

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM7047T-I

7.5//5HP, 1770//1475RPM, 3PH, 60//50HZ, 213T

Class - CLI GP C,D

Division - Division I

**Specifications**

|                                       |                                                                                                          |
|---------------------------------------|----------------------------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                                                     |
| <b>Frame</b>                          | 213TC                                                                                                    |
| <b>Frame Material</b>                 | Steel                                                                                                    |
| <b>Frequency</b>                      | 50.00 Hz<br>60.00 Hz                                                                                     |
| <b>Haz Area Class and Group</b>       | CLI GP C,D                                                                                               |
| <b>Haz Area Division</b>              | Division I                                                                                               |
| <b>Motor Letter Type</b>              | Three Phase                                                                                              |
| <b>Output @ Frequency</b>             | 7.500 HP @ 60 HZ<br>5.000 HP @ 50 HZ                                                                     |
| <b>Phase</b>                          | 3                                                                                                        |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                                                                         |
| <b>Voltage @ Frequency</b>            | 190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ<br>460.0 V @ 60 HZ                                 |
| <b>Agency Approvals</b>               | UR<br>CSA<br>CSA EEV                                                                                     |
| <b>Ambient Temperature</b>            | 40 °C                                                                                                    |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                                                                                         |
| <b>Auxiliary Box Lead Termination</b> | None                                                                                                     |
| <b>Base Indicator</b>                 | Rigid                                                                                                    |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                                                                  |
| <b>Blower</b>                         | None                                                                                                     |
| <b>Current @ Voltage</b>              | 9.500 A @ 460.0 V<br>8.100 A @ 380.0 V<br>20.000 A @ 208.0 V<br>19.000 A @ 230.0 V<br>16.200 A @ 190.0 V |
| <b>Design Code</b>                    | A                                                                                                        |
| <b>Drip Cover</b>                     | No Drip Cover                                                                                            |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | C          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 37H722     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 37WGL864   |
| <b>Layout</b>       | 37LYH722   |
| <b>Eff. date</b>    | 02-21-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-02-2021 |

|                                      |                           |
|--------------------------------------|---------------------------|
| <b>Duty Rating</b>                   | CONT                      |
| <b>Efficiency @ 100% Load</b>        | 91.7 %                    |
| <b>Electrically Isolated Bearing</b> | Not Electrically Isolated |
| <b>Feedback Device</b>               | NO FEEDBACK               |
| <b>Front Shaft Indicator</b>         | None                      |
| <b>Haz Area Temp Code</b>            | T3C                       |
| <b>Heater Indicator</b>              | No Heater                 |
| <b>High Voltage Full Load Amps</b>   | 8.1 a                     |
| <b>Insulation Class</b>              | F                         |
| <b>Inverter Code</b>                 | Not Inverter              |
| <b>KVA Code</b>                      | J                         |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs     |
| <b>Locked Bearing Indicator</b>      | Locked Bearing            |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 14 AWG                |
| <b>Motor Lead Termination</b>        | Flying Leads              |
| <b>Motor Standards</b>               | NEMA                      |
| <b>Motor Type</b>                    | X3738M                    |
| <b>Mounting Arrangement</b>          | F1                        |
| <b>Number of Poles</b>               | 4                         |
| <b>Overall Length</b>                | 21.07 IN                  |
| <b>Power Factor</b>                  | 80                        |
| <b>Product Family</b>                | General Purpose           |
| <b>Pulley End Bearing Type</b>       | Ball                      |
| <b>Pulley Face Code</b>              | C-Face                    |
| <b>Pulley Shaft Indicator</b>        | Standard                  |
| <b>Rodent Screen</b>                 | None                      |
| <b>RoHS Status</b>                   | ROHS NON-COMPLIANT        |
| <b>Service Factor</b>                | 1.15                      |
| <b>Shaft Diameter</b>                | 1.375 IN                  |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding        |
| <b>Shaft Rotation</b>                | Reversible                |
| <b>Shaft Slinger Indicator</b>       | No Slinger                |
| <b>Speed</b>                         | 1475 rpm<br>1770 rpm      |

|                            |                            |
|----------------------------|----------------------------|
| Speed Code                 | Single Speed               |
| Starting Method            | Direct on line             |
| Thermal Device - Bearing   | None                       |
| Thermal Device - Winding   | Normally Closed Thermostat |
| Vibration Sensor Indicator | No Vibration Sensor        |
| Winding Thermal 1          | None                       |
| Winding Thermal 2          | None                       |

