

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM3309T-G**

**5HP,1160RPM,3PH,60HZ,215T,3744M,OPSB,F1**

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | L      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 37WGS521   | CD Diagram: | CD0005 | Mfg Plant:    |            |
| Mech. Spec: | 37J839 | Layout:     | 37LYJ839   | Poles:      | 06     | Created Date: | 11-29-2011 |
| Base:       | RG     | Eff. Date:  | 02-28-2017 | Leads:      | 9#14   |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EM3309T-G               | Insulation Class:              | H                     |
| Enclosure:                      | OPSB                    | Inverter Code:                 | Inverter Ready        |
| Frame:                          | 215T                    | KVA Code:                      | K                     |
| Frame Material:                 | Steel                   | Lifting Lugs:                  | Standard Lifting Lugs |
| Output @ Frequency:             | 5.000 HP @ 60 HZ        | Locked Bearing Indicator:      | Locked Bearing        |
| Synchronous Speed @ Frequency:  | 1200 RPM @ 60 HZ        | Motor Lead Quantity/Wire Size: | 9 @ 14 AWG            |
| Voltage @ Frequency:            | 460.0 V @ 60 HZ         | Motor Lead Exit:               | Ko Box                |
|                                 | 230.0 V @ 60 HZ         | Motor Lead Termination:        | Flying Leads          |
| XP Class and Group:             | None                    | Motor Type:                    | 3744M                 |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1                    |
| Agency Approvals:               | CSA                     | Power Factor:                  | 71                    |
|                                 | CSA EEV                 | Product Family:                | General Purpose       |
|                                 | UR                      | Pulley End Bearing Type:       | Ball                  |
| Auxillary Box:                  | No Auxillary Box        | Pulley Face Code:              | Standard              |
| Auxillary Box Lead Termination: | None                    | Pulley Shaft Indicator:        | Standard              |
| Base Indicator:                 | Rigid                   | Rodent Screen:                 | None                  |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | Shaft Extension Location:      | Pulley End            |
| Blower:                         | None                    | Shaft Ground Indicator:        | Shaft Grounding       |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Current @ Voltage:</b>             | 14.800 A @ 230.0 V        | <b>Shaft Rotation:</b>             | Reversible          |
|                                       | 7.400 A @ 460.0 V         | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Design Code:</b>                   | A                         | <b>Speed Code:</b>                 | Single Speed        |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Motor Standards:</b>            | NEMA                |
| <b>Duty Rating:</b>                   | CONT                      | <b>Starting Method:</b>            | Direct on line      |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Thermal Device - Bearing:</b>   | None                |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Face Code:</b>               | Standard                  | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Winding Thermal 1:</b>          | None                |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 2:</b>          | None                |

| Nameplate NP1259L |              |  |      |    |                |      |  |    |    |   |
|-------------------|--------------|--|------|----|----------------|------|--|----|----|---|
| CAT.NO.           | EM3309T-G    |  |      |    |                |      |  |    |    |   |
| SPEC.             | 37J839S521G1 |  |      |    |                |      |  |    |    |   |
| HP                | 5            |  |      |    |                |      |  |    |    |   |
| VOLTS             | 230/460      |  |      |    |                |      |  |    |    |   |
| AMP               | 14.8/7.4     |  |      |    |                |      |  |    |    |   |
| RPM               | 1160         |  |      |    |                |      |  |    |    |   |
| FRAME             | 215T         |  |      |    | HZ             | 60   |  |    | PH | 3 |
| SER.F.            | 1.15         |  | CODE | K  | DES            | A    |  | CL | H  |   |
| NEMA-NOM-EFF      | 89.5         |  | PF   | 71 |                |      |  |    |    |   |
| RATING            | 40C AMB-CONT |  |      |    |                |      |  |    |    |   |
| CC                | 010A         |  |      |    | USABLE AT 208V |      |  |    |    |   |
| DE                | 6307         |  |      |    | ODE            | 6206 |  |    |    |   |
| ENCL              | OPSB         |  | SN   |    |                |      |  |    |    |   |

