

# **BALDOR® • RELIANCE**

## **Product Information Packet**

### **EM3709T**

**7.5HP,3500RPM,3PH,60HZ,213T,3728M,TEFC,F**

| Part Detail |      |                |       |             |          |               |            |
|-------------|------|----------------|-------|-------------|----------|---------------|------------|
| Revision:   | K    | Status:        | PRD/A | Change #:   |          | Proprietary:  | No         |
| Type:       | AC   | Prod. Type:    | 3728M | Elec. Spec: | 37WGR224 | CD Diagram:   | CD0005     |
| Enclosure:  | TEFC | Mfg Plant:     |       | Mech. Spec: | 37H244   | Layout:       | 37LYH244   |
| Frame:      | 213T | Mounting:      | F1    | Poles:      | 02       | Created Date: | 01-05-2012 |
| Base:       | RG   | Rotation:      | R     | Insulation: | F        | Eff. Date:    | 10-16-2015 |
| Leads:      | 9#14 |                |       |             |          | Replaced By:  |            |
| Literature: |      | Elec. Diagram: |       |             |          |               |            |

## Nameplate NP3441LUA

|              |              |  |  |      |                |     |      |    |   |    |  |      |    |   |
|--------------|--------------|--|--|------|----------------|-----|------|----|---|----|--|------|----|---|
| CAT.NO.      | EM3709T      |  |  |      |                |     |      |    |   |    |  |      |    |   |
| SPEC.        | 37H244R224G1 |  |  |      |                |     |      |    |   |    |  |      |    |   |
| HP           | 7.5          |  |  |      |                |     |      |    |   |    |  |      |    |   |
| VOLTS        | 230/460      |  |  |      |                |     |      |    |   |    |  |      |    |   |
| AMP          | 18/9         |  |  |      |                |     |      |    |   |    |  |      |    |   |
| RPM          | 3520         |  |  |      |                |     |      |    |   |    |  |      |    |   |
| FRAME        | 213T         |  |  |      |                | HZ  |      | 60 |   |    |  |      | PH | 3 |
| SER.F.       | 1.15         |  |  | CODE | J              | DES |      |    | A | CL |  |      | F  |   |
| NEMA-NOM-EFF | 89.5         |  |  |      | PF             | 84  |      |    |   |    |  |      |    |   |
| RATING       | 40C AMB-CONT |  |  |      |                |     |      |    |   |    |  |      |    |   |
| CC           | 010A         |  |  |      | USABLE AT 208V |     |      |    |   |    |  | 19.4 |    |   |
| DE           | 6307         |  |  |      | ODE            |     | 6206 |    |   |    |  |      |    |   |
| ENCL         | TEFC         |  |  | SN   |                |     |      |    |   |    |  |      |    |   |

 VPWM INVERTER READY  
 CT6-60H(10:1)VT3-60H(20:1

50Hz 7.5HP 190/380V 21/10.5A

SF1.0

| Parts List  |                                          |          |
|-------------|------------------------------------------|----------|
| Part Number | Description                              | Quantity |
| SA236670    | SA 37H244R224G1                          | 1.000 EA |
| RA223614    | RA 37H244R224G1                          | 1.000 EA |
| 36FN3000B02 | EXFN, PLASTIC, 6.00 OD, 1.175 ID         | 1.000 EA |
| HW3200A01   | 3/8-16X3/4 I-BLT WELDED F/S              | 1.000 EA |
| 37CB3006    | 37 CB CASTING W/1.38 LEAD HOLE @ 6:00    | 1.000 EA |
| 37GS1000    | GASKET, CONDUIT BOX STD., .06 THICK LEXI | 1.000 EA |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 EA |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 37EP3101A01 | FR ENDPLATE, FOR ROUTING PURPOSES        | 1.000 EA |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW5100A06   | W2420-025 WVY WSHR (WB)                  | 1.000 EA |
| 37PE3100A01 | PUEP ASSEMBLY - ROUTING PUPROSES         | 1.000 EA |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| XY3118A12   | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 EA |
| 07FH4007    | PRIMED                                   | 1.000 EA |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 37CB4516    | LIPPED LID FOR 37 FRAME NEC KOBX         | 1.000 EA |
| 37GS1008    | 37 GS FOR CB LID - LEXIDE                | 1.000 EA |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501F21   | KEY, 5/16 SQ X 2.375                     | 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 |
| LB1115N     | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| MJ1000A02   | GREASE, POLYREX EM EXXON (USe 4824-15A)  | 0.050 LB |

