

# ABB BALDOR RELIANCE III

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## Customer information packet

### CD2105R

DC2112ATCZ, 5HP, 1750RPM, 180, 200, TENV, F3

**Specifications**

|                                 |                       |
|---------------------------------|-----------------------|
| <b>Armature Voltage</b>         | 180 V                 |
| <b>Base Speed</b>               | 1750 rpm              |
| <b>Enclosure</b>                | TENV                  |
| <b>Field Voltage</b>            | 200 V                 |
| <b>Frame</b>                    | DC2112ATCZ            |
| <b>Output Power</b>             | 5.000 HP              |
| <b>Agency Approvals</b>         | CCSA US               |
| <b>Ambient Temperature</b>      | 40 °C                 |
| <b>Armature Current</b>         | 23.0 a                |
| <b>Base Indicator</b>           | Rigid                 |
| <b>Drip Cover</b>               | No Drip Cover         |
| <b>Duty Rating</b>              | CONT                  |
| <b>Feedback Device</b>          | NO FEEDBACK           |
| <b>Field Winding Type</b>       | STR. SHUNT            |
| <b>Frame Prefix</b>             | DC                    |
| <b>Heater Indicator</b>         | No Heater             |
| <b>Insulation Class</b>         | F                     |
| <b>Lifting Lugs</b>             | Standard Lifting Lugs |
| <b>Motor Standards</b>          | NEMA                  |
| <b>Mounting Arrangement</b>     | F3                    |
| <b>Overall Length</b>           | 27.22 IN              |
| <b>Service Factor</b>           | 1.00                  |
| <b>Shaft Diameter</b>           | 1.125 IN              |
| <b>Shaft Ground Indicator</b>   | No Shaft Grounding    |
| <b>Shaft Slinger Indicator</b>  | No Slinger            |
| <b>Thermal Device - Bearing</b> | None                  |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | -          |
| <b>Type</b>         | DC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | G7197A     |
| <b>Layout</b>       | 609958-001 |
| <b>Eff. date</b>    | 11-15-2019 |
| <b>CD Diagram</b>   | 406770-007 |
| <b>Poles</b>        | 00         |
| <b>Leads</b>        |            |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 11-13-2019 |

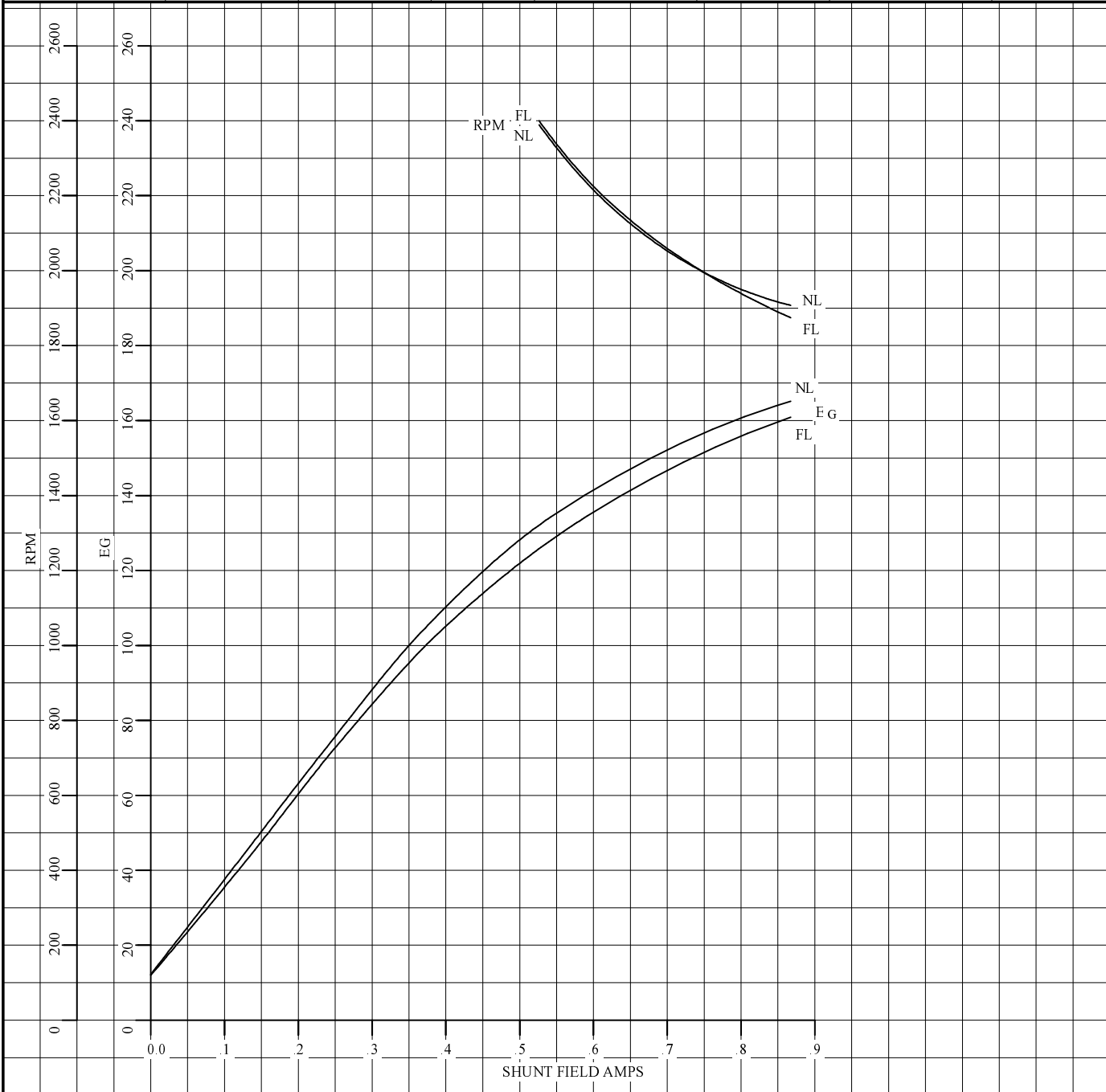
**Nameplate**

| 000613006HP              |            |             |       |              |      |       |      |   |    |
|--------------------------|------------|-------------|-------|--------------|------|-------|------|---|----|
| CAT.NO.                  | CD2105R    | SPEC NO.    |       | T21T1101     |      |       |      |   |    |
| FR                       | DC2112ATCZ | HP          | 5     |              | DUTY |       | CONT |   |    |
| ENCL.                    | TENV       | RPM         | 1750  |              |      | S.F.  | 1.0  |   |    |
| ENCL MOD                 |            | VOLTS       | 180   |              |      | INSUL |      | F |    |
| MAX SAFE SPEED           | 04500      | AMPS        | 23.00 |              |      | AMB.  | 40   |   |    |
| FIELD DATA               |            | SER.NO.     |       |              |      |       |      |   |    |
| WINDING                  | STR. SHUNT | POWER CODE  |       | 2/2-230-60-0 |      |       |      |   |    |
| VOLTS                    | 200/100    | D.E. BRG.   |       | 30BC02JPP30A |      |       |      |   |    |
| MAX AMPS @ 25 C          | 1.34       | O.D.E. BRG. |       | 30BC02JPG30A |      |       |      |   |    |
| HOT AMPS                 | .87        | MIN. AMB.   |       | 0            |      |       | TYPE |   | TR |
| BRUSH:419904050A         |            |             |       |              |      |       |      |   |    |
| FLD. DATA FOR HIGH VOLTS |            |             |       |              |      |       |      |   |    |