| Parts List  |  |          |
|-------------|--|----------|
| Part Number | Description                              | Quantity |
| SA235000    | SA 37J839S521G1                          | 1.000 EA |
| RA221964    | RA 37J839S521G1                          | 1.000 EA |
| HA6361A01   | LIFTING LUG FOR 37, 39 & 40 FRAME ZINC   | 2.000 EA |
| 37CB3006    | 37 CB CASTING W/1.38 LEAD HOLE @ 6:00    | 1.000 EA |
| 51XW2520A10 | .25-20 X .62, TAPTITE II, HEX WSHR SLTD  | 2.000 EA |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 37EP3203A00 | MASTER,ODE,206 BRG,GREASER               | 1.000 EA |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW5100A06   | W2420-025 WVY WSHR (WB)                  | 1.000 EA |
| 37EP3204B00 | MASTER,DE,307 BRG,GREASER,LOCKED BEARING | 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 |
| HW4500A01   | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| XY3118A12   | 5/16-18 HEX NUT DIRECTIONAL SERRATION    | 4.000 EA |
| 37CB4516    | LIPPED LID FOR 37 FRAME NEC KOBX         | 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 |
| LB1459      | AEGIS SGR LABEL "AEGISLBL-100"           | 1.000 EA |
| MJ1000A02   | GREASE, POLYREX EM EXXON (USe 4824-15A)  | 0.050 LB |
| MG1000Y03   | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.028 GA |
| HA3104A35   | THRUBOLT .31-18 X 13.687                 | 4.000 EA |

| <b>Parts List (continued)</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Part Number</b>            | <b>Description</b>                       | <b>Quantity</b> |
| 37AD2001A01                   | BAFFLE PLATE, PLASTIC 0.63" WIDTH        | 2.000 EA        |
| LC0005E01                     | CONN.DIA./WARNING LABEL (LC0005/LB1119N) | 1.000 EA        |
| NP1259L                       | ALUM SUPER-E UL CSA-EEV CC NEMA PREMIUM  | 1.000 EA        |
| G0PA1000                      | PKG GRP, PRINT PK1026A06                 | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (1200/bx) 5/18  | 1.000 EA        |
| LB1350                        | BAR CODE LABEL FOR YORK                  | 1.000 EA        |
| FE-0000001                    | ZRTG FE ASSEMBLY                         | 1.000 EA        |
| PE-0000001                    | ZRTG PE ASSEMBLY                         | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 62644 - Typical performance - not guaranteed values

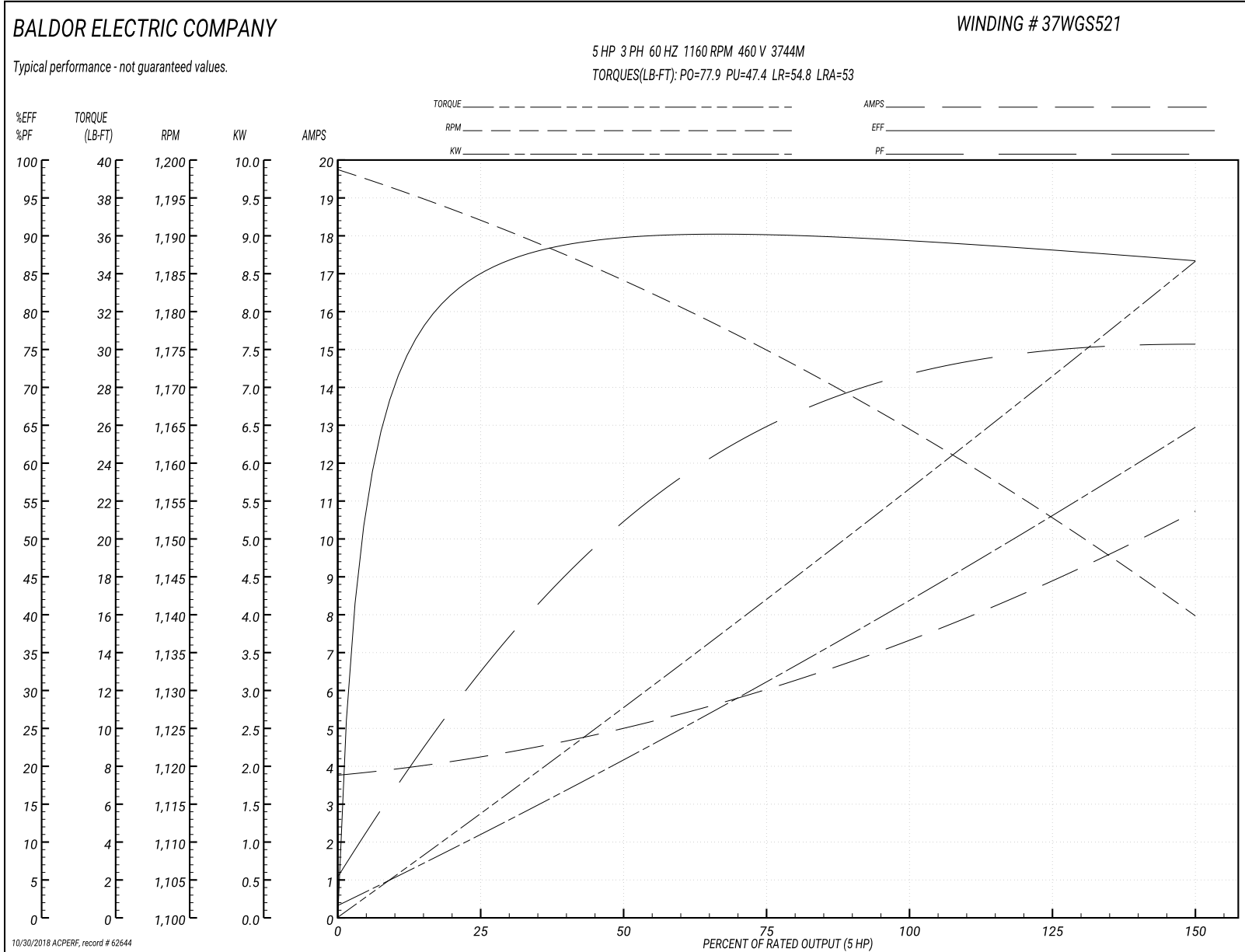
|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 37WGS521-R002 | <b>Type:</b> 3744M | <b>Enclosure:</b> OPSB |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 460 V, 60 Hz:<br>High Voltage Connection |                         |
|-----------------------|--------------|--------------|----|--|-------------------------|
| Rated Output (HP)     | 5            |              |    | Full Load Torque                         | 22.5 LB-FT              |
| Volts                 | 230/460      |              |    | Start Configuration                      | direct on line          |
| Full Load Amps        | 14.8/7.4     |              |    | Breakdown Torque                         | 77.9 LB-FT              |
| R.P.M.                | 1160         |              |    | Pull-up Torque                           | 47.4 LB-FT              |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                      | 54.8 LB-FT              |
| NEMA Design Code      | A            | KVA Code     | K  | Starting Current                         | 53 A                    |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                          | 3.84 A                  |
| NEMA Nom. Eff.        | 89.5         | Power Factor | 71 | Line-line Res. @ 25°C                    | 1.74 Ω                  |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                  | 33°C                    |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                   | 40°C                    |
|                       |              |              |    | Locked-rotor Power Factor                | 22.7                    |
|                       |              |              |    | Rotor inertia                            | 1.09 LB-FT <sup>2</sup> |

