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# Customer information packet

## HBAO3770T

7.5AOHP, 1765RPM, 3PH, 60HZ, 213T, 0738M, TEAO

Class - None

Division - Not Applicable

## Specifications

|                                |                                                               |
|--------------------------------|---------------------------------------------------------------|
| Enclosure                      | TEAO                                                          |
| Frame                          | 213T                                                          |
| Frame Material                 | Iron                                                          |
| Frequency                      | 60.00 Hz                                                      |
| Haz Area Class and Group       | None                                                          |
| Haz Area Division              | Not Applicable                                                |
| Motor Letter Type              | Three Phase                                                   |
| Output @ Frequency             | 7.500 HP @ 60 HZ                                              |
| Phase                          | 3                                                             |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                              |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                            |
| Agency Approvals               | CSA<br>CURUSEEV<br>NEMA_PREMIUM<br>WEEE                       |
| Ambient Temperature            | 40 °C                                                         |
| Auxiliary Box                  | NO AUXILLARY BOX                                              |
| Auxiliary Box Lead Termination | None                                                          |
| Base Indicator                 | Rigid                                                         |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                       |
| Blower                         | None                                                          |
| Current @ Voltage              | 9.500 A @ 460.0 V<br>19.800 A @ 208.0 V<br>19.000 A @ 230.0 V |
| Design Code                    | A                                                             |
| Drip Cover                     | No Drip Cover                                                 |
| Duty Rating                    | CONT                                                          |
| Efficiency @ 100% Load         | 91.7 %                                                        |
| Electrically Isolated Bearing  | Electrically Isolated Bearings                                |
| Feedback Device                | NO FEEDBACK                                                   |
| Front Shaft Indicator          | None                                                          |

## Part detail

|              |            |
|--------------|------------|
| Revision     | J          |
| Type         | AC         |
| Mech. spec.  | 07D097     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 07WGX790   |
| Layout       | 07LYD097   |
| Eff. date    | 10-09-2023 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 09-21-2021 |

|                               |                       |
|-------------------------------|-----------------------|
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 9.5 a                 |
| Insulation Class              | H                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | J                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Max Speed                     | 2700 rpm              |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG            |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 0738M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 4                     |
| Overall Length                | 16.88 IN              |
| Power Factor                  | 81                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| RoHS Status                   | ROHS COMPLIANT        |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 1.375 IN              |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | No Slinger            |
| Speed                         | 1770 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Bearing      | None                  |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |
| Winding Thermal 1             | None                  |

|                   |      |
|-------------------|------|
| Winding Thermal 2 | None |
|-------------------|------|

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## Nameplate

## NP4312A01M05L

| CAT #         |  |       |  | HBAO3770T    |  |   |  | SER #   |  |    |  | CC           |  |      |  | WGT   |  |    |  | 198  |  |      |  | LBS      |  |  |  |    |  |  |  |               |  |  |  |
|---------------|--|-------|--|--------------|--|---|--|---------|--|----|--|--------------|--|------|--|-------|--|----|--|------|--|------|--|----------|--|--|--|----|--|--|--|---------------|--|--|--|
| SPEC          |  |       |  | 07D097X790G2 |  |   |  | RATING  |  |    |  | 40C AMB-CONT |  |      |  |       |  |    |  |      |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |
| HP            |  |       |  | VOLTS        |  |   |  | AMPS    |  |    |  | MAG CUR      |  |      |  | CODE  |  |    |  | RPM  |  |      |  | DES      |  |  |  | PF |  |  |  | NEMA NOM. EFF |  |  |  |
| 7.5 AO        |  |       |  | 230/460      |  |   |  | 19/9.5  |  |    |  | 8.6/4.3      |  |      |  | J     |  |    |  | 1770 |  |      |  | A        |  |  |  | 81 |  |  |  | 91.7          |  |  |  |
| 8 AO          |  |       |  | 230/460      |  |   |  | 20/10   |  |    |  | 8.6/4.3      |  |      |  | H     |  |    |  | 1765 |  |      |  | -        |  |  |  | 82 |  |  |  | 91            |  |  |  |
| 8.5AO         |  |       |  | 230/460      |  |   |  | 21/10.5 |  |    |  | 8.6/4.3      |  |      |  | H     |  |    |  | 1765 |  |      |  | -        |  |  |  | 83 |  |  |  | 91            |  |  |  |
| 9 AO          |  |       |  | 230/460      |  |   |  | 22/11   |  |    |  | 8.6/4.3      |  |      |  | G     |  |    |  | 1760 |  |      |  | -        |  |  |  | 85 |  |  |  | 90.2          |  |  |  |
| 9.5 AO        |  |       |  | 230/460      |  |   |  | 23/11.5 |  |    |  | 8.6/4.3      |  |      |  | G     |  |    |  | 1755 |  |      |  | -        |  |  |  | 86 |  |  |  | 89.5          |  |  |  |
| PH            |  | 3     |  | CL           |  | H |  | HZ      |  | 60 |  | ENCL         |  | TEAO |  | IP    |  | 54 |  | SF   |  | 1.15 |  | AIR OVER |  |  |  |    |  |  |  |               |  |  |  |
| DE BRG        |  |       |  | 6307         |  |   |  | ODE BRG |  |    |  | 6206         |  |      |  | FRAME |  |    |  | 213T |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |
| INV TYPE:     |  |       |  | VPWM         |  |   |  | SL HZ   |  |    |  | 1            |  | CHP  |  | 60    |  | TO |  | 90   |  |      |  | 1.5:1    |  |  |  |    |  |  |  |               |  |  |  |
| WK2           |  | 0.934 |  | LB FT2       |  |   |  | MAX RPM |  |    |  | 2700         |  | CT   |  | 6     |  | TO |  | 60   |  |      |  | 10:1     |  |  |  |    |  |  |  |               |  |  |  |
|               |  |       |  |              |  |   |  |         |  |    |  | VT           |  | 3    |  | TO    |  | 60 |  |      |  | 20:1 |  |          |  |  |  |    |  |  |  |               |  |  |  |
| SFA 21.6/10.8 |  |       |  |              |  |   |  |         |  |    |  |              |  |      |  |       |  |    |  |      |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |
|               |  |       |  |              |  |   |  |         |  |    |  |              |  |      |  |       |  |    |  |      |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |
|               |  |       |  |              |  |   |  |         |  |    |  |              |  |      |  |       |  |    |  |      |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |
| YR:           |  |       |  |              |  |   |  |         |  |    |  |              |  |      |  |       |  |    |  |      |  |      |  |          |  |  |  |    |  |  |  |               |  |  |  |

## AC Induction Motor Performance Data

Record # 95864

Typical performance - not guaranteed values

| Winding: 07WGX790-R073 |    |              | Type: 0738M  |                                          | Enclosure: TEAO       |                |        |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)      |    | 7.5 AIR OVER |              | Full Load Torque                         |                       | 22.2 LB-FT     |        |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps         |    | 19/9.5       |              | Breakdown Torque                         |                       | 70.9 LB-FT     |        |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                           |                       | 32.7 LB-FT     |        |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 43 LB-FT       |        |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                | 70.8 A |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 4.3 A          |        |
| NEMA Nom. Eff.         |    | 91.7         | Power Factor | 81                                       | Line-line Res. @ 25°C |                | 1.41 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 41°C           |        |
| S.F. Amps              |    | 21.6/10.8    |              | Temp. Rise @ S.F. Load                   |                       | 50°C           |        |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 37.2           |        |
|                        |    |              |              | Rotor inertia                            |                       | 0.934 lb-ft²   |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 42   | 64   | 75   | 80   | 83   | 84   | 82   |
| Efficiency      | 87.5 | 91.6 | 92.5 | 92   | 91.1 | 90.1 | 91.3 |
| Speed           | 1793 | 1786 | 1778 | 1770 | 1760 | 1750 | 1764 |
| Line amperes    | 4.83 | 6.02 | 7.6  | 9.5  | 11.6 | 13.9 | 10.7 |

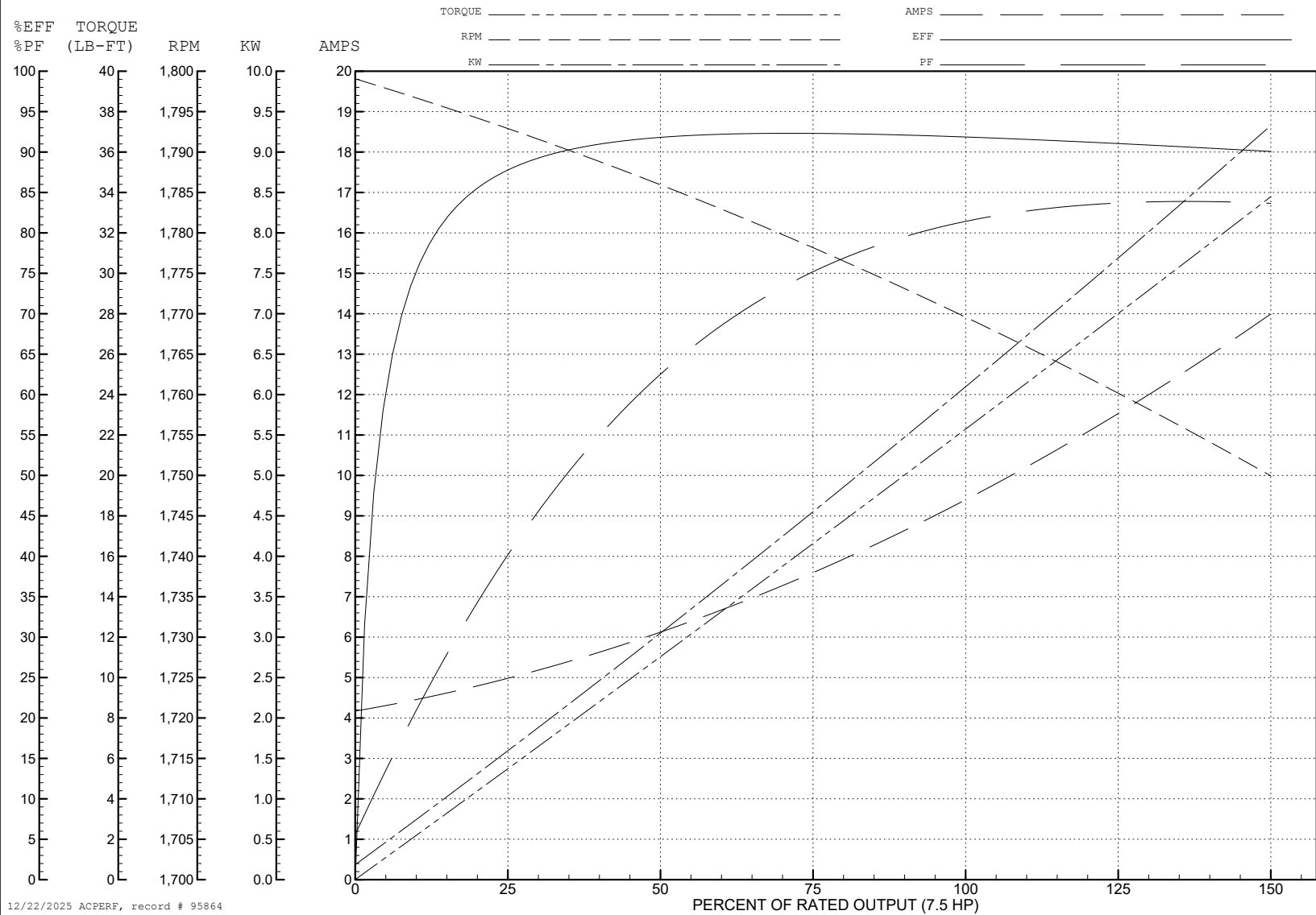
ABB Motors and Mechanical Inc.

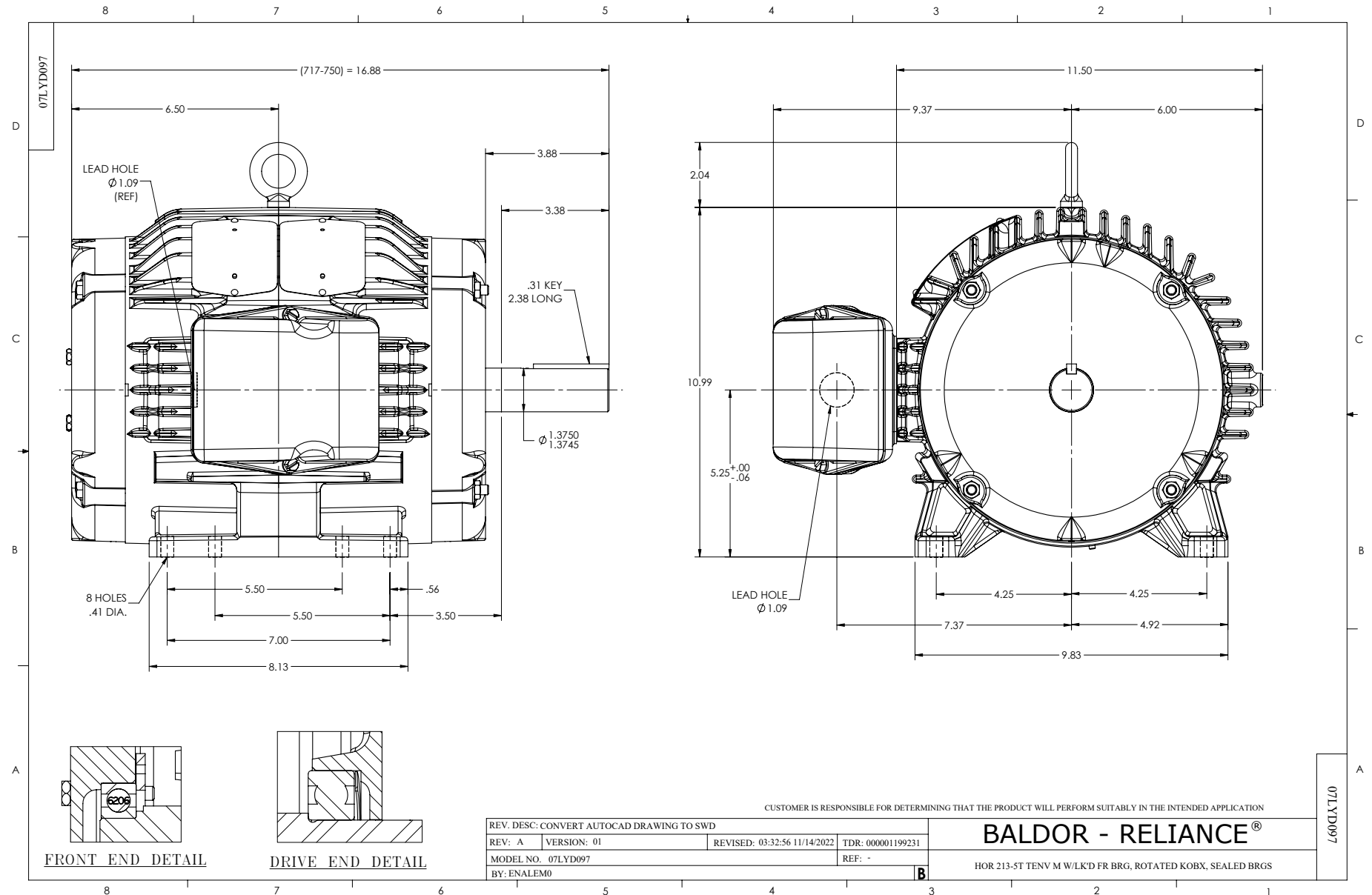
WINDING # 07WGX790

Typical performance - not guaranteed values.

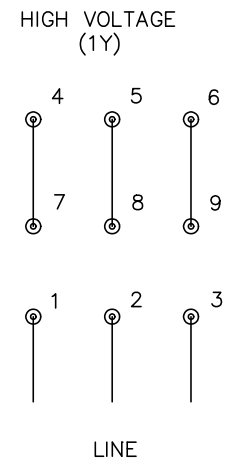
7.5 HP 3 PH 60 HZ 1770 RPM 460 V 0738M

TORQUES (LB-FT): PO=70.9 PU=32.7 LR=43 LRA=70.8





CD0005



- 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