

**BALDOR • RELIANCE**

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# Customer information packet

## CEM31104

.33HP, 1725RPM, 3PH, 60HZ, 56C, 3416M, OPEN, F1

Class - None

Division - Not Applicable

## Specifications

|                                |  |
|--------------------------------|--|
| Enclosure                      | OPEN   |
| Frame                          | 56C  |
| Frame Material                 | Steel  |
| Frequency                      | 60.00 Hz   |
| Haz Area Class and Group       | None   |
| Haz Area Division              | Not Applicable   |
| Motor Letter Type              | Three Phase  |
| Output @ Frequency             | .330 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               | CURUSEEV   |
| Ambient Temperature            | 40 °C  |
| Auxillary Box                  | No Auxillary Box   |
| Auxillary Box Lead Termination | None   |
| Base Indicator                 | Rigid  |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                    |
| Blower                         | None   |
| Current @ Voltage              | .700 A @ 460.0 V<br>1.400 A @ 230.0 V<br>1.700 A @ 208.0 V |
| Design Code                    | B  |
| Drip Cover                     | No Drip Cover  |
| Duty Rating                    | CONT   |
| Efficiency @ 100% Load         | 73.4 %   |
| Electrically Isolated Bearing  | Not Electrically Isolated                                  |
| Feedback Device                | NO FEEDBACK  |
| Front Face Code                | Standard   |
| Front Shaft Indicator          | None   |
| Heater Indicator               | No Heater  |
| High Voltage Full Load Amps    | 0.7 a  |

## Part detail

|              |            |
|--------------|------------|
| Revision     | J          |
| Type         | AC         |
| Mech. spec.  | 34F010     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 34WGS936   |
| Layout       | 34LYF010   |
| Eff. date    | 02-12-2025 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 10-03-2014 |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Insulation Class</b>              | B                   |
| <b>Inverter Code</b>                 | Not Inverter        |
| <b>KVA Code</b>                      | N                   |
| <b>Lifting Lugs</b>                  | No Lifting Lugs     |
| <b>Locked Bearing Indicator</b>      | Locked Bearing      |
| <b>Motor Lead Exit</b>               | Ko Box              |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 18 AWG          |
| <b>Motor Lead Termination</b>        | Flying Leads        |
| <b>Motor Standards</b>               | NEMA                |
| <b>Motor Type</b>                    | 3416M               |
| <b>Mounting Arrangement</b>          | F1                  |
| <b>Number of Poles</b>               | 4                   |
| <b>Overall Length</b>                | 10.10 IN            |
| <b>Power Factor</b>                  | 66                  |
| <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 COMPLIANT      |
| <b>Service Factor</b>                | 1.35                |
| <b>Shaft Diameter</b>                | 0.625 IN            |
| <b>Shaft Extension Location</b>      | Pulley End          |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding  |
| <b>Shaft Rotation</b>                | Reversible          |
| <b>Shaft Slinger Indicator</b>       | No Slinger          |
| <b>Speed</b>                         | 1725 rpm            |
| <b>Speed Code</b>                    | Single Speed        |
| <b>Starting Method</b>               | Direct on line      |
| <b>Thermal Device - Bearing</b>      | None                |
| <b>Thermal Device - Winding</b>      | None                |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor |
| <b>Winding Thermal 1</b>             | None                |
| <b>Winding Thermal 2</b>             | None                |