# ABB BALDOR RELIANCE III

CD2105  
**CUSTOMER INFORMATION**  
 DC2112AT  
**PACKET**  
 5.00HP  
**BASE SPEED**  
 1750  
**WINDING TYPE**  
 200, TENV, F3  
 STRAIGHT SHUNT

| S.F.<br>1.0                                 | ENCL.<br>TENV | AMB <sup>0</sup> C/INSUL<br>40/F | DUTY<br>CONT      | POWER CODE/FORM FACTOR<br>2/2 230-60-0 |                         |                   | TYPE<br>TR           | WK <sup>2</sup> (LB-FT <sup>2</sup> )<br>2.093 |                   |
|---------------------------------------------|---------------|----------------------------------|-------------------|----------------------------------------|-------------------------|-------------------|----------------------|------------------------------------------------|-------------------|
| COOLING AIR(CFM/IN H <sub>2</sub> O)<br>-/- |               | J (sec)<br>.792                  | R (hot)<br>.0444  | T <sub>E</sub><br>.0109                | T <sub>M</sub><br>.0352 | BASIC RPM<br>2050 | MAX CONT RPM<br>2400 | WINDER RPM<br>-                                | MAX. SAFE<br>4500 |
| WINDING                                     |               | VOLTS                            | RESISTANCE        |                                        | CURRENT                 |                   | INDUCTANCE           | TURNS<br>PER COIL                              |                   |
|                                             |               |                                  | 25 <sup>0</sup> C | HOT                                    | 25 <sup>0</sup> C       | HOT               |                      |                                                |                   |
| ARM CIRCUIT                                 |               | 180                              | .148              | .219                                   | -                       | 23.0              | 3.64 mH              | -                                              |                   |
| SERIES S1-S2                                |               | -                                | -                 | -                                      | -                       | -                 | -                    | -                                              |                   |
| SHUNT F1-F2                                 |               | 200                              | 154               | 231                                    | 1.30                    | .867              | 64.5 H               | 1800                                           |                   |
|                                             |               |                                  |                   |                                        |                         |                   |                      |                                                |                   |



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY  
 CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY R.ERLACHER  
 CK. BY R.ERLACHER  
 APP. BY T.S.EVON  
 DATE 08-08-88

D-C  
 APPLICATION  
 DATA

SG7197A

ISSUE DATE 02-02-90

|                                                                                                  |                |                                                                                 |                                       |                                                              |                 |
|--------------------------------------------------------------------------------------------------|----------------|---------------------------------------------------------------------------------|---------------------------------------|--------------------------------------------------------------|-----------------|
| REL S.O.                                                                                         | FRAME          | RATING                                                                          | RPM                                   | ARM. VOLTS                                                   | ARM. AMPS       |
|                                                                                                  | DC2112AT       | 5.00HP                                                                          | 1750                                  | 180                                                          | 23.0            |
| WINDING TYPE                                                                                     |                | S.F.                                                                            | ENCL.                                 | AMB °C/INSUL                                                 | DUTY            |
| STRAIGHT SHUNT                                                                                   |                | 1.0                                                                             | TENV                                  | 40/F                                                         | CONT            |
| POWER CODE                                                                                       |                | TYPE                                                                            | WK <sup>2</sup> (LB-FT <sup>2</sup> ) | HOT ARM.CIR.RES.                                             | FLD. AMPS@25 °C |
| 2/2 230-60-0                                                                                     |                | TR                                                                              | 2.093                                 | .218                                                         | 1.30            |
| ARM. CIR. IND. (mh)                                                                              | FIELD IND. (H) | COOLING AIR(CFM/IN H <sup>2</sup> 0)                                            |                                       | TURNS PER COIL SHUNT/SERIES                                  | TEST DATE       |
| 3.63                                                                                             | 64.4           | -/-                                                                             |                                       | 1800/.00000                                                  | -               |
| LOAD PERFORMANCE                                                                                 |                |                                                                                 |                                       |                                                              |                 |
| LOAD                                                                                             | AMPERES        | TORQUE IN LB.-FT.                                                               | OUTPUT IN HP                          | RPM                                                          | % EFFICIENCY    |
| NO LOAD                                                                                          | 1.2            | 0                                                                               | 0                                     | 1895                                                         | 0               |
| 1/4                                                                                              | 5.8            | 3.00                                                                            | 1.07                                  | 1883                                                         | 64.3            |
| 2/4                                                                                              | 12             | 6.75                                                                            | 2.41                                  | 1875                                                         | 76.9            |
| 3/4                                                                                              | 17             | 10.4                                                                            | 3.71                                  | 1871                                                         | 80.7            |
| 4/4                                                                                              | 23             | 14.0                                                                            | 4.98                                  | 1871                                                         | 82.0            |
| O.L.                                                                                             | 35             | 20.7                                                                            | 7.42                                  | 1884                                                         | 82.1            |
| RPM VS. FIELD AMPS                                                                               |                |                                                                                 |                                       |                                                              |                 |
| FIELD AMPS                                                                                       | RPM N.L.       | RPM F.L.                                                                        | Eg N.L. @ BASE SPEED                  | Eg F.L. @ BASE SPEED                                         |                 |
| .867                                                                                             | 1894           | 1871                                                                            | 165                                   | 160                                                          |                 |
| .782                                                                                             | 1964           | 1958                                                                            | 159                                   | 153                                                          |                 |
| .696                                                                                             | 2057           | 2063                                                                            | 151                                   | 146                                                          |                 |
| .611                                                                                             | 2192           | 2202                                                                            | 143                                   | 136                                                          |                 |
| .526                                                                                             | 2389           | 2400                                                                            | 131                                   | 125                                                          |                 |
| REMARKS: TYPICAL DATA<br>MAXIMUM SAFE SPEED = 4500 RPM<br>SPEED REGULATOR REQUIRED FOR STABILITY |                |                                                                                 |                                       |                                                              |                 |
|               |                | DR. BY R. ERLACHER<br>CK. BY R. ERLACHER<br>APP. BY T. S. EVON<br>DATE 08-08-88 |                                       | D-C MOTOR PERFORMANCE DATA<br>DG7197A<br>ISSUE DATE 02-02-90 |                 |