**Nameplate**

| NP0977XPSLEV |                                |     |        |              |              |        |         |           |      |     |    |  |
|--------------|--------------------------------|-----|--------|--------------|--------------|--------|---------|-----------|------|-----|----|--|
| NO.          |                                |     |        |              |              |        |         | CC        | 010A |     |    |  |
| SER.         |                                |     |        |              |              |        |         | TEMP CODE |      | T3C |    |  |
| SPEC.        | 37H722L864G1                   |     |        |              |              |        |         |           |      |     |    |  |
| CAT.NO.      | CEM7047T-I                     |     |        |              |              |        |         |           |      |     |    |  |
| HP           | 7.5//5                         |     |        |              |              |        |         |           |      |     |    |  |
| VOLTS        | 230/460//190/380               |     |        |              |              |        |         |           |      |     |    |  |
| AMPS         | 19/9.5//16.2/8.1               |     |        |              |              |        |         |           |      |     |    |  |
| RPM          | 1770//1475                     |     |        |              | MOTOR WEIGHT |        |         |           | 163  |     |    |  |
| HERTZ        | 60//50                         | PH  | 3      | CL           | F            | DE BRG |         | 6307      |      |     |    |  |
| SER.F.       | 1.15                           | DES | A      | CODE         |              | J      | ODE BRG |           | 6206 |     |    |  |
| FRAME        | 213TC                          |     | GREASE |              | POLYREX EM   |        |         |           |      |     |    |  |
| RATING       | 40C AMB-CONT 55C AMB AT 1.0 SF |     |        |              |              |        |         |           |      |     |    |  |
|              |                                |     |        | NEMA-NOM-EFF |              |        |         | 91.7      |      | PF  | 80 |  |
|              | NEMA MG-1 PT 5,IP55            |     |        |              |              |        |         |           |      |     |    |  |

**AC Induction Motor Performance Data**

Record # 86495

Preliminary Data Sheet

| Winding: 37WGL864-R004 |    |              |              | Type: 3738M                              |  | Enclosure: XPFC |  |
|------------------------|----|--------------|--------------|------------------------------------------|--|-----------------|--|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |  |                 |  |
| Rated Output (HP)      |    | 7.5          |              | Full Load Torque                         |  | 22.2 LB-FT      |  |
| Volts                  |    | 230/460      |              | Start Configuration                      |  | direct on line  |  |
| Full Load Amps         |    | 19.0/9.5     |              | Breakdown Torque                         |  | 69.8 LB-FT      |  |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                           |  | 31.5 LB-FT      |  |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |  | 41 LB-FT        |  |
| NEMA Design Code       |    | A            | KVA Code     | Starting Current                         |  | 70.7 A          |  |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |  | 4.32 A          |  |
| NEMA Nom. Eff.         |    | 91.7         | Power Factor | Line-line Res. @ 25°C                    |  | 1.48 Ω          |  |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |  | 64°C            |  |
| S.F. Amps              |    | 21.4/10.7    |              | Temp. Rise @ S.F. Load                   |  | 84°C            |  |
|                        |    |              |              | Locked-rotor Power Factor                |  | 41.9            |  |
|                        |    |              |              | 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   | 83   |
| Efficiency      | 87.1 | 91.4 | 92   | 91.7 | 90.7 | 89.6 | 90.7 |
| Speed           | 1793 | 1786 | 1778 | 1770 | 1760 | 1750 | 1761 |
| Line amperes    | 4.83 | 6.03 | 7.64 | 9.5  | 11.6 | 13.9 | 10.7 |

