

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM3704T-BG**

**3HP,1160RPM,3PH,60HZ,213T,3738M,TEFC,F1**

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | L      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 37WGS519   | CD Diagram: | CD0005 | Mfg Plant:    |            |
| Mech. Spec: | 37N339 | Layout:     | 37LYN339   | Poles:      | 06     | Created Date: | 10-04-2013 |
| Base:       | RG     | Eff. Date:  | 07-24-2020 | Leads:      | 9#14   |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EM3704T-BG              | Insulation Class:              | H                     |
| Enclosure:                      | TEFC                    | Inverter Code:                 | Inverter Ready        |
| Frame:                          | 213T                    | KVA Code:                      | L                     |
| Frame Material:                 | Steel                   | Lifting Lugs:                  | Standard Lifting Lugs |
| Output @ Frequency:             | 3.000 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:                    | 3738M                 |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1                    |
| Agency Approvals:               | CSA                     | Power Factor:                  | 68                    |
|                                 | 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) | RoHS Status:                   | ROHS COMPLIANT        |
| Blower:                         | None                    | Shaft Extension Location:      | Pulley End            |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Current @ Voltage:</b>             | 4.600 A @ 460.0 V         | <b>Shaft Ground Indicator:</b>     | Shaft Grounding     |
|                                       | 9.200 A @ 230.0 V         | <b>Shaft Rotation:</b>             | Reversible          |
| <b>Design Code:</b>                   | B                         | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Speed Code:</b>                 | Single Speed        |
| <b>Duty Rating:</b>                   | CONT                      | <b>Motor Standards:</b>            | NEMA                |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Starting Method:</b>            | Direct on line      |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Bearing:</b>   | None                |
| <b>Front Face Code:</b>               | Standard                  | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 1:</b>          | None                |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                |

|                            |              |  |             |    |                       |      |  |           |           |   |
|----------------------------|--------------|--|-------------|----|-----------------------|------|--|-----------|-----------|---|
| <b>Nameplate NP3441L</b>   |              |  |             |    |                       |      |  |           |           |   |
| <b>CAT.NO.</b>             | EM3704T-BG   |  |             |    |                       |      |  |           |           |   |
| <b>SPEC.</b>               | 37N339S519G1 |  |             |    |                       |      |  |           |           |   |
| <b>HP</b>                  | 3            |  |             |    |                       |      |  |           |           |   |
| <b>VOLTS</b>               | 230/460      |  |             |    |                       |      |  |           |           |   |
| <b>AMP</b>                 | 9.2/4.6      |  |             |    |                       |      |  |           |           |   |
| <b>RPM</b>                 | 1160         |  |             |    |                       |      |  |           |           |   |
| <b>FRAME</b>               | 213T         |  |             |    | <b>HZ</b>             | 60   |  |           | <b>PH</b> | 3 |
| <b>SER.F.</b>              | 1.15         |  | <b>CODE</b> | L  | <b>DES</b>            | B    |  | <b>CL</b> | H         |   |
| <b>NEMA-NOM-EFF</b>        | 89.5         |  | <b>PF</b>   | 68 |                       |      |  |           |           |   |
| <b>RATING</b>              | 40C AMB-CONT |  |             |    |                       |      |  |           |           |   |
| <b>CC</b>                  | 010A         |  |             |    | <b>USABLE AT 208V</b> |      |  |           |           |   |
| <b>DE</b>                  | 6307         |  |             |    | <b>ODE</b>            | 6206 |  |           |           |   |
| <b>ENCL</b>                | TEFC         |  | <b>SN</b>   |    |                       |      |  |           |           |   |
| <b>VPWM INVERTER READY</b> |              |  |             |    |                       |      |  |           |           |   |
| CT6-60H(10:1)VT3-60H(20:1) |              |  |             |    |                       |      |  |           |           |   |
|                            |              |  |             |    |                       |      |  |           |           |   |

| Parts List  |  |          |
|-------------|--|----------|
| Part Number | Description                              | Quantity |
| SA270532    | SA 37N339S519G1                          | 1.000 EA |
| RA257166    | RA 37N339S519G1                          | 1.000 EA |
| 37FN3002C01 | EXFN, PLASTIC, 6.00 OD, 1.155 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 |
| 37GS1000SP  | 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 |
| 37EP3100B06 | PU EP 307 LOCK BRG,GRSR,DRAIN,2 RET HLS  | 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 |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB                | 1.000 EA |
| 07FH4007SP  | 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 |

| <b>Parts List (continued)</b> |  |                 |
|-------------------------------|--|-----------------|
| <b>Part Number</b>            | <b>Description</b>                       | <b>Quantity</b> |
| 85XU0407S04                   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA        |
| LB1115N                       | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA        |
| LB1508                        | LABEL "SHAFT GROUNDING BRUSH" 1.50 X .81 | 1.000 EA        |
| MJ1000A02                     | GREASE, MOBIL POLYREX EM - 124047        | 0.050 LB        |
| MG1000Y03                     | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.028 GA        |
| HA3104A17                     | 5/16-18X13.250 T-BLT/OHIO                | 4.000 EA        |
| LC0005E01                     | CONN.DIA./WARNING LABEL (LC0005/LB1119N) | 1.000 EA        |
| NP3441L                       | ALUM SUPER-E VPWM INVERTER READY UL      | 1.000 EA        |
| 37PA1074                      | PALLET PACK GRP, PRINT BOX PK1026A06     | 1.000 EA        |
| MN416A01                      | TAG-INSTAL-MAINT no wire (2100/bx) 4/22  | 1.000 EA        |

**AC Induction Motor Performance Data**

Record # 37131

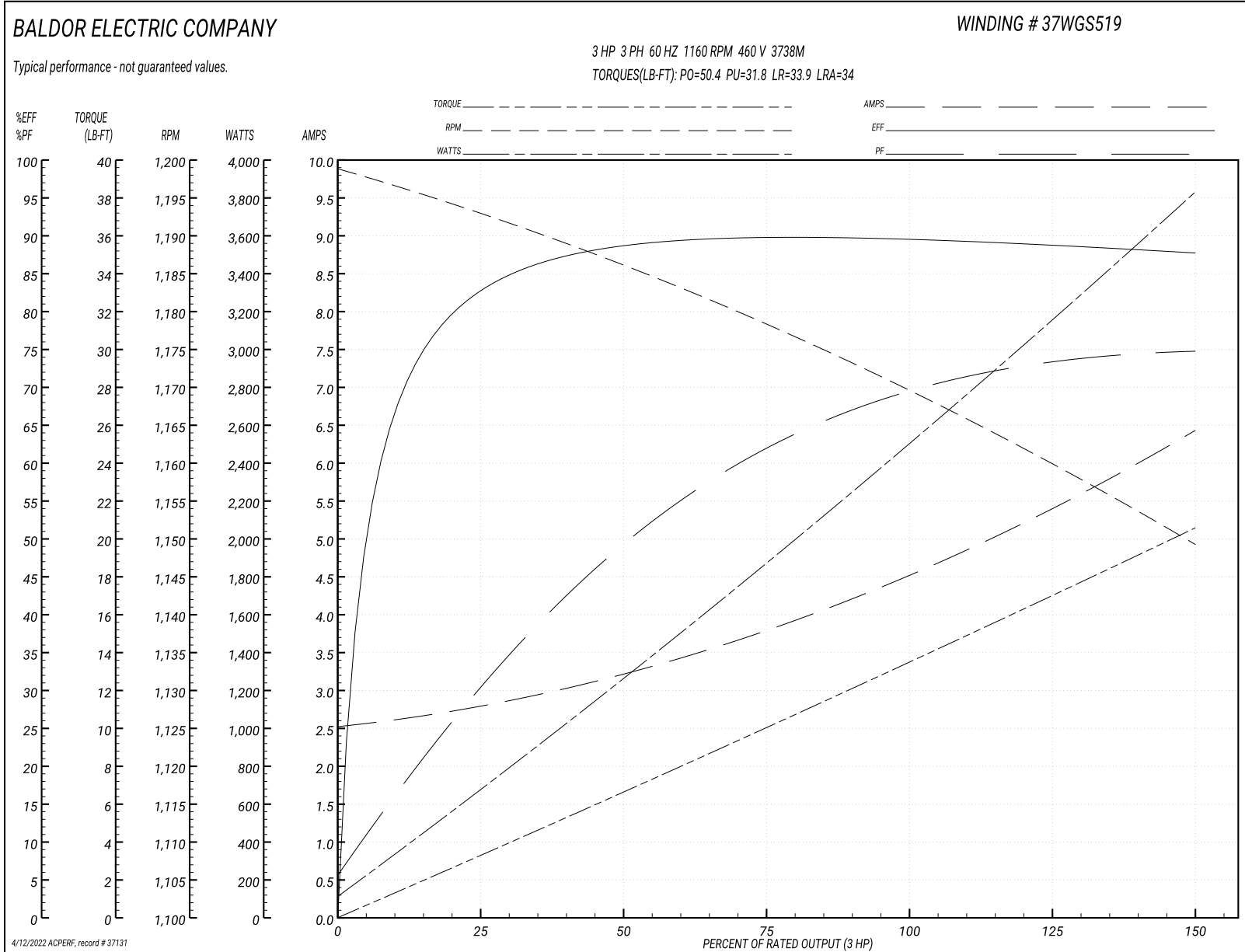
Typical performance - not guaranteed values

| <b>Winding: 37WGS519-R005</b> |                   | <b>Type: 3738M</b>               |  | <b>Enclosure: TEFC</b>       |        |
|-------------------------------|-------------------|----------------------------------|--|------------------------------|--------|
| <b>Nameplate Data</b>         |                   |                                  | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                              |        |
| <b>Rated Output (HP)</b>      | 3                 | <b>Full Load Torque</b>          | 13.4 LB-FT                                       |                              |        |
| <b>Volts</b>                  | 230/460           | <b>Start Configuration</b>       | direct on line                                   |                              |        |
| <b>Full Load Amps</b>         | 9.2/4.6           | <b>Breakdown Torque</b>          | 50.4 LB-FT                                       |                              |        |
| <b>R.P.M.</b>                 | 1160              | <b>Pull-up Torque</b>            | 31.8 LB-FT                                       |                              |        |
| <b>Hz</b>                     | 60 <b>Phase</b>   | 3                                | <b>Locked-rotor Torque</b>                       | 33.9 LB-FT                   |        |
| <b>NEMA Design Code</b>       | <b>B KVA Code</b> | L                                | <b>Starting Current</b>                          | 34 A                         |        |
| <b>Service Factor (S.F.)</b>  | 1.15              | <b>No-load Current</b>           | 2.56 A   |                              |        |
| <b>NEMA Nom. Eff.</b>         | 89.5              | <b>Power Factor</b>              | 68   | <b>Line-line Res. @ 25°C</b> | 2.67 Ω |
| <b>Rating - Duty</b>          | 40C AMB-CONT      | <b>Temp. Rise @ Rated Load</b>   | 38°C   |                              |        |
| <b>S.F. Amps</b>              |                   | <b>Temp. Rise @ S.F. Load</b>    | 45°C   |                              |        |
|                               |                   | <b>Locked-rotor Power Factor</b> | 22.9   |                              |        |
|                               |                   | <b>Rotor inertia</b>             | 0.945 LB-FT <sup>2</sup>                         |                              |        |

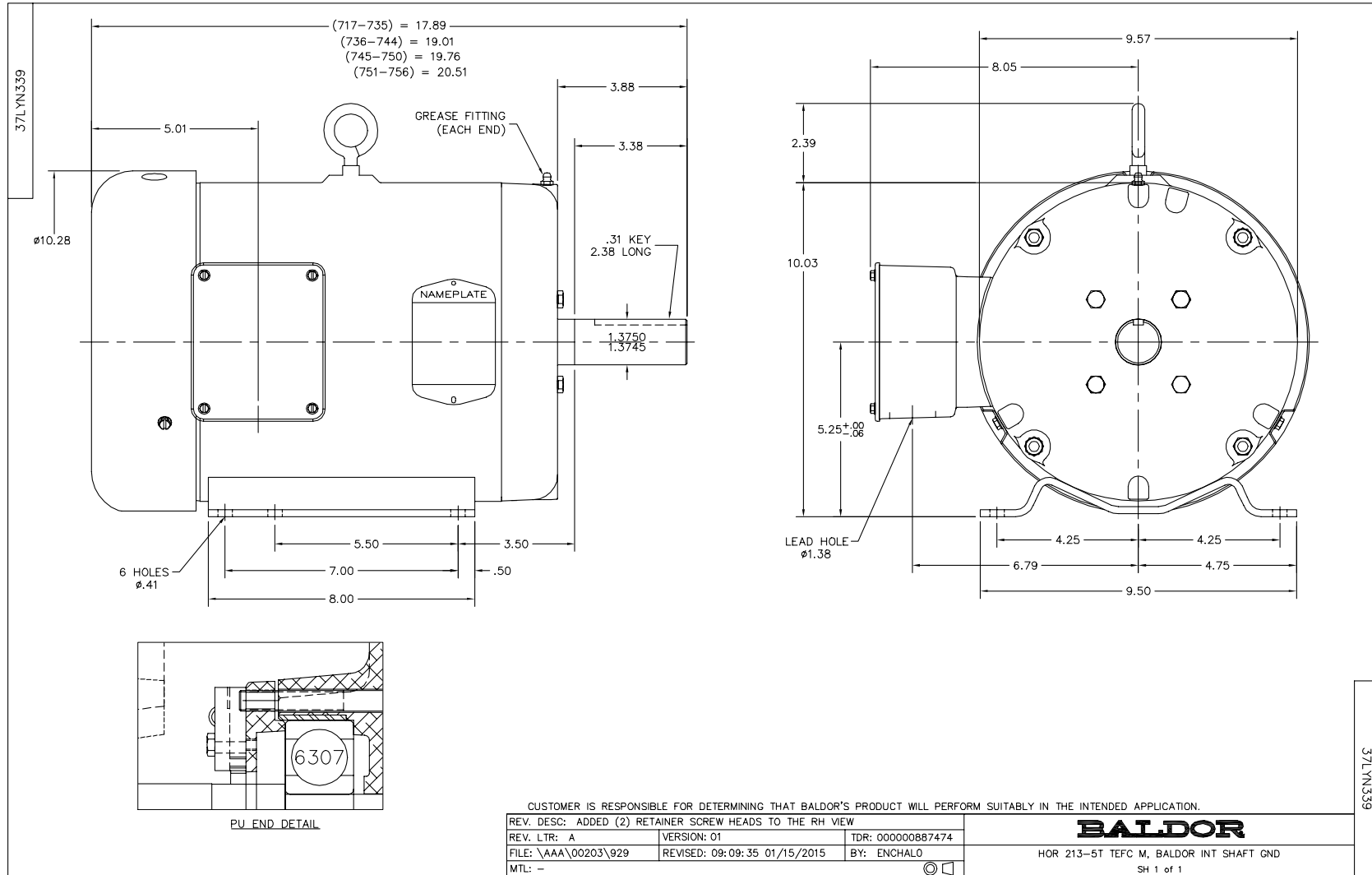
**Load Characteristics 460 V, 60 Hz, 3 HP**

| <b>% of Rated Load</b> | <b>25</b> | <b>50</b> | <b>75</b> | <b>100</b> | <b>125</b> | <b>150</b> | <b>S.F.</b> |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| <b>Power Factor</b>    | 30        | 50        | 62        | 69         | 73         | 75         | 70          |
| <b>Efficiency</b>      | 82.1      | 88.6      | 89.5      | 89.8       | 89.1       | 87.6       | 89.1        |
| <b>Speed</b>           | 1193      | 1186      | 1178      | 1170       | 1160       | 1149       | 1166        |
| <b>Line amperes</b>    | 2.74      | 3.19      | 3.82      | 4.53       | 5.44       | 6.41       | 5.14        |

Performance Graph at 460V, 60Hz, 3.0HP Typical performance - Not guaranteed values







CD0005



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

900003

FILE: AAA00005140

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005