Load Characteristics 460 V, 60 Hz, 5 HP

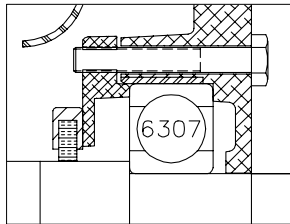
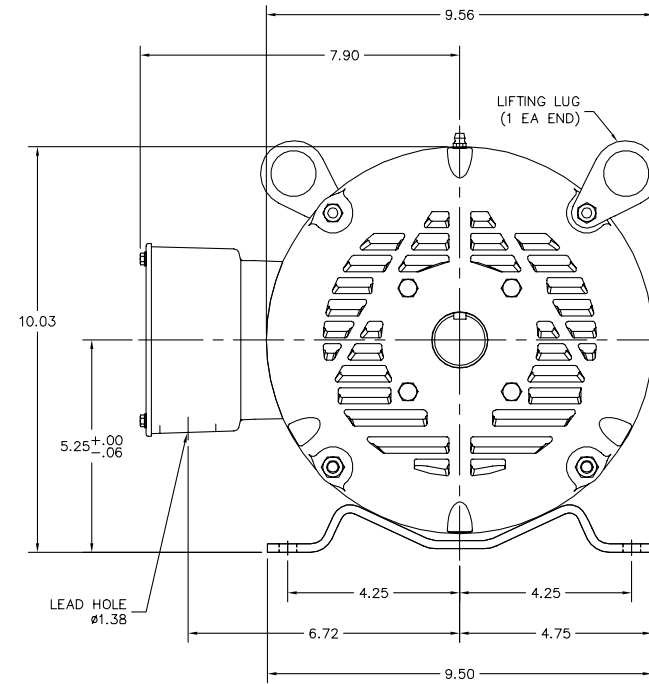
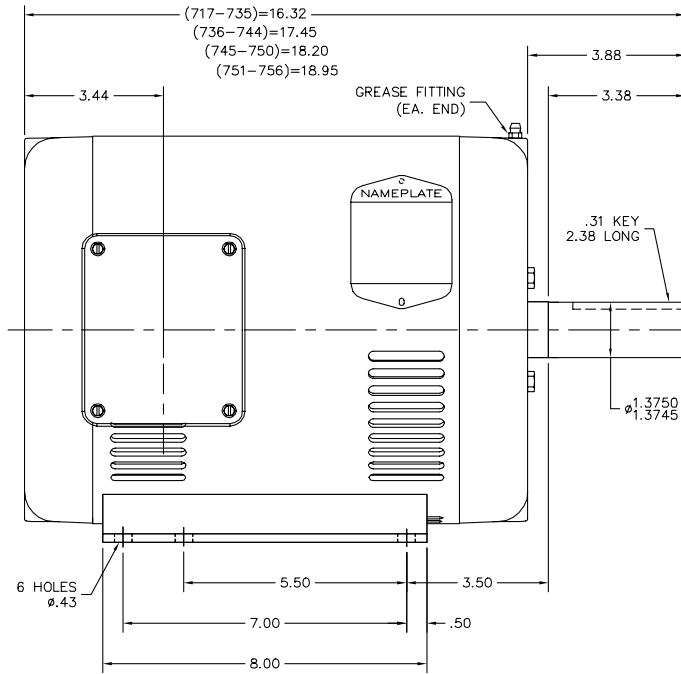
| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 33   | 53   | 65   | 71   | 75   | 76   | 73   |
| Efficiency      | 84.7 | 89.4 | 89.7 | 89.7 | 88.5 | 86.5 | 89   |
| Speed           | 1192 | 1184 | 1174 | 1165 | 1154 | 1139 | 1158 |
| Line amperes    | 4.14 | 4.95 | 6.08 | 7.36 | 8.92 | 10.7 | 8.3  |

Performance Graph at 460V, 60Hz, 5.0HP Typical performance - Not guaranteed values





37LYJ839



PU END DETAIL

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

|                      |                              |                   |
|----------------------|------------------------------|-------------------|
| REV. DESC: NEW       | VERSION: 00                  | TDR: 000000553350 |
| REV. LTR: -          | REVISED: 01:15:32 08/26/2010 | BY: ENWINBO       |
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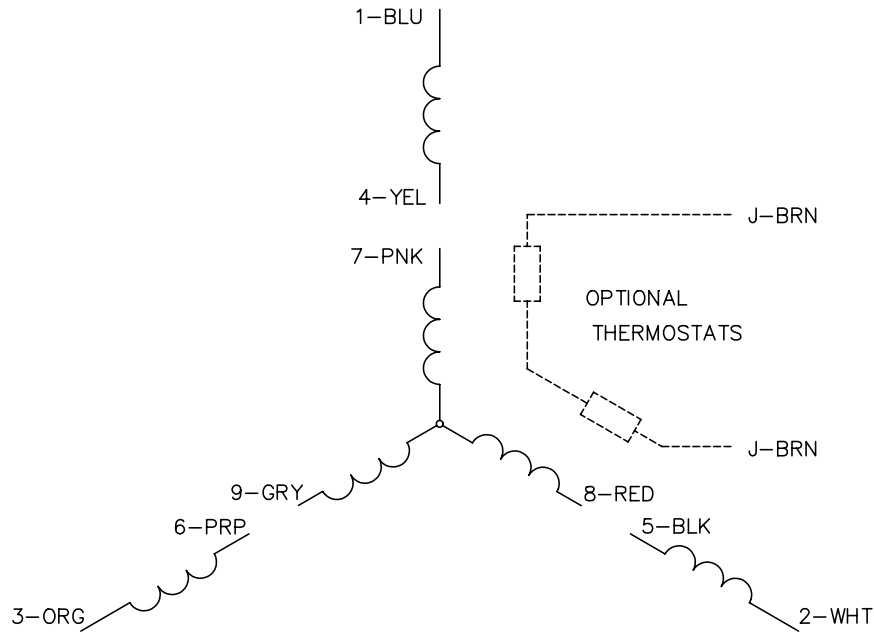
**BALDOR**

HOR 213-5T OPSB M, AEGIS INT SHAFT GND

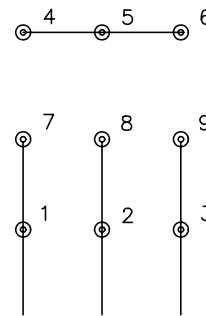
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37LYJ839

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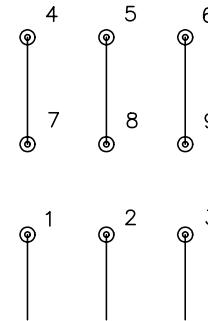


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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 |
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|   |         | MTL: -                  |              |

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005