**Nameplate**

| <b>NP3155L</b>        |              |             |            |            |   |           |   |  |  |
|-----------------------|--------------|-------------|------------|------------|---|-----------|---|--|--|
| <b>CAT.NO.</b>        | CEM31104     |             |            |            |   |           |   |  |  |
| <b>SPEC.</b>          | 34F010S936G1 |             |            |            |   |           |   |  |  |
| <b>HP</b>             | .33          |             |            |            |   |           |   |  |  |
| <b>VOLTS</b>          | 230/460      |             |            |            |   |           |   |  |  |
| <b>AMP</b>            | 1.4/.7       |             |            |            |   |           |   |  |  |
| <b>RPM</b>            | 1725         |             |            |            |   |           |   |  |  |
| <b>FRAME</b>          | 56C          |             | <b>HZ</b>  | 60         |   | <b>PH</b> | 3 |  |  |
| <b>SER.F.</b>         | 1.35         | <b>CODE</b> | N          | <b>DES</b> | B | <b>CL</b> | B |  |  |
| <b>F.L. AVG. EFF.</b> | 73.4         | <b>PF</b>   | 66         |            |   |           |   |  |  |
| <b>RATING</b>         | 40C AMB-CONT |             |            |            |   |           |   |  |  |
| <b>CC</b>             |              |             |            |            |   |           |   |  |  |
| <b>DE</b>             | 6203         |             | <b>ODE</b> | 6203       |   |           |   |  |  |
| <b>ENCL</b>           | OPEN         | <b>SN</b>   |            |            |   |           |   |  |  |
|                       | SFA 1.6/.8   |             |            |            |   |           |   |  |  |

**AC Induction Motor Performance Data**

Record # 47464

Typical performance - not guaranteed values

| Winding: 34WGS936-R002 |          | Type: 3416M               | Enclosure: OPEN                                  |                       |          |
|------------------------|----------|---------------------------|--|-----------------------|----------|
| <b>Nameplate Data</b>  |          |                           | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                       |          |
| Rated Output (HP)      | .33      | Full Load Torque          | 1.007 LB-FT                                      |                       |          |
| Volts                  | 230/460  | Start Configuration       | direct on line                                   |                       |          |
| Full Load Amps         | 1.4/.7   | Breakdown Torque          | 4.56 LB-FT                                       |                       |          |
| R.P.M.                 | 1725     | Pull-up Torque            | 3.18 LB-FT                                       |                       |          |
| Hz                     | 60 Phase | 3                         | Locked-rotor Torque                              | 3.82 LB-FT            |          |
| NEMA Design Code       | B        | KVA Code                  | N  | Starting Current      | 4.74 A   |
| Service Factor (S.F.)  | 1.35     | No-load Current           | 0.445 A  |                       |          |
| NEMA Nom. Eff.         | 73.4     | Power Factor              | 66   | Line-line Res. @ 25°C | 43.915 Ω |
| Rating - Duty          | 40C      | AMB-CONT                  | Temp. Rise @ Rated Load                          | 18°C                  |          |
| S.F. Amps              | 1.6/.8   | Temp. Rise @ S.F. Load    | 24°C   |                       |          |
|                        |          | Locked-rotor Power Factor | 58   |                       |          |
|                        |          | Rotor inertia             | 0.0381 LB-FT <sup>2</sup>                        |                       |          |

**Load Characteristics 460 V, 60 Hz, 0.33 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F.  |
|-----------------|--------|--------|--------|--------|--------|--------|-------|
| Power Factor    | 30     | 45     | 57     | 66     | 73     | 78     | 75    |
| Efficiency      | 55.9   | 69.8   | 74.8   | 76.7   | 76.9   | 76.2   | 76.6  |
| Speed           | 1785.9 | 1772.3 | 1758.5 | 1743.2 | 1726.8 | 1709.1 | 1720  |
| Line amperes    | 0.458  | 0.497  | 0.55   | 0.617  | 0.696  | 0.787  | 0.732 |

