

# **BALDOR® • RELIANCE**

## **Product Information Packet**

### **ECP84102T-5**

**20HP,1180RPM,3PH,60HZ,286T,1050M,TEFC,F1**

Copyright © All product information within this document is subject to Baldor Electric Company copyright © protection, unless otherwise noted.

| Part Detail      |              |                   |       |                         |            |               |            |
|------------------|--------------|-------------------|-------|-------------------------|------------|---------------|------------|
| Revision:        | D            | Status:           | PRD/A | Change #:               |            | Proprietary:  | No         |
| Type:            | AC           | Prod. Type:       | 1050M | Elec. Spec:             | 10WGY222   | CD Diagram:   |            |
| Enclosure:       | TEFC         | Mfg Plant:        |       | Mech. Spec:             | 10G187     | Layout:       |            |
| Frame:           | 286T         | Mounting:         | F1    | Poles:                  | 06         | Created Date: | 12-30-2010 |
| Base:            | RG           | Rotation:         | R     | Insulation:             | F          | Eff. Date:    | 10-11-2012 |
| Leads:           | 3#12         | Literature:       |       | Elec. Diagram:          |            | Replaced By:  |            |
| Nameplate NP2155 |              |                   |       |                         |            |               |            |
| STK.NO.          | ECP84102T-5  | P/N               |       | ENCLOSURE               | TEFC       |               |            |
| SPEC.            | 10G187Y222G1 | CC                | 010A  | FRAME                   | 286T       | S/N           |            |
| HP               | 20           | CLASS             | F     | HZ                      | 60         |               |            |
| RPM              | 1180         | T. CODE           | T3    | PH                      | 3          | DES           | B          |
| VOLT             | 575          | KVA-CODE          | G     | ODE BRG                 | 6311       | DE BRG        | 6311       |
| AMP              | 21           | MOTOR WEIGHT      | 420   |                         |            |               |            |
| RATING           | 40C AMB-CONT | MAX. KVAR         | 7.4   | GREASE                  | POLYREX EM |               |            |
| NEMA-NOM-EFF     | 92.4         | # OF ROTOR BARS   | 42    | SER.F.                  | 1.15       |               |            |
| G.MIN.EFF        | 91.0         | # OF STATOR SLOTS | 54    | PF                      | 79         |               |            |
| HTR-VOLTS        |              | HTR-AMPS          |       | MAX. SPACE HEATER TEMP. |            |               |            |

| Parts List   |                                          |          |
|--------------|------------------------------------------|----------|
| Part Number  | Description                              | Quantity |
| SA214272     | SA 10G187Y222G1                          | 1.000 EA |
| RA201483     | RA 10G187Y222G1                          | 1.000 EA |
| 09FN3001B02  | EXTERNAL FAN, PLASTIC                    | 1.000 EA |
| WD1000B16    | KPA-4C BURNDY TERMINAL                   | 1.000 EA |
| 10XN2520K06  | 1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P | 1.000 EA |
| 10CB1000A09P | CONDUIT BOX, MACH W/EPOXY PRIMER         | 1.000 EA |
| 09GS1010     | GASKET, DWG, LEADWIRE SEPERATOR          | 1.000 EA |
| 10XN3118K16  | 5/16-18 X 1" GRADE #5, STL, ZINC PLATE   | 4.000 EA |
| HW1001A31    | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| WD1000B16    | KPA-4C BURNDY TERMINAL                   | 1.000 EA |
| 10XN2520K06  | 1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P | 1.000 EA |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 1.000 EA |
| HW4500A20    | 1/8NPT SL PIPE PLUG                      | 1.000 EA |
| 10XN3816K28  | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5  | 4.000 EA |
| HW1001A38    | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HW1001A38    | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HA4017A02    | .125X2.50 GREASER EXTENS.F/S             | 1.000 EA |
| HA4017A10    | 1/8X1.25 GREASE EXT (F/S)                | 1.000 EA |
| HA4024A02    | 1/8 DOUBLE FEMALE SS CPLG, MCM #4464K351 | 1.000 EA |
| HA4002A01    | DRAIN PLUG STAINLESS STL                 | 1.000 EA |
| HW4601A53    | INPRO/SEAL VBXX FOR 311 BEARING/310 FRAM | 1.000 EA |
| HW5100A13    | W4627-047 WVY WSHER                      | 1.000 EA |
| 10XN3118K40  | 5/16-18 X 2.50" HEX HD, GRADE 5          | 4.000 EA |
| 10EP1110A01P | MACH'D EPOXY PRIMED EP                   | 1.000 EA |