HP/KW 5.00HP

ENCL. TENV

WK2(LB-FT<sup>2</sup>) 2.093

FLD.AMPS@25 °C 1.30

RPM 1750

AMB °C INSL. 40/F

HOT ARM. CIR. RES. .218

FIELD IND (H) 64.4

ARM. VOLTS 180

ARM. AMPS 23.0

ARM. CIRCUIT IND(mh) 3.63

CFM/IN. H<sub>2</sub>O -/-

WDG. TYPE STRAIGHT SHUNT

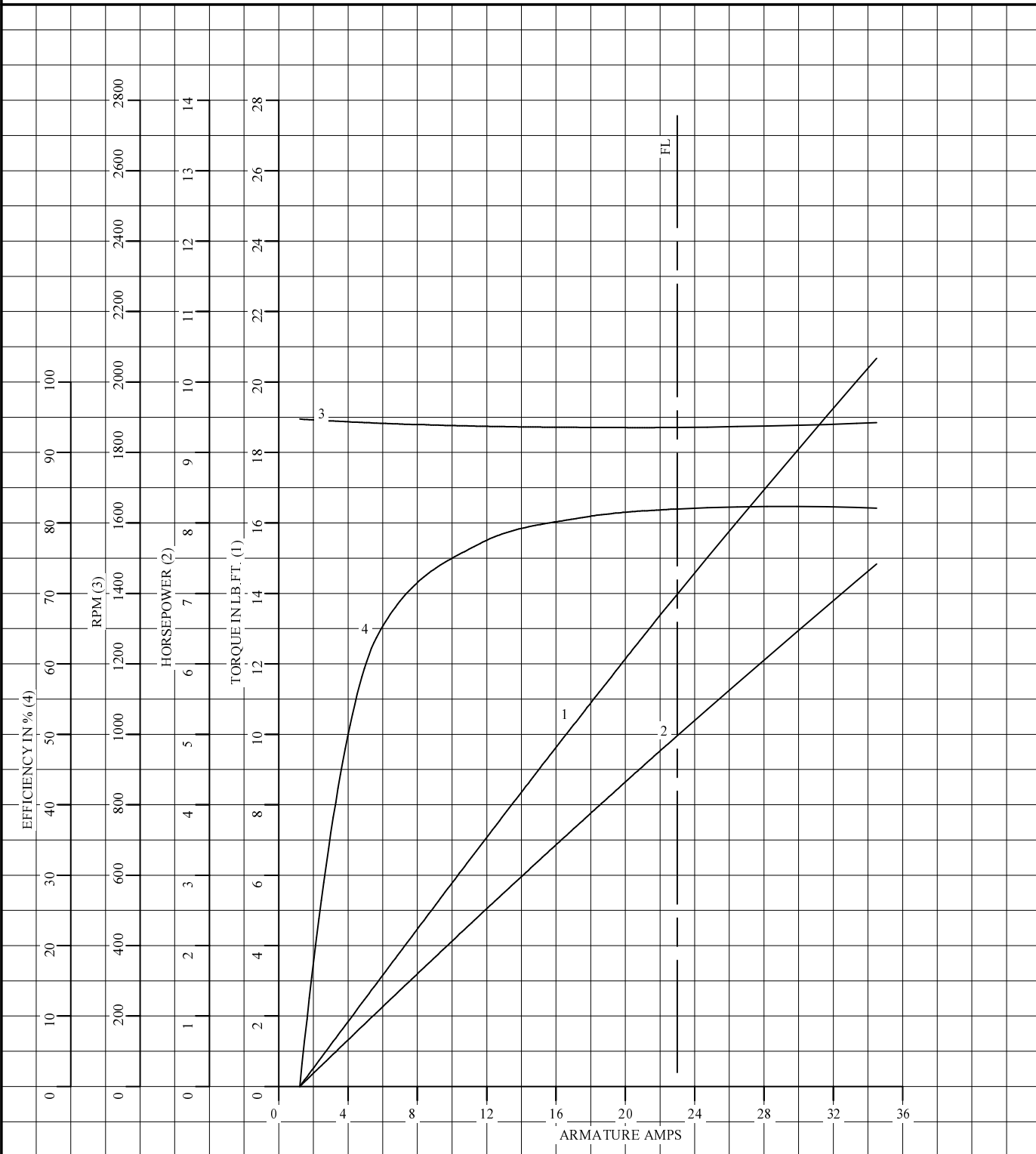
FIELD VOLTS 200

HOT FIELD RES. 230

TEST S.O. -

POWER CODE 2/2 230-60-0

TEST DATE -



REMARKS: TYPICAL DATA SPEED REGULATOR REQUIRED FOR STABILITY



DR. BY R.ERLACHER  
CK. BY R.ERLACHER  
APP. BY T.S.EVON  
DATE 08-08-88

**D-C  
PERFORMANCE  
CURVES**

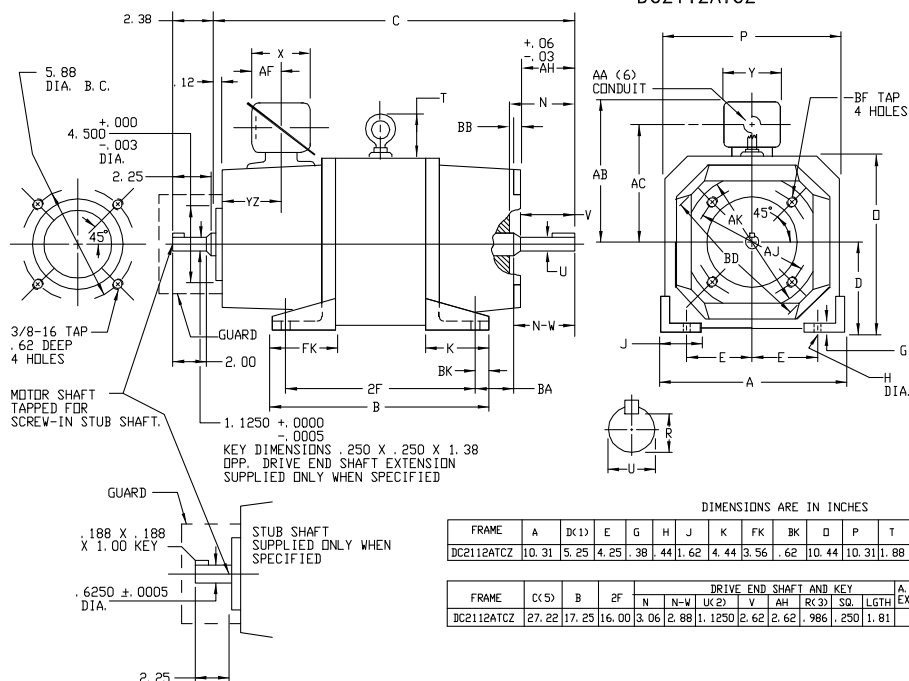
PG7197A

ISSUE DATE 02-02-90

ENCLOSURE:DRIP-PROOF FULLY-GUARDED  
SPLASHPROOF, TOTALLY ENCLOSED  
MOUNTING:FOOT,"C" FACE  
METHOD OF DRIVE:COUPLED OR BELTED

COOLING:SELF-VENTILATED  
NON-VENTILATED  
ACCESSORIES:PROVISIONS FOR  
TACHOMETER MOUNTING  
ONLY WHEN SPECIFIED

DC2112ATCZ



- (1) "D" DIMENSION WILL NOT BE EXCEEDED. SHIMS UP TO .03 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.
- (2) "U" VARIES +.000, - .003.
- (3) "R" VARIES +.000, - .015.
- (4) "AK" VARIES +.000, - .003.  
FACE RUNOUT AND ECCENTRICITY .004 MAX. T. I. R.
- (5) WHEN THE MOTOR APPLICATION DOES NOT REQUIRE THE USE OF COUPLER, THE MOTOR SHAFT END OF THE DRIVE BRACKET COVER.
- (6) TERMINAL BOX CAN BE ROTATED TO REPOSITION CONDUIT CONNECTION.
- (7) IF MOUNTING CLEARANCE DETAILS ARE REQUIRED CONSULT FACTORY.

MOTOR WEIGHT MAY VARY 15% FOR NON-STANDARD RATINGS AND/OR ACCESSORIES.

DIMENSIONS ARE IN INCHES

| FRAME      | A     | D(1) | E    | G   | H   | J    | K    | FK   | BK  | D     | P     | T    | BA   | BB  | BD   | BF TAP | BF TAP<br>DEPTH | AJ   | AK(4) |
|------------|-------|------|------|-----|-----|------|------|------|-----|-------|-------|------|------|-----|------|--------|-----------------|------|-------|
| DC2112ATCZ | 10.31 | 5.25 | 4.25 | .38 | .44 | 1.62 | 4.44 | 3.56 | .62 | 10.44 | 10.31 | 1.88 | 3.50 | .25 | 8.75 | 1/2-13 | .98             | 7.25 | 8.50  |

| FRAME      | C(S)  | B     | 2F    | DRIVE END SHAFT AND KEY |      |       |      |      |       |      |      | A. C. SHAFT<br>EXT. REF. | TERMINAL BOX DIMENSIONS |      |      |      |      |      |      | WT.<br>LBS. |
|------------|-------|-------|-------|-------------------------|------|-------|------|------|-------|------|------|--------------------------|-------------------------|------|------|------|------|------|------|-------------|
|            |       |       |       | N                       | N-W  | U(2)  | V    | AH   | RC(3) | SQ.  | LGTH |                          | AA                      | AB   | AC   | AF   | X    | Y    | YZ   |             |
| DC2112ATCZ | 27.22 | 17.25 | 16.00 | 3.06                    | 2.88 | 1.250 | 2.62 | 2.62 | 1.96  | .250 | 1.81 | 180                      | 3/4                     | 6.88 | 5.56 | 1.69 | 3.38 | 3.88 | 3.25 | 3.50        |

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

|                                              |                              |                   |
|----------------------------------------------|------------------------------|-------------------|
| REV. DESC: CHANGE LAB OFFICE TO 015 FROM 018 |                              |                   |
| REV. LTR: A                                  | VERSION: 01                  | TDR: 000000872511 |
| FILE: \RSN\00029\755                         | REVISED: 01:05:56 09/22/2014 | BY: RSNDLB2       |
| MTL: -                                       |                              |                   |

SH 1 of 1