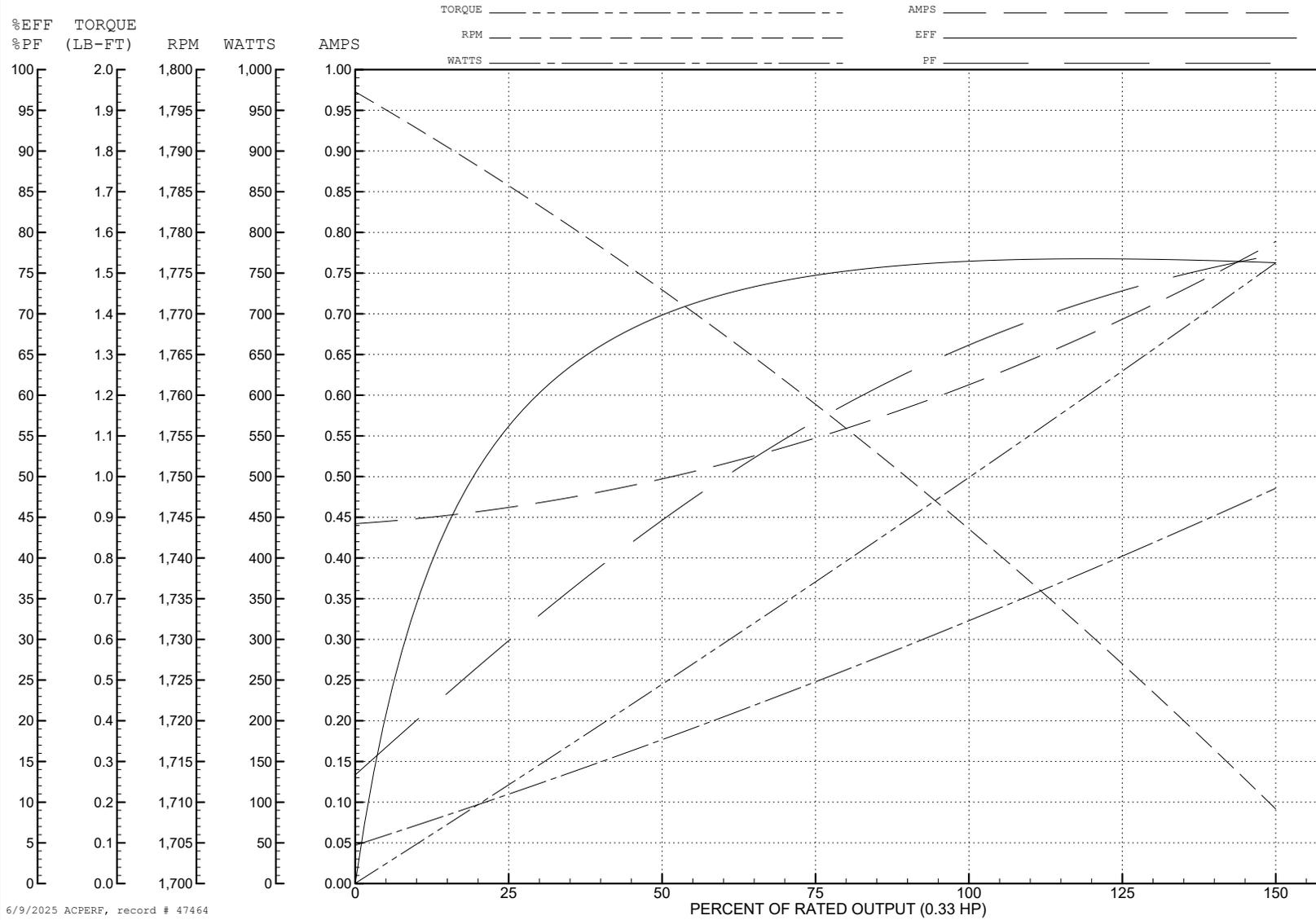
ABB Motors and Mechanical Inc.

WINDING # 34WGS936

0.33 HP 3 PH 60 HZ 1725 RPM 460 V 3416M

Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=4.56 PU=3.18 LR=3.82 LRA=4.74