**Parts List (continued)**

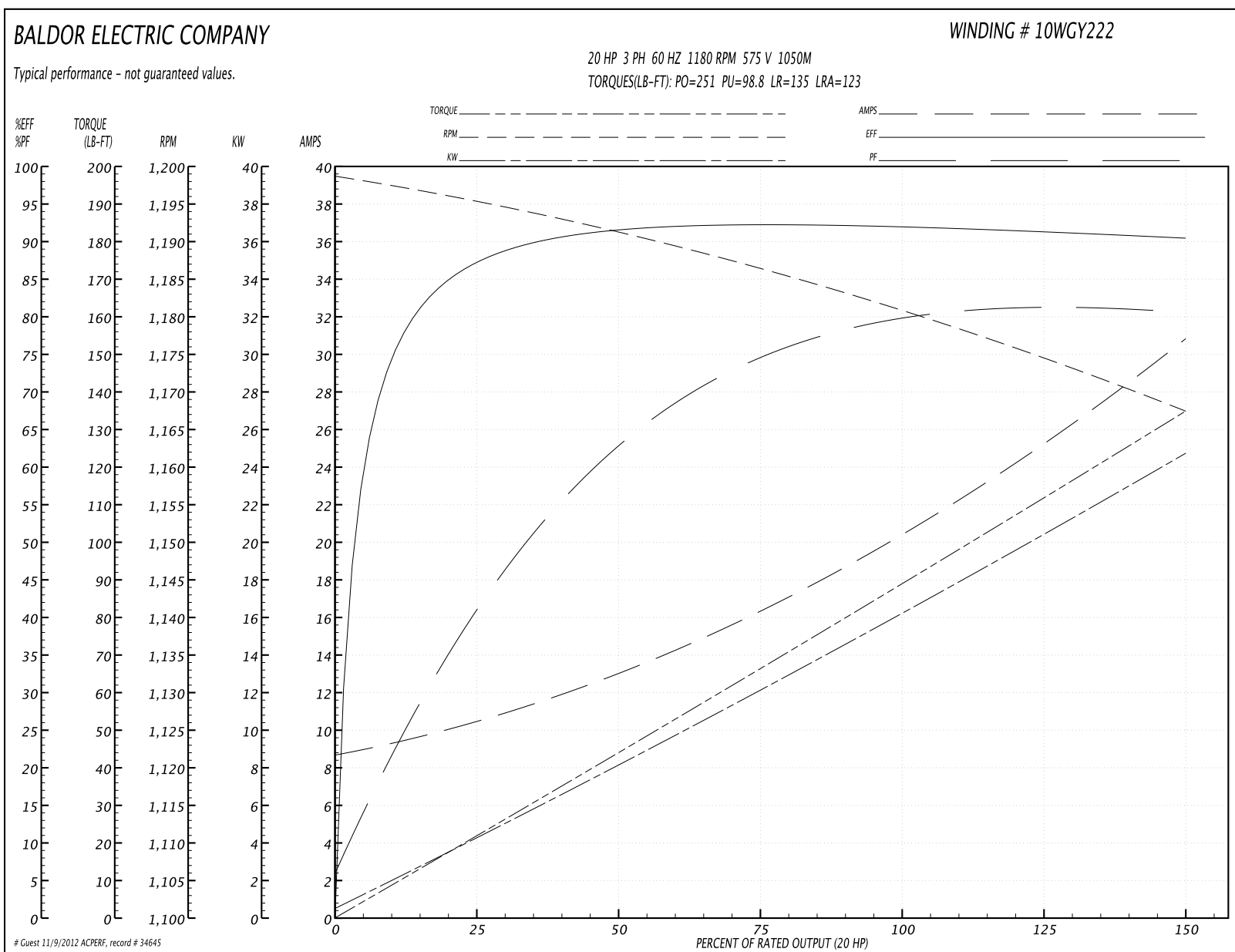
| Part Number    | Description                              | Quantity |
|----------------|------------------------------------------|----------|
| HW4500A20      | 1/8NPT SL PIPE PLUG                      | 1.000 EA |
| 10XN3816K28    | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5  | 4.000 EA |
| HA4002A01      | DRAIN PLUG STAINLESS STL                 | 1.000 EA |
| HW4601A53      | INPRO/SEAL VBXX FOR 311 BEARING/310 FRAM | 1.000 EA |
| 10XN3118K40    | 5/16-18 X 2.50" HEX HD, GRADE 5          | 4.000 EA |
| 10FH1007A24P   | FAN COVER, MACH W/EPOXY PRIMER           | 1.000 EA |
| 10XN3118K16    | 5/16-18 X 1" GRADE #5, STL, ZINC PLATE   | 3.000 EA |
| HW1001A31      | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 3.000 EA |
| 10CB1503A01P   | CONDUIT BOX LIPPED LID, MACH W/EPXY PRMR | 1.000 EA |
| 14GS1003       | GASKET CONDUIT BOX LID, NEOP             | 1.000 EA |
| 10XN2520K16    | 1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P   | 4.000 EA |
| HW1001A25      | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 EA |
| MJ5004A59      | ADHESIVE LOCTITE #401 SURFACE INSENSITIV | 0.010 EA |
| HW2501H28      | KEY, 1/2 SQ X 3.250                      | 1.000 EA |
| MJ5001A01      | 46-665 RED SEALER                        | 0.031 QT |
| MJ5001A14      | DYNAPRO SEAL, CP MOTORS VC#2508050 (603  | 0.026 EA |
| LB1115         | LABEL,LIFTING DEVICE                     | 1.000 EA |
| LB5040         | INSTRUCTION TAG, AC & DC                 | 1.000 EA |
| LB1002         | LABEL,MARINE DUTY (ON ROLLS)             | 1.000 EA |
| WD1000B49      | TERMINAL BURNDY YAV10-T4                 | 3.000 EA |
| 10EP1110A02GP6 | FR ENDPLATE, MACH W/PRIMER & PAINT       | 1.000 EA |
| HW4500A21      | 1618BALEMITE FITTING 825 UNIVERSAL       | 1.000 EA |
| HW4500A17      | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HA4051A00      | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |

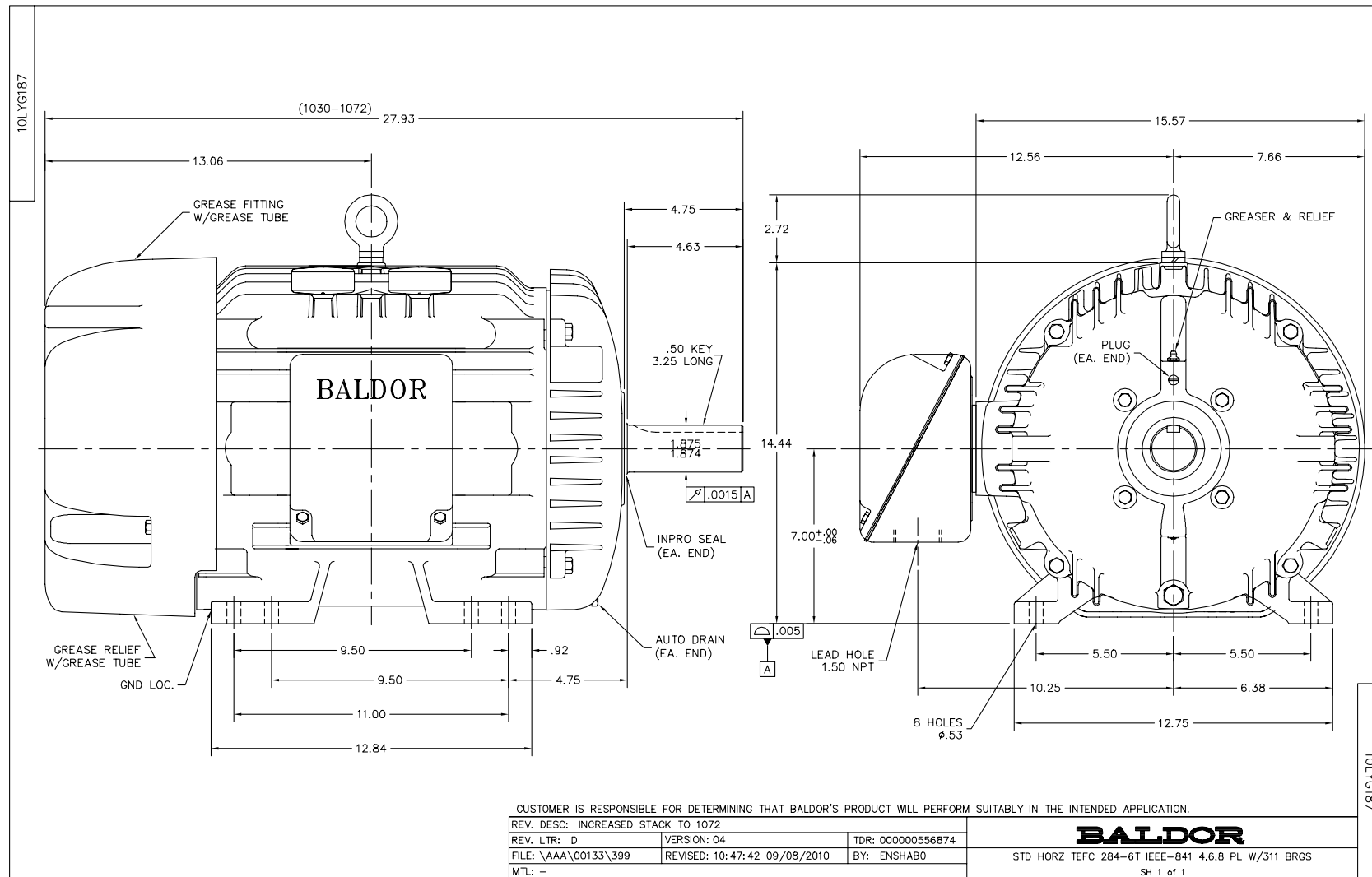
| Parts List (continued) |                                          |          |
|------------------------|------------------------------------------|----------|
| Part Number            | Description                              | Quantity |
| MJ1000A75              | GREASE, POLYREX EM EXXON                 | 0.130 LB |
| HA4051A00              | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| HW4500A03              | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A17              | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HW2500A25              | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20            | 12-14X1.25 HXWSSLD SERTYB                | 1.000 EA |
| MG1025N19              | PAINT, 778.50 WILKO, RELIANCE ELEC GREEN | 0.070 GA |
| 85XU0407S04            | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 EA |
| LB1449                 | DIV-2/NEC WARNING LABEL                  | 1.000 EA |
| LB1119                 | WARNING LABEL                            | 1.000 EA |
| LB1125C02              | SUPER-E (STOCK CTN LABEL SUPER-E WITH FL | 4.000 EA |
| LB1357                 | ENERGY GUIDE LABEL (BOX LABEL)           | 1.000 SH |
| LC0006                 | CONNECTION LABEL                         | 1.000 EA |
| NP2155                 | IEEE-841,NP, ECP, DIV 2                  | 1.000 EA |
| 10PA1000               | PACKAGING GROUP COMBINED PRINT PK1023A06 | 1.000 EA |