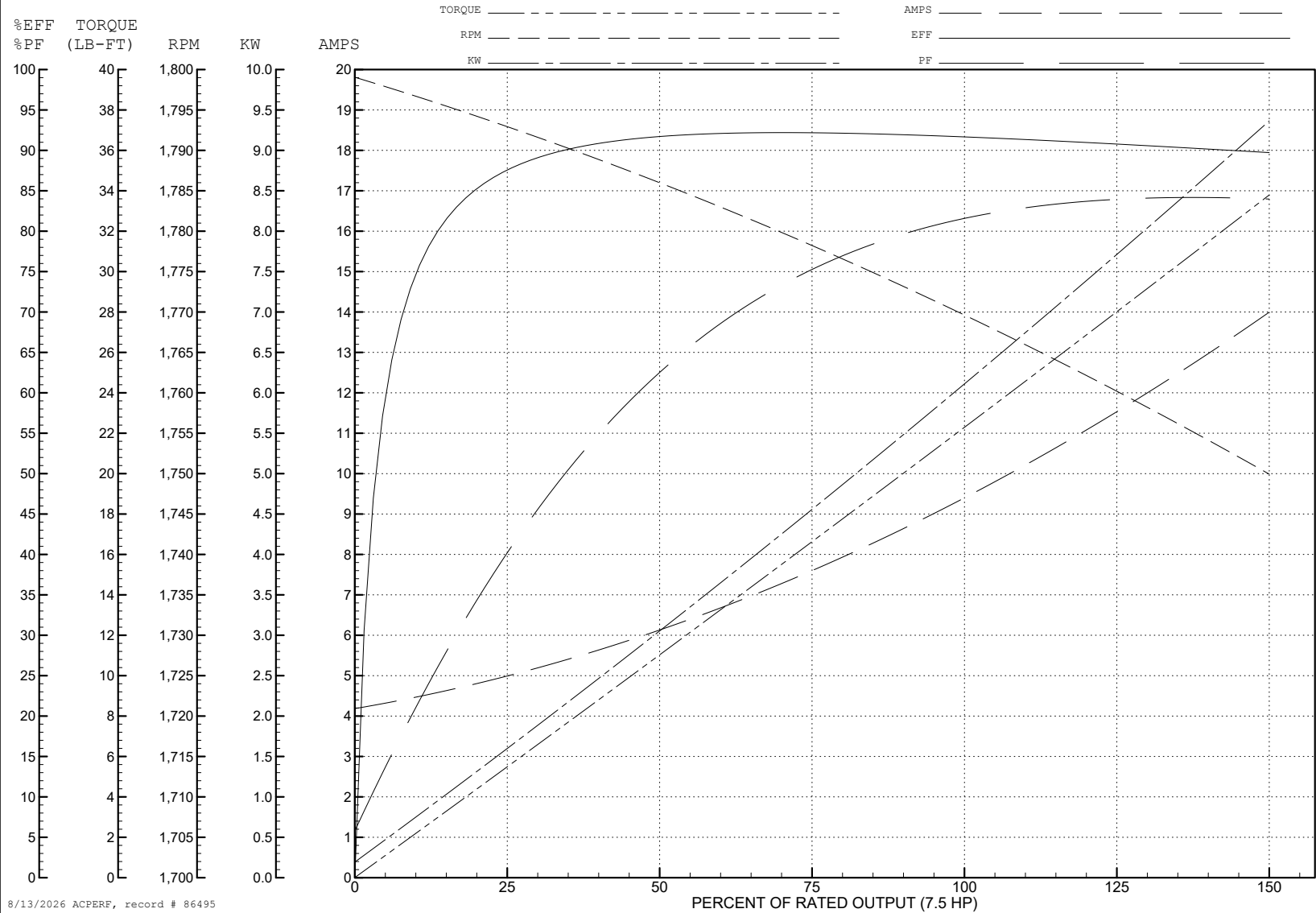
ABB Motors and Mechanical Inc.