| Parts List (continued) |                                          |          |
|------------------------|------------------------------------------|----------|
| Part Number            | Description                              | Quantity |
| MG1000Y03              | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.028 GA |
| 51XB1214A20            | 12-14X1.25 HXWSSLD SERTYB                | 1.000 EA |
| HA3104A14              | THRUBOLT- 5/16-18 X12.125(OHIO)          | 4.000 EA |
| LC0005E01              | CONN.DIA./WARNING LABEL (LC0005/LB1119N) | 1.000 EA |
| NP3441LUA              | ALUM SUPER-E VPWM INV READY UL           | 1.000 EA |
| 36PA1001               | PKG GRP, PRINT     PK1017A06             | 1.000 EA |
| MN416A01               | TAG-INSTAL-MAINT no wire (1200/bx) 11/14 | 1.000 EA |

| Accessories |             |            |
|-------------|-------------|------------|
| Part Number | Description | Multiplier |
| 37-3301     | C FACE KIT  | P1         |

## AC Induction Motor Performance Data

Record # 53378 - Typical performance - not guaranteed values

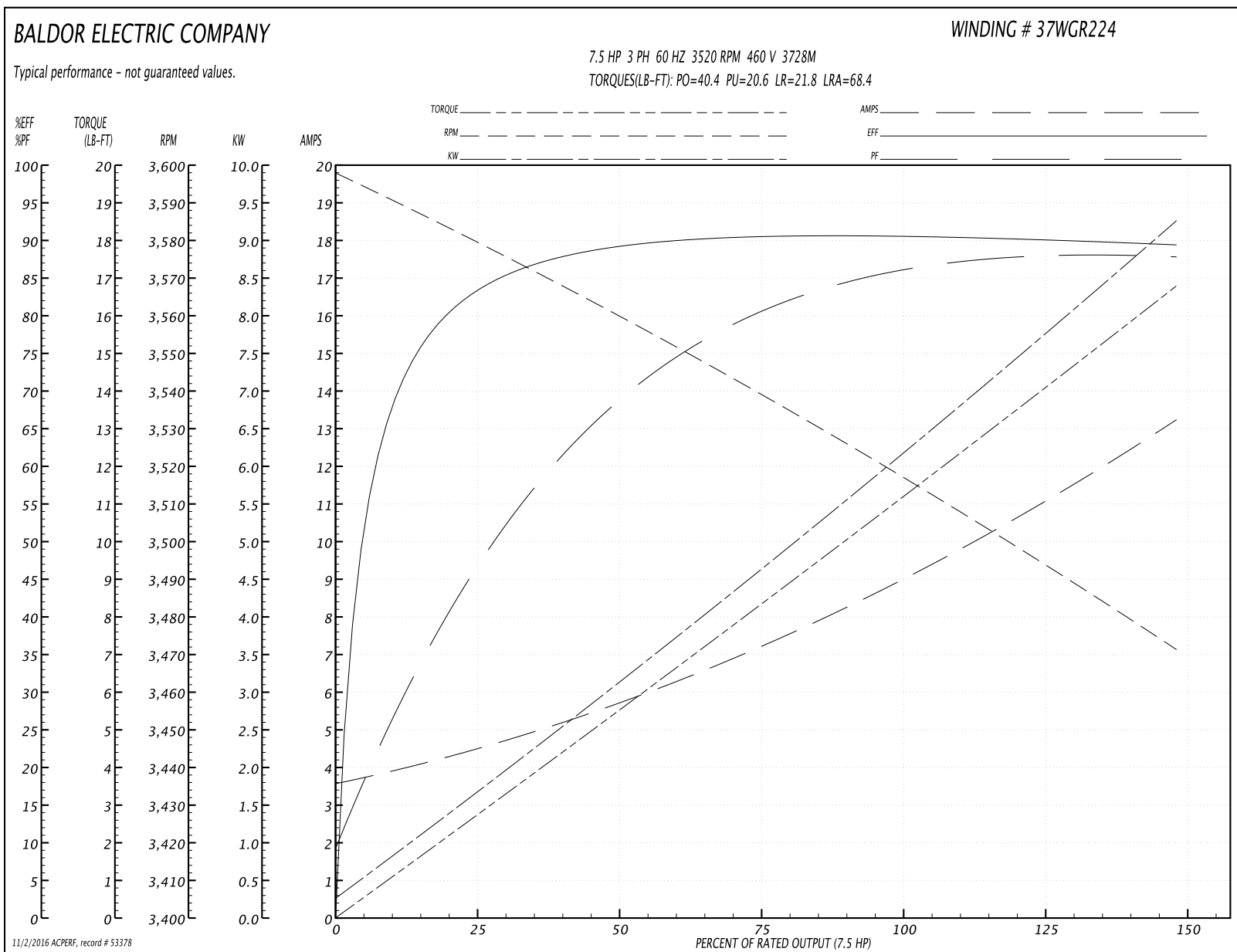
|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 37WGR224-R033 | <b>Type:</b> 3728M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

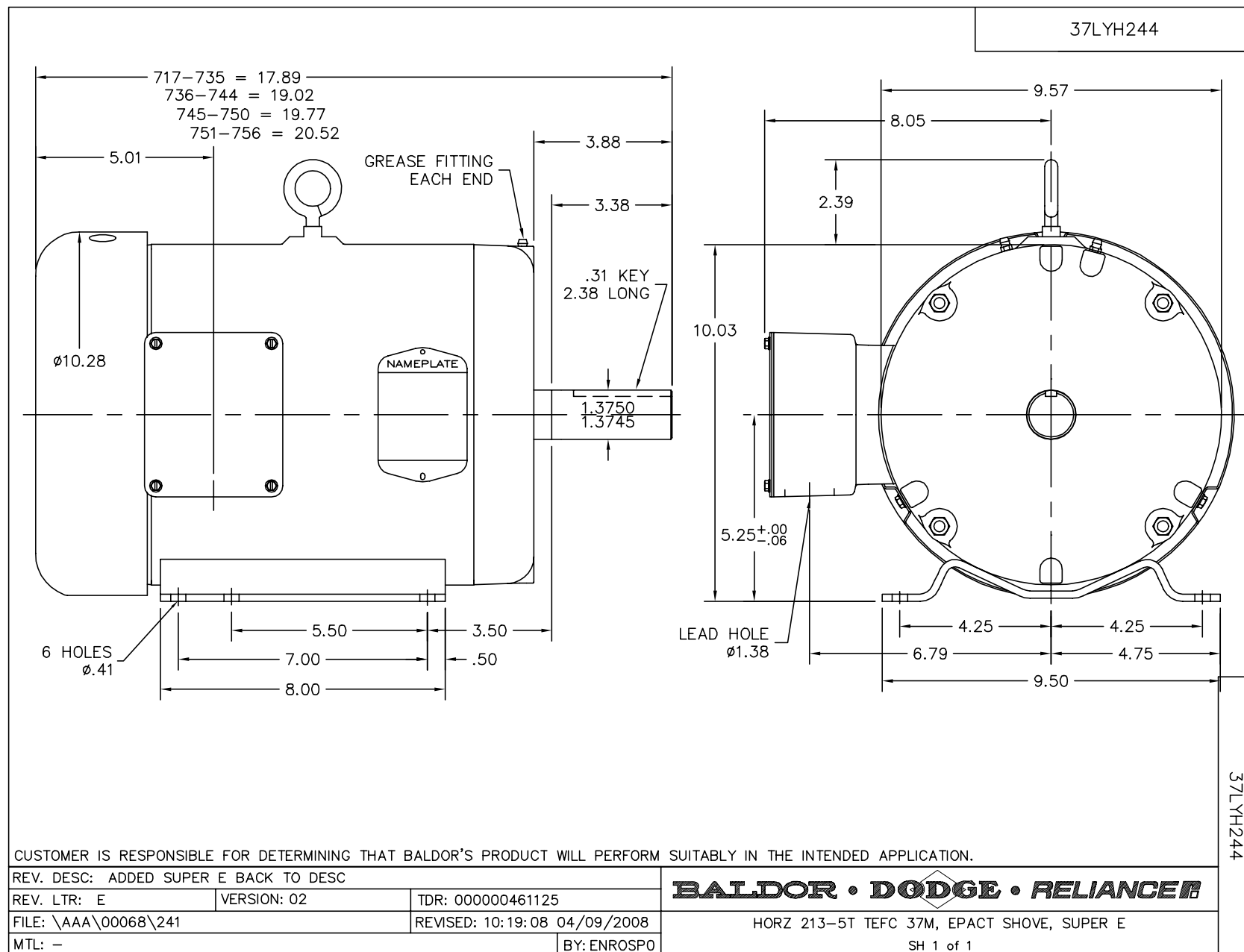
| Nameplate Data        |              |              |    | 460 V, 60 Hz:<br>High Voltage Connection |                          |
|-----------------------|--------------|--------------|----|------------------------------------------|--------------------------|
| Rated Output (HP)     | 7.5          |              |    | Full Load Torque                         | 10.9 LB-FT               |
| Volts                 | 230/460      |              |    | Start Configuration                      | direct on line           |
| Full Load Amps        | 18/9         |              |    | Breakdown Torque                         | 40.4 LB-FT               |
| R.P.M.                | 3520         |              |    | Pull-up Torque                           | 20.6 LB-FT               |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                      | 21.8 LB-FT               |
| NEMA Design Code      | A            | KVA Code     | J  | Starting Current                         | 68.4 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                          | 3.73 A                   |
| NEMA Nom. Eff.        | 89.5         | Power Factor | 84 | Line-line Res. @ 25°C                    | 1.1531 $\Omega$          |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                  | 45°C                     |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                   | 54°C                     |
|                       |              |              |    | Rotor inertia                            | 0.255 LB-FT <sup>2</sup> |

