

# ABB BALDOR RELIANCE III

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## Customer information packet

### SUM70756-4

7.5HP, 1150RPM, 3PH, 60HZ, 210TY, XPNV, V1

Class - CLI GP C,D

Division - Not Applicable

**Specifications**

|                          |                         |
|--------------------------|-------------------------|
| Enclosure                | XPNV                    |
| Frame                    | 210TY                   |
| Frame Material           | Iron                    |
| Frequency                | 60.00 Hz                |
| Haz Area Class and Group | CLI GP C,D              |
| Haz Area Division        | Not Applicable          |
| Motor Letter Type        | Three Phase             |
| Phase                    | 3                       |
| Agency Approvals         | CCSA US                 |
| Base Indicator           | Rigid                   |
| Bearing Grease Type      | Polyrex EM (-20F +300F) |
| Cable Length             | NO CABLE                |
| Design Code              | B                       |
| Drip Cover               | No Drip Cover           |
| Duty Rating              | CONT                    |
| Haz Area Temp Code       | T3C                     |
| Heater Indicator         | No Heater               |
| Insulation Class         | F                       |
| Inverter Code            | Not Inverter            |
| IP Rating                | IP68                    |
| KVA Code                 | G                       |
| Lifting Lugs             | Standard Lifting Lugs   |
| Motor Standards          | NEMA                    |
| Motor Type               | M                       |
| Mounting Arrangement     | V1                      |
| Number of Poles          | 6                       |
| Product Family           | Pump - Centrifugal      |
| Pulley End Bearing Type  | Ball                    |
| Pulley Face Code         | Standard                |
| Service Factor           | 1.15                    |
| Shaft Diameter           | 1.437 IN                |
| Shaft Rotation           | Reversible              |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | D          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 85997      |
| Layout       | 619738-003 |
| Eff. date    | 12-10-2024 |
| CD Diagram   | 416820-001 |
| Poles        | ///        |
| Leads        |            |
| Proprietary  | False      |
| Created date | 08-09-2021 |

|                          |                            |
|--------------------------|----------------------------|
| Shaft Slinger Indicator  | No Slinger                 |
| Speed Code               | Single Speed               |
| Starting Method          | Direct on line             |
| Thermal Device - Winding | Normally Closed Thermostat |

**Nameplate**

| 000613007MS            |                              |                    |                     |                   |             |             |               |   |  |
|------------------------|------------------------------|--------------------|---------------------|-------------------|-------------|-------------|---------------|---|--|
| <b>CAT.NO.</b>         | SUM70756-4                   |                    | <b>SPEC NO.</b>     | S21-CWS0-0007     |             |             |               |   |  |
| <b>SER.NO.</b>         |                              |                    |                     | <b>FRAME SIZE</b> | 210TY       |             |               |   |  |
|                        | <b>HP</b>                    | <b>RPM</b>         | <b>VOLTS</b>        | <b>AMPS</b>       | <b>HZ</b>   | <b>S.F.</b> |               |   |  |
|                        | 7.5                          | 1150               | 230/460             | 20.8/10.4         | 6-60        | 1.00        |               |   |  |
|                        | 7.5                          | 1150               | 230/460             | 20.8/10.4         | 60          | 1.15        |               |   |  |
| <b>CONSTANT HP RPM</b> |                              | @                  |                     | <b>HZ</b>         | <b>CODE</b> | G           |               |   |  |
| <b>TYPE</b>            | P                            | <b>INSUL.CLASS</b> | F                   | <b>TORQUE</b>     | 10:1_VT     |             | <b>DESIGN</b> | B |  |
| <b>D.E. BRG.</b>       | 60BC02JPP30A                 |                    | <b>ENCL</b>         | TENV              | <b>DUTY</b> | 15MIN       | <b>PH</b>     | 3 |  |
| <b>O.D.E. BRG.</b>     | 30BC02JPG30A                 |                    | <b>MOTOR WEIGHT</b> |                   | <b>AMB</b>  | 40          |               |   |  |
|                        | FINAL CONN VOLTAGE = 460 *15 |                    |                     |                   |             |             |               |   |  |
|                        | MIN IN AIR ;SUB. IN WATER    |                    |                     |                   |             |             |               |   |  |
|                        | ONLY                         |                    |                     |                   |             |             |               |   |  |