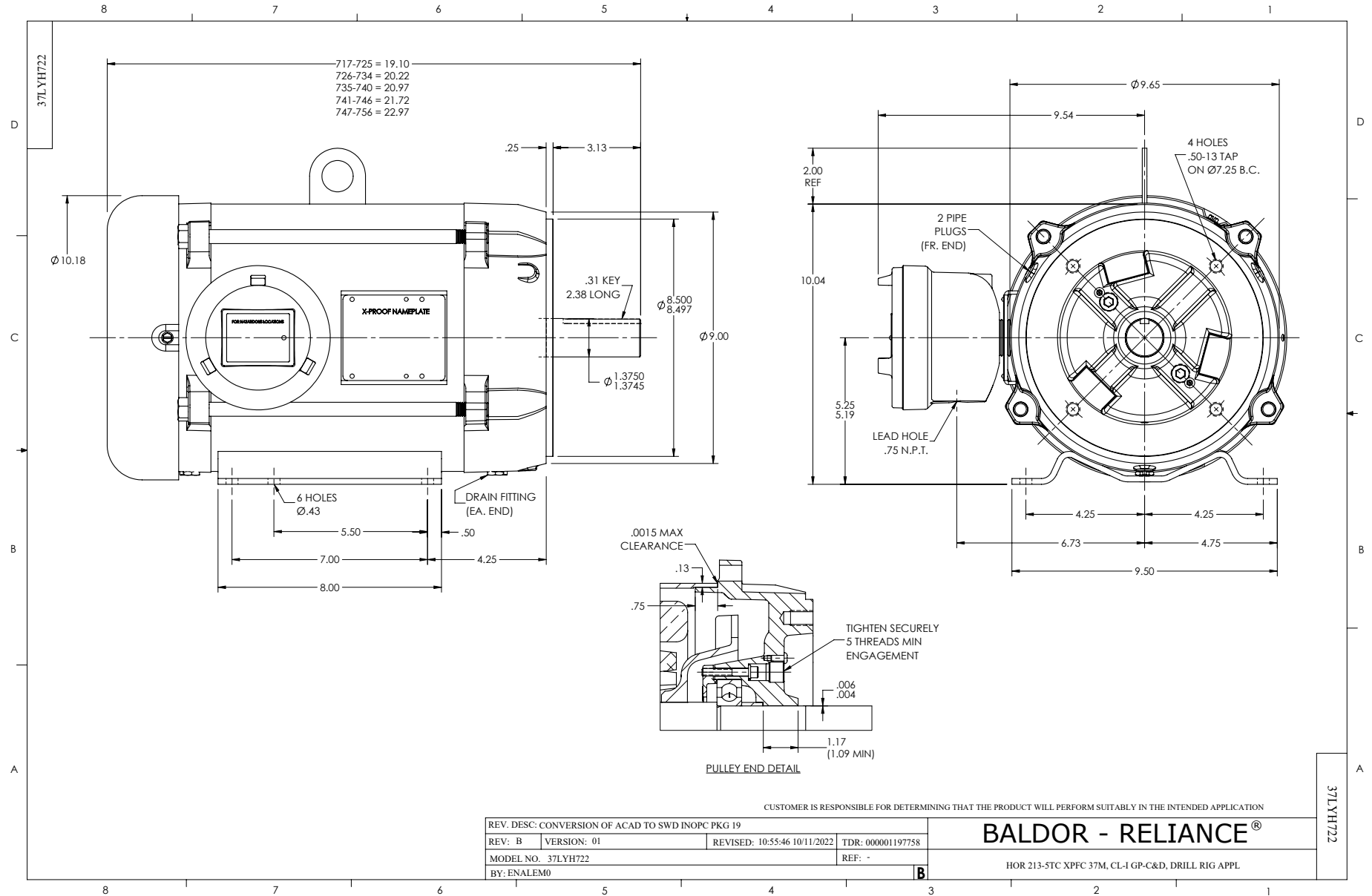
WINDING # 37WGL864

Typical performance - not guaranteed values.

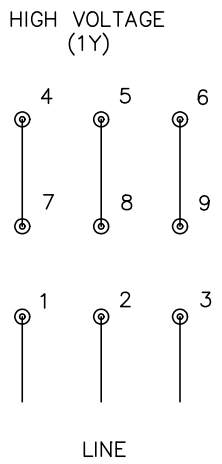
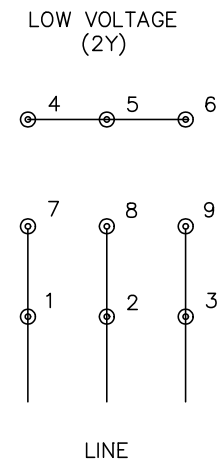
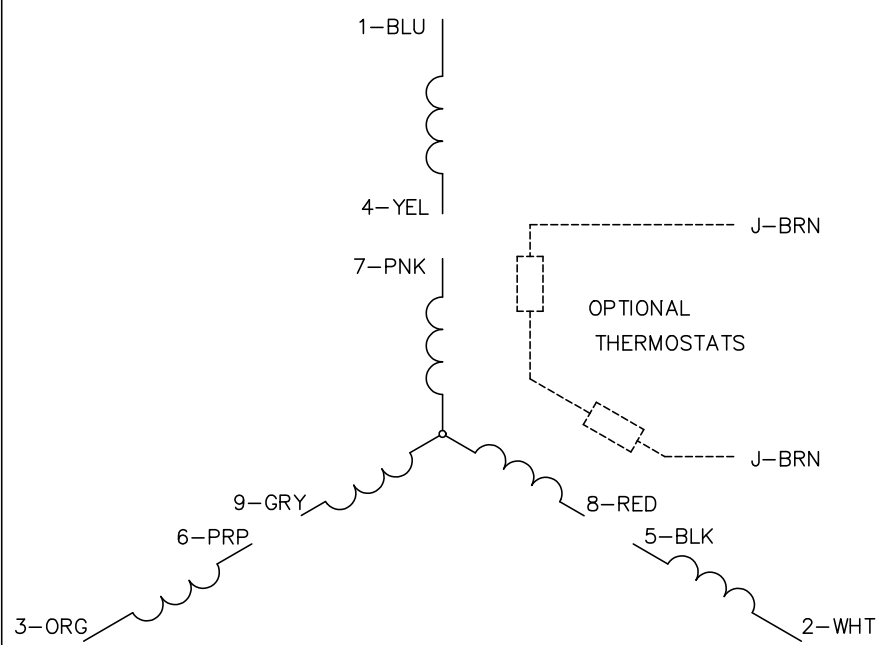
7.5 HP 3 PH 60 HZ 1770 RPM 460 V 3738M

TORQUES (LB-FT): PO=69.8 PU=31.5 LR=41 LRA=70.7





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