## Load Characteristics 460 V, 60 Hz, 7.5 HP

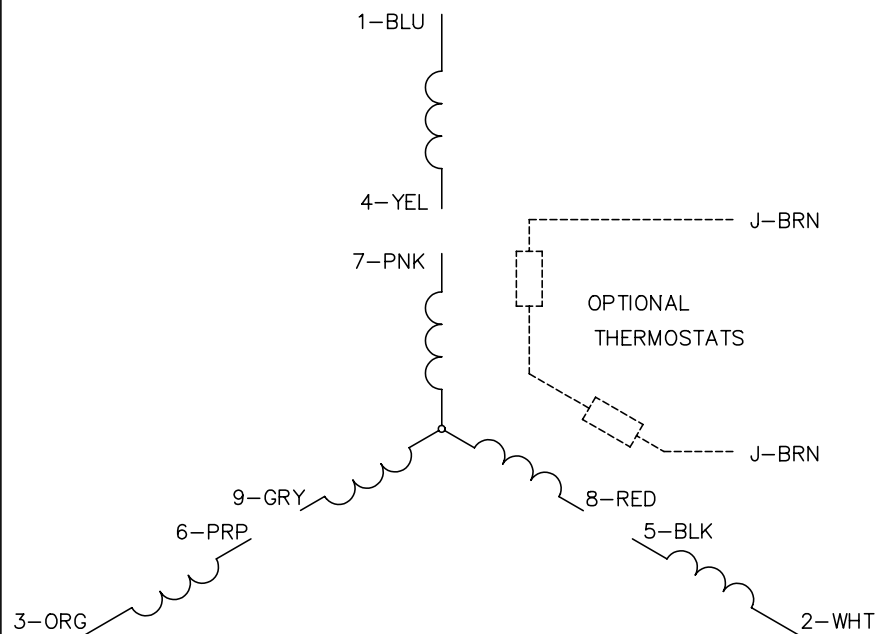
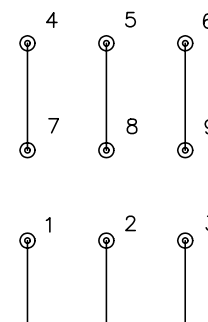
| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 45     | 69     | 79     | 84     | 87     | 89     | 86   |
| Efficiency      | 81.5   | 88.8   | 90.5   | 90.6   | 90.1   | 89.2   | 90.3 |
| Speed           | 3580.5 | 3562.7 | 3541.6 | 3520.3 | 3496.3 | 3470.9 | 3506 |
| Line amperes    | 4.22   | 5.36   | 7.03   | 8.94   | 11     | 13.1   | 10.2 |

## Performance Graph at 460V, 60Hz, 7.5HP Typical performance - Not guaranteed values





CD0005

LOW VOLTAGE  
(2Y)HIGH VOLTAGE  
(1Y)

## NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E

BY: JLP

REVISED: 01/19/99 10:15

TDR: 0171435

900000

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005