**Performance Data at 575V, 60Hz, 20.0HP (Typical performance - Not guaranteed values)**

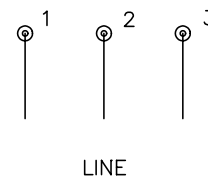
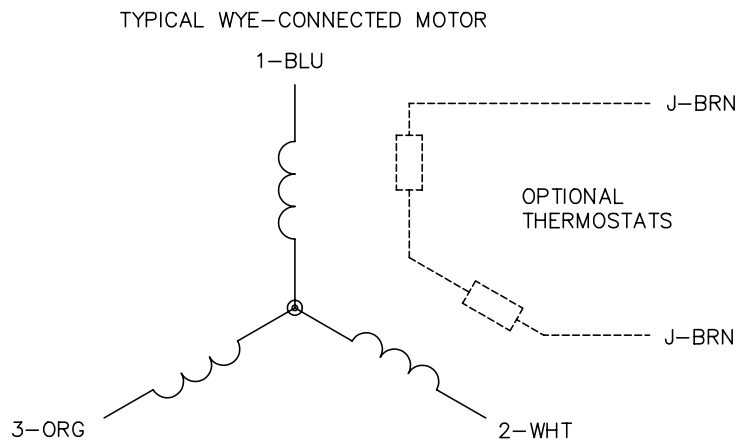
| General Characteristics  |        |                                 |        |                      |        |             |        |
|--------------------------|--------|---------------------------------|--------|----------------------|--------|-------------|--------|
| Full Load Torque:        |        | 89.7 LB-FT                      |        | Start Configuration: |        | DOL         |        |
| No-Load Current:         |        | 8.99 Amps                       |        | Break-Down Torque:   |        | 251.0 LB-FT |        |
| Line-line Res. @ 25°C.:  |        | 0.692 Ohms A Ph / 0.0 Ohms B Ph |        | Pull-Up Torque:      |        | 98.8 LB-FT  |        |
| Temp. Rise @ Rated Load: |        | 54 C                            |        | Locked-Rotor Torque: |        | 135.0 LB-FT |        |
| Temp. Rise @ S.F. Load:  |        | 67 C                            |        | Starting Current:    |        | 123.0 Amps  |        |
| Load Characteristics     |        |                                 |        |                      |        |             |        |
| % of Rated Load          | 25     | 50                              | 75     | 100                  | 125    | 150         | S.F.   |
| Power Factor:            | 44.0   | 65.0                            | 74.0   | 79.0                 | 81.0   | 81.0        | 80.0   |
| Efficiency:              | 86.5   | 91.3                            | 92.4   | 92.4                 | 91.3   | 90.4        | 91.7   |
| Speed:                   | 1195.0 | 1191.0                          | 1186.0 | 1181.0               | 1175.0 | 1167.0      | 1177.0 |
| Line Amperes:            | 10.1   | 12.9                            | 16.5   | 20.8                 | 25.5   | 30.6        | 23.6   |

## Performance Graph at 575V, 60Hz, 20.0HP Typical performance - Not guaranteed values





CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: D

BY: JLP

REVISED: 01/21/99 4:02

TDR: 0171435

9000D

FILE: AAA00005141

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

CD0006

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|--|--------------------------------------------------------------------|-------------|-------------|----------------------|-------------------|---------------------------------------------|------------------------------|--|--|-------------|
| LT0019A00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| <p>Diagram showing motor nameplate layout with dimensions in inches. The nameplate is 5.500 inches wide and 7.000 inches high. It includes fields for Baldor Motors and Drives logo, IEEE 841, Special Test, Other, Spec., Cat., G.O., S/N, No Load, Voltage, Amps, Resistance, RPM, Rotation, Heater Resistance, Vibration, Opposite Drive End, Drive End, Tester, Date, and Other. Dimensions are provided for each field and the overall plate size.</p>                                                                                                                                                                                                                                     | <p>NOTE:</p> <ol style="list-style-type: none"> <li>1) BALDOR LOGO, "NO LOAD", AND "VIBRATION (IN/SEC.)" TO BE CENTERED ON PAGE.</li> <li>2) "IEEE", "SPECIAL TEST", AND "OTHER" TO BE <math>\frac{3}{16}</math>" HIGH.</li> <li>3) "HEATER RESISTANCE (WHEN REQ'D)" AND "LT0019A00" TO BE <math>\frac{3}{32}</math>" HIGH.</li> <li>4) ALL OTHER LETTERING TO BE <math>\frac{1}{8}</math>" HIGH.</li> </ol> |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| MTL: 5.5" X 7" 2 PART CARBONLESS WHITE/MANILA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">REV. DESC: ADD DIMENSIONS AND MATERIAL INFO</td> <td rowspan="4" style="text-align: center; vertical-align: middle;"> <b>BALDOR</b><br/>                     MOTOR NO LOAD PERFORMANCE DATA SHEET<br/>                     SH 1 of 1                 </td> </tr> <tr> <td>REV. LTR: D</td> <td>VERSION: 01</td> </tr> <tr> <td>FILE: \AAA\00070\447</td> <td>TDR: 000000724943</td> </tr> <tr> <td>MTL: 5.5 X 7 2 PART CARBONLESS WHITE/MANILA</td> <td>REVISED: 04:02:06 08/22/2012</td> </tr> <tr> <td colspan="2"></td> <td style="text-align: right; padding: 5px;">BY: ENJERWO</td> </tr> </table> |                                                                                                                                                                                                                                                                                                                                                                                                              | REV. DESC: ADD DIMENSIONS AND MATERIAL INFO                        |  | <b>BALDOR</b><br>MOTOR NO LOAD PERFORMANCE DATA SHEET<br>SH 1 of 1 | REV. LTR: D | VERSION: 01 | FILE: \AAA\00070\447 | TDR: 000000724943 | MTL: 5.5 X 7 2 PART CARBONLESS WHITE/MANILA | REVISED: 04:02:06 08/22/2012 |  |  | BY: ENJERWO |
| REV. DESC: ADD DIMENSIONS AND MATERIAL INFO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                              | <b>BALDOR</b><br>MOTOR NO LOAD PERFORMANCE DATA SHEET<br>SH 1 of 1 |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| REV. LTR: D                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | VERSION: 01                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| FILE: \AAA\00070\447                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | TDR: 000000724943                                                                                                                                                                                                                                                                                                                                                                                            |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
| MTL: 5.5 X 7 2 PART CARBONLESS WHITE/MANILA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | REVISED: 04:02:06 08/22/2012                                                                                                                                                                                                                                                                                                                                                                                 |                                                                    |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                              | BY: ENJERWO                                                        |  |                                                                    |             |             |                      |                   |                                             |                              |  |  |             |