|                     |       |     |  |
|---------------------|-------|-----|--|
| 000613007RC         |       |     |  |
| CLASS I GROUP       | C D X | NO. |  |
| CLASS II GROUP      | X X X |     |  |
| OPERATING TEMP CODE | T3C   |     |  |

| 000692000MB                   |  |
|-------------------------------|--|
| SUITABLE FOR OPERATION ON PWM |  |
| INVERTER EQUIPPED WITH IGBT   |  |
| DEVICES AND CAPABLE OF        |  |
| CARRIER                       |  |
| FREQUENCY OF 2 KHZ MINIMUM    |  |
|                               |  |
|                               |  |

**000613007MS**

|                        |                              |                    |                     |               |             |                   |
|------------------------|------------------------------|--------------------|---------------------|---------------|-------------|-------------------|
| <b>CAT.NO.</b>         | SUM70756-4                   |                    | <b>SPEC NO.</b>     | S21-CWS0-0007 |             |                   |
| <b>SER.NO.</b>         |                              |                    | <b>FRAME SIZE</b>   | 210TY         |             |                   |
|                        | <b>HP</b>                    | <b>RPM</b>         | <b>VOLTS</b>        | <b>AMPS</b>   | <b>HZ</b>   | <b>S.F.</b>       |
|                        | 7.5                          | 1150               | 230/460             | 20.8/10.4     | 6-60        | 1.00              |
|                        | 7.5                          | 1150               | 230/460             | 20.8/10.4     | 60          | 1.15              |
| <b>CONSTANT HP RPM</b> |                              | @                  | <b>HZ</b>           | <b>CODE</b>   | G           |                   |
| <b>TYPE</b>            | P                            | <b>INSUL.CLASS</b> | F                   | <b>TORQUE</b> | 10:1_VT     | <b>DESIGN</b> B   |
| <b>D.E. BRG.</b>       | 60BC02JPP30A                 |                    | <b>ENCL</b>         | TENV          | <b>DUTY</b> | 15MIN <b>PH</b> 3 |
| <b>O.D.E. BRG.</b>     | 30BC02JPG30A                 |                    | <b>MOTOR WEIGHT</b> |               | <b>AMB</b>  | 40                |
|                        | FINAL CONN VOLTAGE = 460 *15 |                    |                     |               |             |                   |
|                        | MIN IN AIR ;SUB. IN WATER    |                    |                     |               |             |                   |
|                        | ONLY                         |                    |                     |               |             |                   |

**AC induction motor performance data**

Record #85997 - Typical performance - not guaranteed values

|           |           |
|-----------|-----------|
| Winding   | 07WGA0019 |
| Type      | 0758M     |
| Enclosure | PART      |

## Nameplate data

|                |           |              |    |
|----------------|-----------|--------------|----|
| Rated Output   | 7.5       |              |    |
| Volts          | 230/460   |              |    |
| Full Load Amps | 20.8/10.4 |              |    |
| R.P.M.         | 1150      |              |    |
| Hz             | 60        | Phase        | 3  |
| KVA Code       | G         |              |    |
| S.F.           | 1.15      |              |    |
| NEMA Nom. Eff. | 89.5      | Power Factor | 75 |
| Duty           | 15 MIN    |              |    |
| S.F. Amps      |           |              |    |

460 V, 60 Hz:

## High Voltage Connection

|                           |                |
|---------------------------|----------------|
| Full Load Torque          | 34 LB-FT       |
| Start Configuration       | direct on line |
| Breakdown Torque          | 84.38 LB-FT    |
| Pull-up Torque            | 61.39 LB-FT    |
| Locked-rotor Torque       | 74.5 LB-FT     |
| Starting Current          | 59.05 A        |
| No-load Current           | 4.22           |
| Line-line Res. @ 25°C     | 1.26 Ω         |
| Temp. Rise @ Rated Load   | 16°C           |
| Temp. Rise @ S.F. Load    | 21°C           |
| Locked-rotor Power Factor | 21             |
| Rotor inertia             | 1.44 lb-ft²    |

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

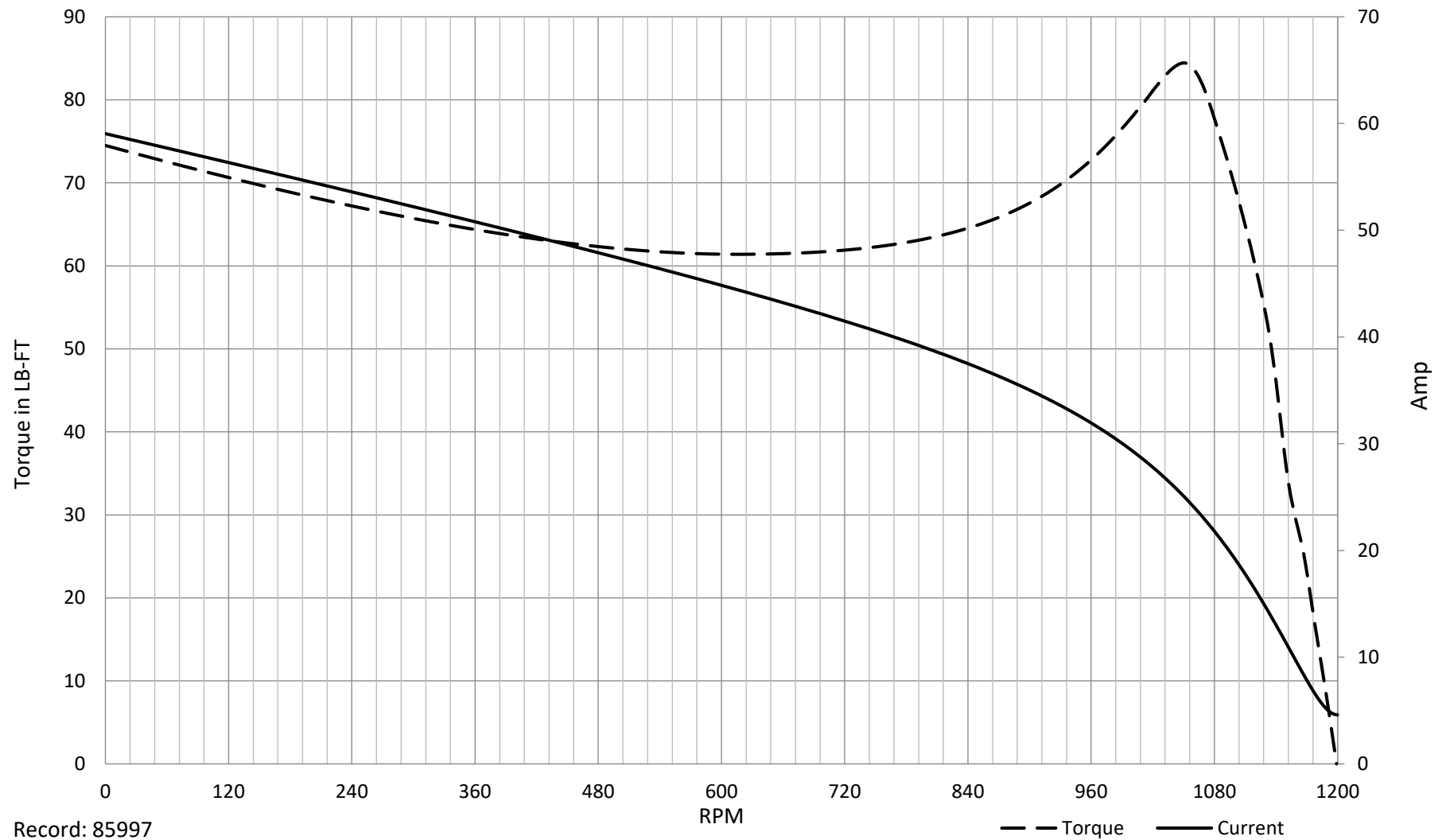
| % of Rated Load | NL   | 25   | 50   | 75   | 100   | 125  | 150  | SF   |
|-----------------|------|------|------|------|-------|------|------|------|
| Power Factor    | 5    | 41   | 63   | 72   | 75    | 76   | 74   | 76   |
| Efficiency      | 0    | 90.9 | 91.6 | 90.6 | 89.5  | 86.9 | 83.5 | 88.1 |
| Speed           | 1199 | 1189 | 1178 | 1167 | 1152  | 1135 | 1110 | 1142 |
| Line amperes    | 4.22 | 4.73 | 6.13 | 8.11 | 10.41 | 13.2 | 17   | 12.1 |

**SPEED TORQUE / SPEED CURRENT CURVES**

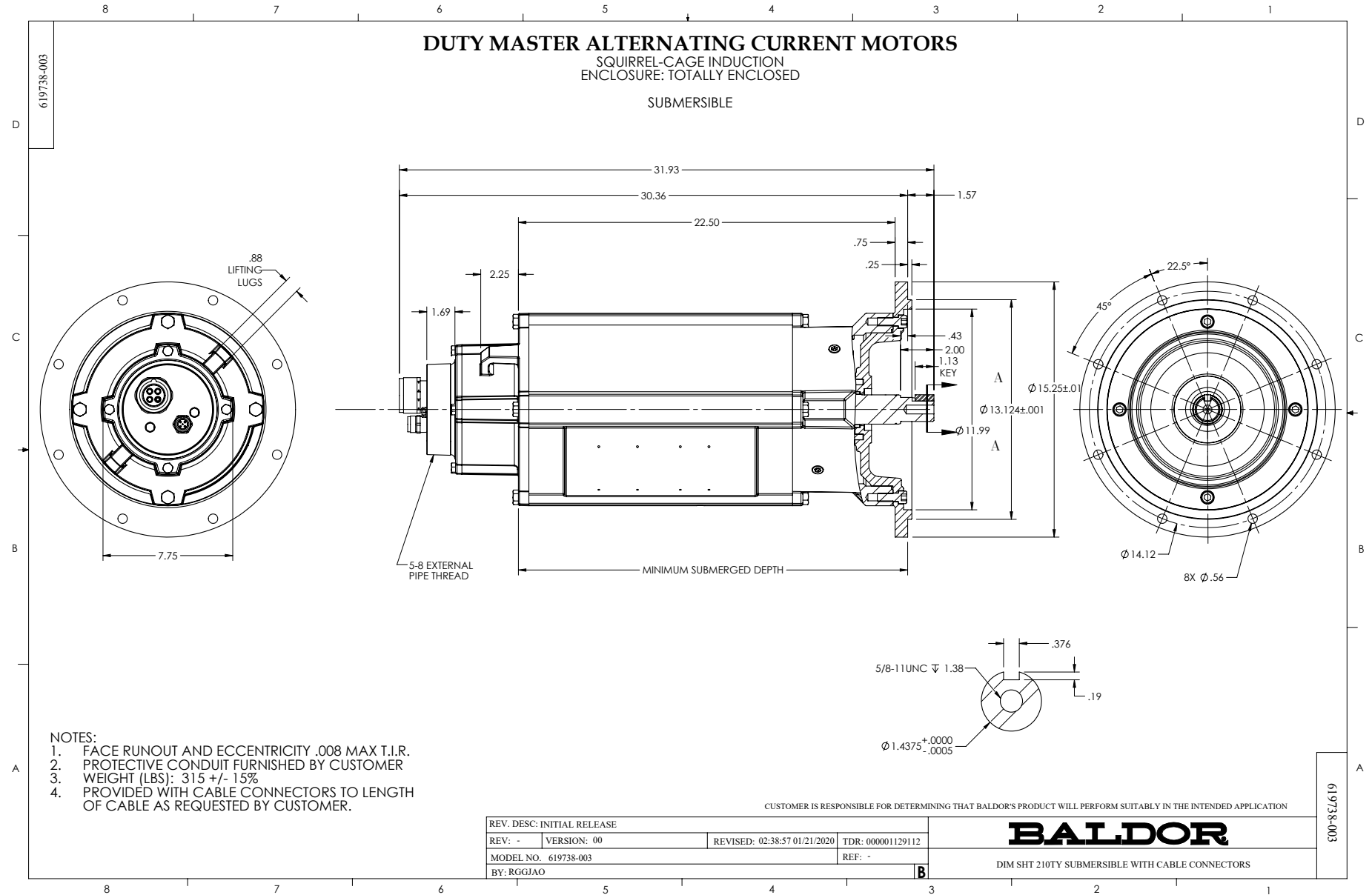
**BALDOR • RELIANCE**

07WGA0019

7.5HP 460V 60HZ

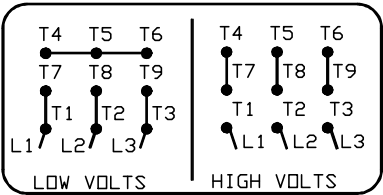
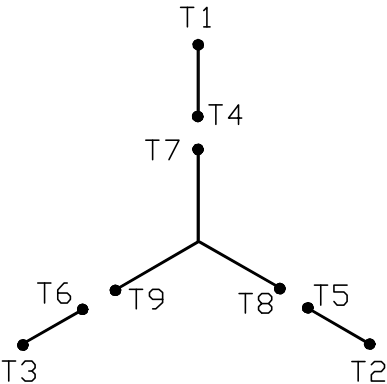


Record: 85997



416820-001

A-C MOTOR  
CONNECTION DIAGRAM  
STANDARD 9 LEAD                      Y CONNECTED



( N. P. 1575-A )

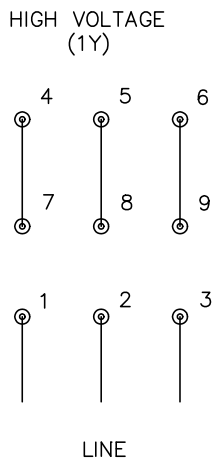
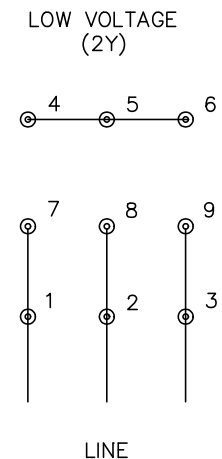
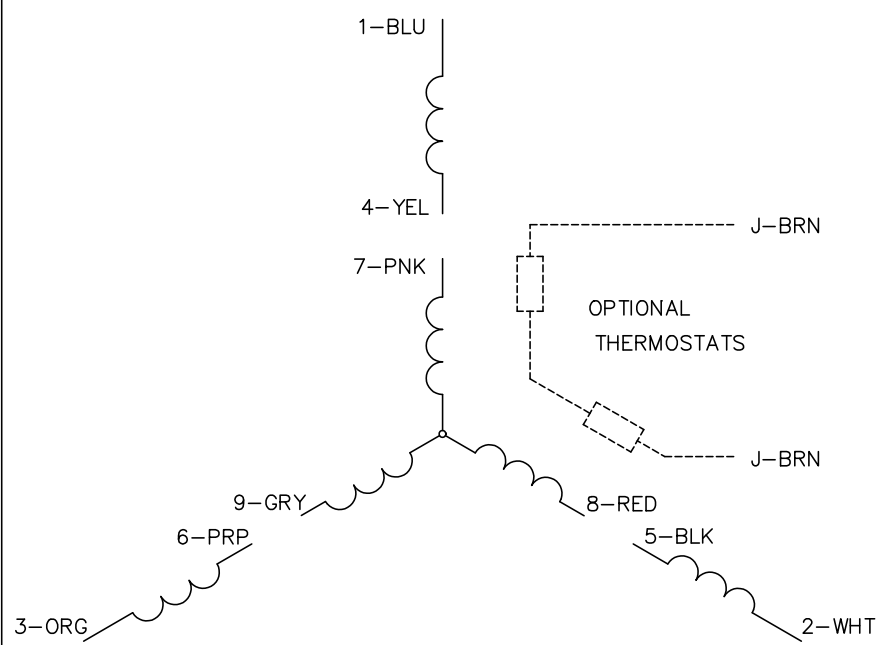
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| REV. DESC: FONT CHANGE FOR PDF SEARCHABLE |                                |                   |
| REV. LTR: A                               | VERSION: 01                    | TDR: 000001009382 |
| FILE: \MGA\00000\659                      | REVISED: 10: 33: 07 12/21/2016 | BY: MGHMTT        |
| MTL: —                                    | ⊗ ◻                            |                   |

**BALDOR**

CONN DIAG — STANDARD 9 LEAD, Y CONNECTED  
SH 1 of 1

416820-001

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