPS HEAD TAPTITE-II (SI | 4.000 ea |
| HA6343A01     | TG-300 TACH. ADAPTER MACH'D FOR 36 FRAME | 1.000 ea |
| 84XN3816J12   | 3/8-16X 3/4 SOCK HD, BK OX               | 4.000 ea |
| HW1001A38     | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| 18XN0632A16   | FLAT HEAD SCREW                          | 2.000 ea |
| 36CB4508      | COVER 36 TACH ADAPTER                    | 1.000 ea |
| 36GS5003      | GASKET-COVER 36 TACH ADAPTER             | 1.000 ea |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 1.000 ea |
| HA6346A02     | SHAFT ADAPTER,MD 36,TG200&TG300 TACH,A=2 | 1.000 ea |
| HW1005W01     | LOCKWASHER, 201 BEARING MO               | 1.000 ea |
| WD4100A26     | HEYCO UNIVERSAL BUSHING P/N 2089, MTG HO | 1.000 ea |
| HW5100A06     | W2420-025 WVY WSHR (WB)                  | 1.000 ea |
| 36EP3302A01   | STD PU ENDPLATE #206 BRG 182TC-184TC 36P | 1.000 ea |
| 10XN2520A28   | 1/4-20X 1 3/4 HEX HD                     | 4.000 ea |
| HW1001A25     | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| 36FN3000A01SP | EXFN, PLASTIC, 7.00 OD, .912 ID          | 1.000 ea |
| 51XB1214A16   | 12-14X1.00 HWSSLD SERTYB                 | 1.000 ea |
| 36FH4009A47   | IEC FH NO GREASER, W/ PRIMER             | 1.000 ea |

|             |                                           |          |
|-------------|-------------------------------------------|----------|
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S  | 3.000 ea |
| 35CB4514    | 35 LIPPED CB LID                          | 1.000 ea |
| 36GS1001A08 | GASKET, CONDUIT BOX LID WHITE NON-CONDUCT | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE  | 4.000 ea |
| 36CB4500SP  | CONDUIT BOX LID, STAMPED                  | 2.000 ea |
| 36GS1001A08 | GASKET, CONDUIT BOX LID WHITE NON-CONDUCT | 2.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE  | 8.000 ea |
| HW2501E16   | KEY, 1/4 SQ X 1.750                       | 1.000 ea |
| HA7000A02   | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA   | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS               | 2.000 ea |
| LC0194      | CONNECTION LABEL                          | 1.000 ea |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I  | 4.000 ea |
| M35000-523  | TACH CALLAN 50V .625 BORE CCW             | 1.000 ea |
| MG1050G01   | CELEROL MEDIUM CHARCOAL METALLIC GRAY     | 0.019 ga |
| NP0891L     | NP STD LASER ENGRAVED DC MTRS, UL CSA CE  | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25   | 1.000 ea |
| MG5010A01   | TRICKLE VARNISH (PEDIGREE 600 S)          | 0.005 ga |
| MG5010Z01   | 488 (TPB) CATALYST                        | 0.001 lb |
| 36RK5008A01 | ROCKERARM ASSY-GRADE E45                  | 1.000 ea |
| HA3101A48   | THRUBOLT- 1/4-20 X 16.75                  | 4.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR  | 1.000 ea |
| 37PA1039    | PALLET PACK GROUP, BLANK PK1148           | 1.000 ea |

**DC Motor Performance Data**

Record # 312

Typical performance - not guaranteed values

| Winding: 36WGZ509-R001 |              | Type: 3681P                   | Enclosure: TEFC          |
|------------------------|--------------|-------------------------------|--------------------------|
| Nameplate Data         |              | General Characteristics       |                          |
| Rated Output (HP)      | 5            | Armature Resistance<br>@ 25°C | 0.16 Ω                   |
| R.P.M.                 | 1750         |                               |                          |
| Armature Volts         | 180          | Voltage Constant              | 91.78 v/krpm             |
| Armature Amps          | 24.5         |                               |                          |
| Field Volts            |              | Armature Inductance           | 3.677 mH                 |
| Field Amps             |              | Armature Inertia              | 177.0597 LI <sup>2</sup> |
| Rating - Duty          | 40C AMB-CONT |                               |                          |
| Power Supply Code      | K            |                               |                          |

**Load Characteristics at 180 Armature Volts**

| Load Point       | 1    | 2    | 3    | 4     | 5     | 6    | 7     |
|------------------|------|------|------|-------|-------|------|-------|
| Armature Amps    | 1.1  | 7.1  | 12.8 | 18.4  | 24.1  | 29.9 | 35.99 |
| R.P.M.           | 1931 | 1915 | 1886 | 1870  | 1850  | 1832 | 1815  |
| Torque ( LB-FT ) | 0    | 3.8  | 7.57 | 11.39 | 15.18 | 19   | 22.81 |

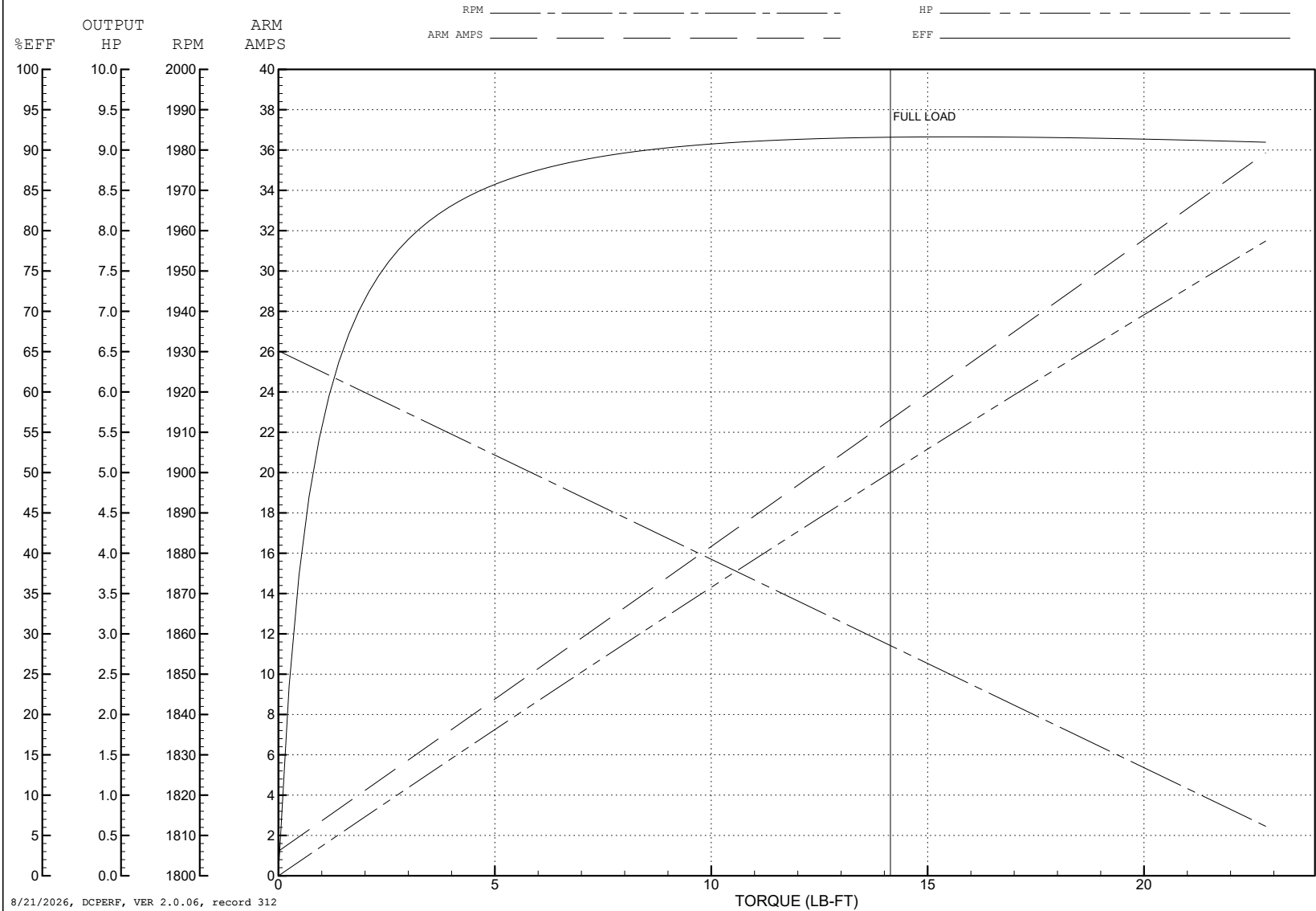
ABB Motors and Mechanical Inc.

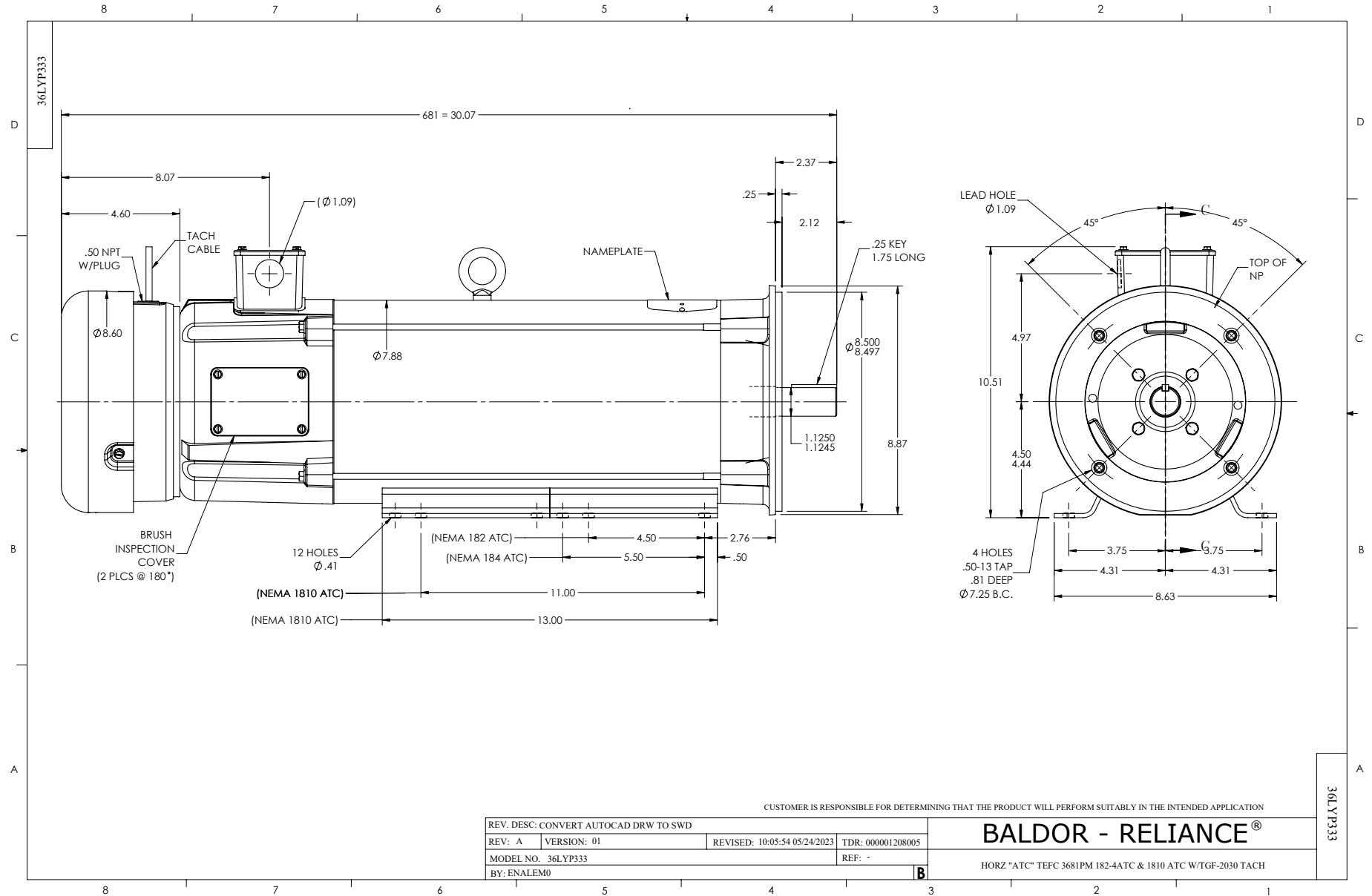
WINDING # 36WGZ509

Typical performance - not guaranteed values.

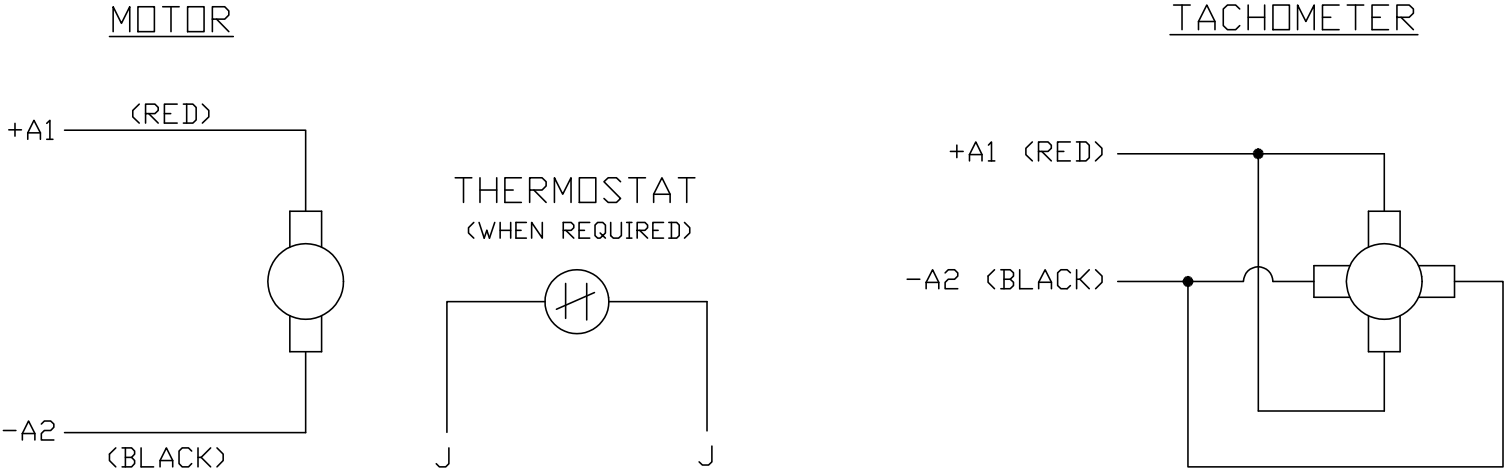
5 HP DC 1750 RPM 180 V 3681P

ENCL: TEFC DUTY: CONT CL: F





CD0194



NOTES:

1. CCW ROTATION AS SHOWN FACING COMMUTATOR END. TO REVERSE MOTOR ROTATION OR TACHOMETER OUTPUT POLARITY INTERCHANGE LEADS A1(RED) & A2(BLACK)
2. LEAD COLORS FOR REFERENCE ONLY & NOT SPECIFIED BY THIS DRAWING. LEAD COLORS SPECIFIED BY LAYOUT DRAWING & BILL OF MATERIAL ONLY.

MATL: -

REV: E

ADDED NOTE "LEAD COLORS FOR REFERENCE ONLY &..."

CD0194

SCALE: -

BY: CK

REVISED: 07/28/95

FILE: AAA00004503

TDR: 0078737

**BALDOR ELECTRIC Co.**

CD TYPE P DC PERMANENT MAGNET MOTORS AND TACHOMETERS

CD0194