6/9/2025 ACPERF, record # 47464

**AC Induction Motor Performance Data**

Record # 49379

Typical performance - not guaranteed values

| Winding: 34WGS936-R002 |          | Type: 3416M               | Enclosure: OPEN                                 |                       |        |
|------------------------|----------|---------------------------|---|-----------------------|--------|
| <b>Nameplate Data</b>  |          |                           | <b>230 V, 60 Hz:<br/>Low Voltage Connection</b> |                       |        |
| Rated Output (HP)      | .33      | Full Load Torque          | 1.01 LB-FT                                      |                       |        |
| Volts                  | 230/460  | Start Configuration       | direct on line                                  |                       |        |
| Full Load Amps         | 1.4/.7   | Breakdown Torque          | 4.56 LB-FT                                      |                       |        |
| R.P.M.                 | 1725     | Pull-up Torque            | 3.18 LB-FT                                      |                       |        |
| Hz                     | 60 Phase | 3                         | Locked-rotor Torque                             | 3.82 LB-FT            |        |
| NEMA Design Code       | B        | KVA Code                  | N   | Starting Current      | 9.48 A |
| Service Factor (S.F.)  | 1.35     | No-load Current           | 0.89 A  |                       |        |
| NEMA Nom. Eff.         | 73.4     | Power Factor              | 66  | Line-line Res. @ 25°C | 10.5 Ω |
| Rating - Duty          | 40C      | AMB-CONT                  | Temp. Rise @ Rated Load                         | 18°C                  |        |
| S.F. Amps              | 1.6/.8   | Temp. Rise @ S.F. Load    | 23°C  |                       |        |
|                        |          | Locked-rotor Power Factor | 58.4  |                       |        |
|                        |          | Rotor inertia             | 0.0381 LB-FT <sup>2</sup>                       |                       |        |

**Load Characteristics 230 V, 60 Hz, 0.33 HP**

| % of Rated Load | 25    | 50    | 75   | 100  | 125  | 150  | S.F. |
|-----------------|-------|-------|------|------|------|------|------|
| Power Factor    | 30    | 45    | 57   | 66   | 73   | 78   | 75   |
| Efficiency      | 55.8  | 69.9  | 74.8 | 77   | 76.7 | 76.4 | 76.6 |
| Speed           | 1786  | 1772  | 1759 | 1743 | 1727 | 1709 | 1720 |
| Line amperes    | 0.915 | 0.993 | 1.1  | 1.23 | 1.39 | 1.57 | 1.46 |

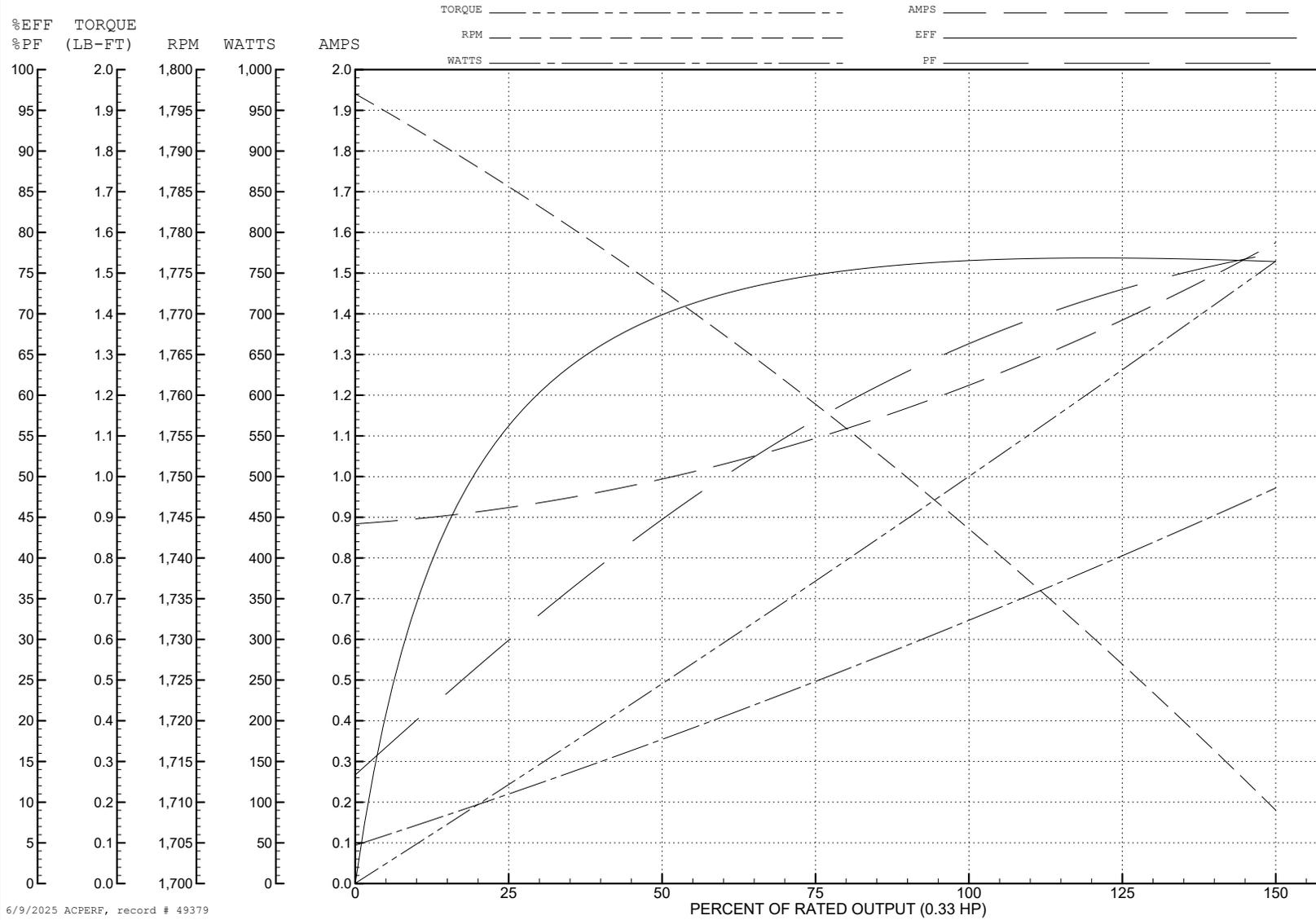
ABB Motors and Mechanical Inc.

WINDING # 34WGS936

0.33 HP 3 PH 60 HZ 1725 RPM 230 V 3416M

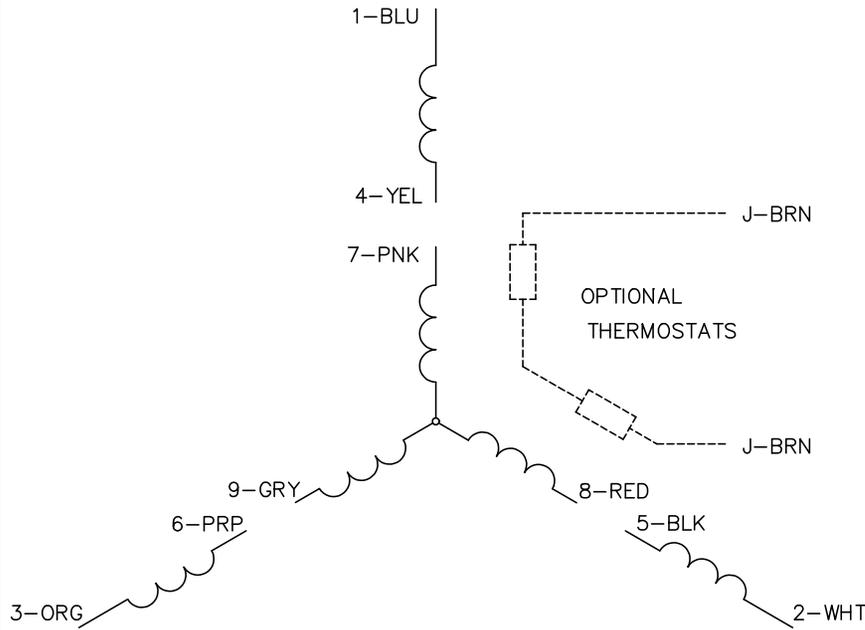
Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=4.56 PU=3.18 LR=3.82 LRA=9.48

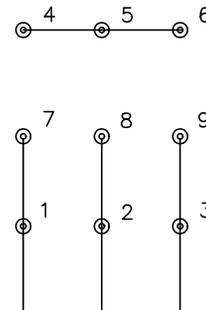




CD0005

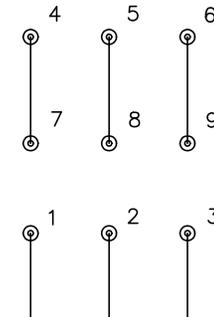


LOW VOLTAGE  
(2Y)



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.

CD0005

|   |         |                         |              |
|---|---------|-------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS |         |                         |              |
| REV. LTR: E                               | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| S00000                                    |         | FILE: AAA00005140       | MDL: -       |
|   |         | MTL: -                  |              |

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS