

# ABB BALDOR RELIANCE III

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## Customer information packet

### CPX32546T

50HP, 1775//1475RPM, 3PH, 60HZ, 326TY, XPFC

Class - CLI GP C,D; CLII GP E,F,G

Division - Division I

**Specifications**

|                                       |                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                                   |
| <b>Frame</b>                          | 326TY                                                                                  |
| <b>Frame Material</b>                 | Iron                                                                                   |
| <b>Frequency</b>                      | 60.00 Hz                                                                               |
| <b>Haz Area Class and Group</b>       | CLI GP C,D; CLII GP E,F,G                                                              |
| <b>Haz Area Division</b>              | Division I                                                                             |
| <b>Motor Letter Type</b>              | Three Phase                                                                            |
| <b>Output @ Frequency</b>             | 40.000 HP @ 50 HZ<br>50.000 HP @ 60 HZ                                                 |
| <b>Phase</b>                          | 3                                                                                      |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                                                       |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>460.0 V @ 60 HZ<br>380.0 V @ 50 HZ               |
| <b>Agency Approvals</b>               | UL<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>Constant Torque Speed Range</b>    | 6                                                                                      |
| <b>Current @ Voltage</b>              | 59.000 A @ 460.0 V<br>57.000 A @ 380.0 V<br>118.000 A @ 230.0 V<br>114.000 A @ 190.0 V |
| <b>Design Code</b>                    | A                                                                                      |
| <b>Drip Cover</b>                     | No Drip Cover                                                                          |
| <b>Duty Rating</b>                    | CONT                                                                                   |
| <b>Efficiency @ 100% Load</b>         | 94.5 %                                                                                 |

**Part Detail**

|                     |              |
|---------------------|--------------|
| <b>Revision</b>     | M            |
| <b>Type</b>         | AC           |
| <b>Mech. spec.</b>  |              |
| <b>Base</b>         |              |
| <b>Status</b>       | PRD/A        |
| <b>Elec. spec.</b>  | 12WGY585     |
| <b>Layout</b>       | 12LY-000-157 |
| <b>Eff. date</b>    | 11-05-2024   |
| <b>CD Diagram</b>   | CD0180       |
| <b>Poles</b>        | 04           |
| <b>Leads</b>        | 9#8          |
| <b>Proprietary</b>  | False        |
| <b>Created date</b> | 02-19-2019   |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Electrically Isolated Bearing</b> | Not Electrically Isolated  |
| <b>Enclosure Modification</b>        | Severe Duty Features       |
| <b>Feedback Device</b>               | NO FEEDBACK                |
| <b>Haz Area Temp Code</b>            | T3C                        |
| <b>Heater Indicator</b>              | No Heater                  |
| <b>High Voltage Full Load Amps</b>   | 57.0 a                     |
| <b>Insulation Class</b>              | F                          |
| <b>Inverter Code</b>                 | Inverter Duty              |
| <b>IP Rating</b>                     | IP55                       |
| <b>KVA Code</b>                      | J                          |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs      |
| <b>Locked Bearing Indicator</b>      | Locked Bearing             |
| <b>Max Speed</b>                     | 2700 rpm                   |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 1276M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 4                          |
| <b>Overall Length</b>                | 32.24 IN                   |
| <b>Power Factor</b>                  | 84                         |
| <b>Product Family</b>                | Chemical Process Features  |
| <b>Pulley Face Code</b>              | Standard                   |
| <b>Rodent Screen</b>                 | None                       |
| <b>RoHS Status</b>                   | ROHS NON-COMPLIANT         |
| <b>Service Factor</b>                | 1.00                       |
| <b>Shaft Diameter</b>                | 2.125 IN                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible                 |
| <b>Speed</b>                         | 1775 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>      | Normally Closed Thermostat |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor        |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

**Nameplate**

| NP2033XPSLEV |                           |        |   |              |      |          |                     |       |          |    |  |  |
|--------------|---------------------------|--------|---|--------------|------|----------|---------------------|-------|----------|----|--|--|
| NO.          |                           |        |   |              |      |          | CC                  | 010A  |          |    |  |  |
| S/N          |                           |        |   |              |      |          | TEMP CODE           | T3C   |          |    |  |  |
| SPEC.        | 12-0000-0487              |        |   |              |      |          | INV.TYPE            | PWM   |          |    |  |  |
| CAT.NO.      | CPX32546T                 |        |   |              |      |          | C HP FR             | 60    | C HP TO  | 90 |  |  |
| HP           | 50//40                    |        |   |              |      |          | CT HZ FROM          | 6     | CT HZ TO | 60 |  |  |
| VOLTS        | 230/460//190/380          |        |   |              |      |          | VT HZ FROM          | 6     | VT HZ TO | 60 |  |  |
| AMPS         | 118/59//114/57            |        |   |              |      |          | MAG CUR             | 50/25 |          |    |  |  |
| RPM          | 1775//1475                |        |   |              |      |          | MX RPM              | 2700  |          |    |  |  |
| HZ           | 60//50                    | PH     | 3 | CL           | F    | NOM.EFF. | 94.5                |       |          |    |  |  |
| SER.F.       | 1.00                      | DES    | A | SL HZ        | 0.83 | WK2      | 10.1                |       |          |    |  |  |
| FRAME        | 326TY                     | RATING |   | 40C AMB-CONT |      |          |                     |       |          |    |  |  |
| BLANK        | 55C AMB @ 1.0SF, 60C RISE |        |   |              |      |          |                     |       |          |    |  |  |
|              | 1.15SF ON SINEWAVE        |        |   |              |      |          | NEMA MG-1 PT.5,IP55 |       |          |    |  |  |

**AC Induction Motor Performance Data**

Record # 60172

Typical performance - not guaranteed values

| Winding: 12WGY585-R008 |    |              | Type: 1276M  |                                          | Enclosure: XPFC       |                |            |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|------------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |            |
| Rated Output (HP)      |    | 50           |              | Full Load Torque                         |                       | 148 LB-FT      |            |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line |            |
| Full Load Amps         |    | 118/59       |              | Breakdown Torque                         |                       | 561 LB-FT      |            |
| R.P.M.                 |    | 1775         |              | Pull-up Torque                           |                       | 236 LB-FT      |            |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 279 LB-FT      |            |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                | 475 A      |
| Service Factor (S.F.)  |    | 1            |              | No-load Current                          |                       | 25 A           |            |
| NEMA Nom. Eff.         |    | 94.5         | Power Factor | 84                                       | Line-line Res. @ 25°C |                | 0.096885 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 56°C           |            |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 26.4           |            |
|                        |    |              |              | Rotor inertia                            |                       | 10.1 LB-FT2    |            |

**Load Characteristics 460 V, 60 Hz, 50 HP**

| % of Rated Load | 25   | 50     | 75     | 100    | 125    | 150    |
|-----------------|------|--------|--------|--------|--------|--------|
| Power Factor    | 46   | 68     | 78     | 84     | 85     | 87     |
| Efficiency      | 90   | 93.7   | 94.6   | 94.7   | 94.4   | 93.9   |
| Speed           | 1794 | 1789.1 | 1784.4 | 1779.2 | 1773.7 | 1767.4 |
| Line amperes    | 28.6 | 36.9   | 47.3   | 59.1   | 72.4   | 86.3   |

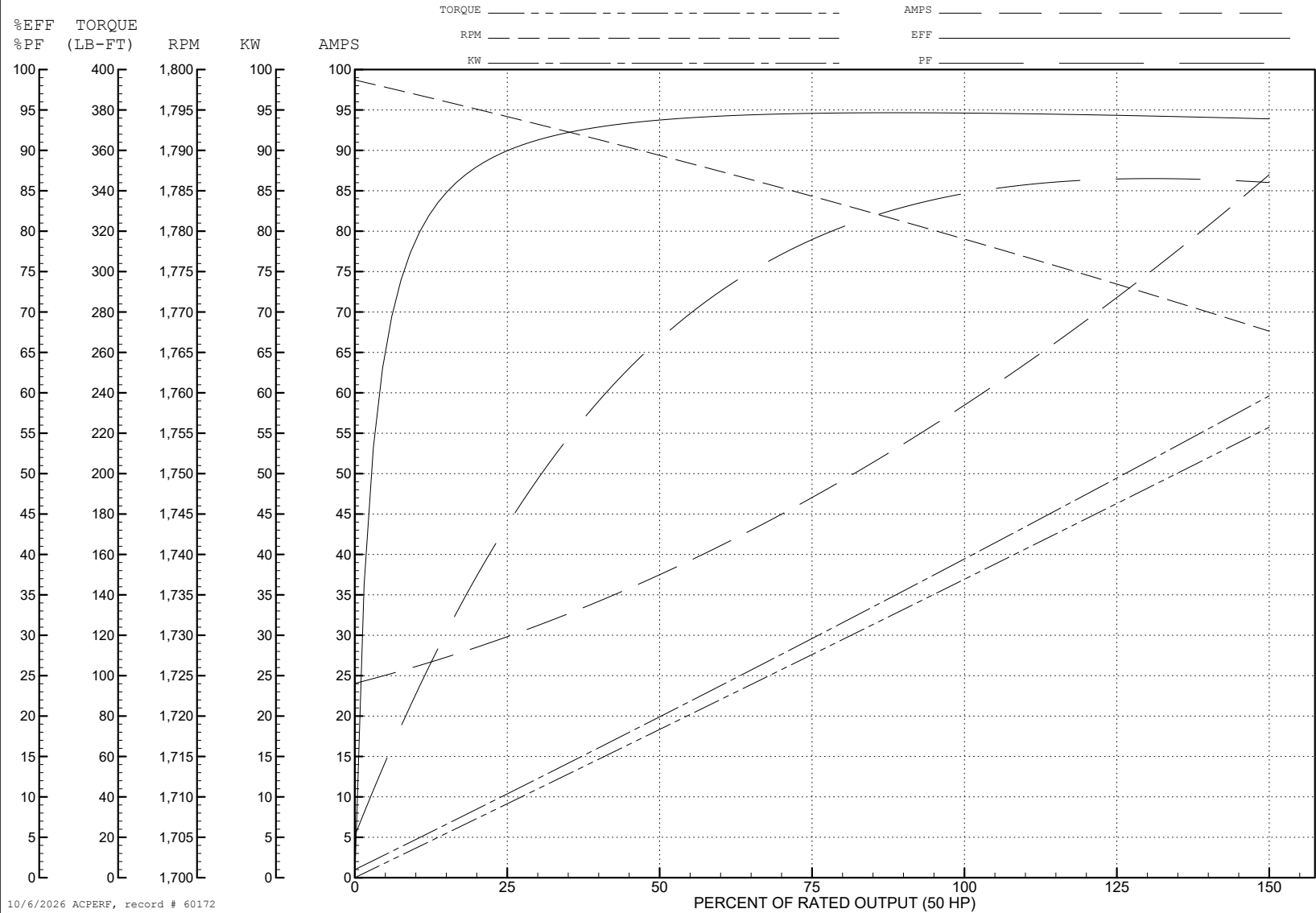
ABB Motors and Mechanical Inc.

WINDING # 12WGY585

Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1775 RPM 460 V 1276M

TORQUES (LB-FT): PO=561 PU=236 LR=279 LRA=475



**AC Induction Motor Performance Data**

Record # 74482

Typical performance - not guaranteed values

| Winding: 12WGY585-R011 |  |                  |  | Type: 1276M                              |  | Enclosure: XPFC     |  |                           |  |          |  |
|------------------------|--|------------------|--|------------------------------------------|--|---------------------|--|---------------------------|--|----------|--|
| Nameplate Data         |  |                  |  | 380 V, 50 Hz:<br>High Voltage Connection |  |                     |  |                           |  |          |  |
| Rated Output (HP)      |  | 50//40           |  | Full Load Torque                         |  | 142 LB-FT           |  |                           |  |          |  |
| Volts                  |  | 230/460//190/380 |  | Start Configuration                      |  | direct on line      |  |                           |  |          |  |
| Full Load Amps         |  | 118/59//114/57   |  | Breakdown Torque                         |  | 544 LB-FT           |  |                           |  |          |  |
| R.P.M.                 |  | 1775//1475       |  | Pull-up Torque                           |  | 248 LB-FT           |  |                           |  |          |  |
| Hz                     |  | 60//50 Phase     |  | 3                                        |  | Locked-rotor Torque |  | 293 LB-FT                 |  |          |  |
| NEMA Design Code       |  | A                |  | KVA Code                                 |  | J                   |  | Starting Current          |  | 465 A    |  |
| Service Factor (S.F.)  |  | 1                |  | No-load Current                          |  | 24.51 A             |  | Line-line Res. @ 25°C     |  | 0.0936 Ω |  |
| NEMA Nom. Eff.         |  | 94.5             |  | Power Factor                             |  | 84                  |  | Temp. Rise @ Rated Load   |  | 52°C     |  |
| Rating - Duty          |  | 40C AMB-CONT     |  | Temp. Rise @ S.F. Load                   |  | 63°C                |  | Locked-rotor Power Factor |  | 29.3     |  |
| S.F. Amps              |  |                  |  | Rotor inertia                            |  | 10.1 LB-FT2         |  |                           |  |          |  |

**Load Characteristics 380 V, 50 Hz, 40 HP**

| % of Rated Load | 25   | 50    | 75    | 100   | 125   | 150   |
|-----------------|------|-------|-------|-------|-------|-------|
| Power Factor    | 45   | 67    | 78    | 84    | 86    | 87    |
| Efficiency      | 90.3 | 93.7  | 94.6  | 94.3  | 94.2  | 93.2  |
| Speed           | 1494 | 1490  | 1485  | 1480  | 1475  | 1469  |
| Line amperes    | 27.9 | 35.86 | 45.89 | 57.36 | 70.22 | 83.76 |

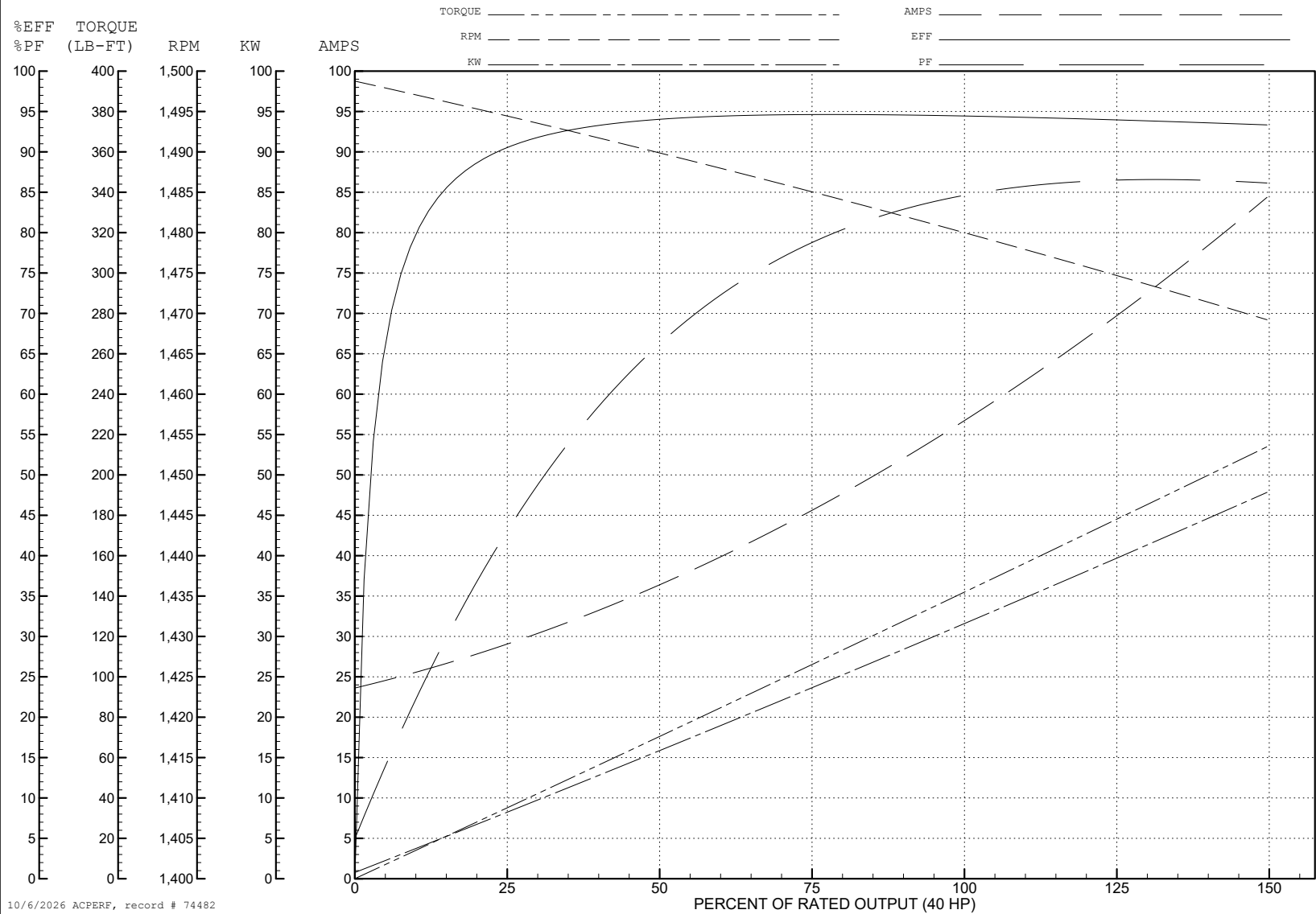
ABB Motors and Mechanical Inc.

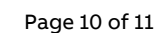
WINDING # 12WGY585

Typical performance - not guaranteed values.

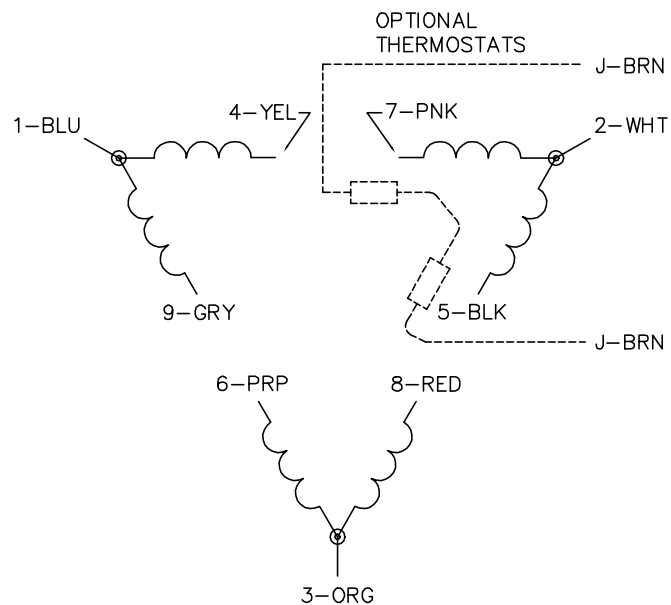
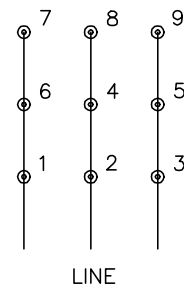
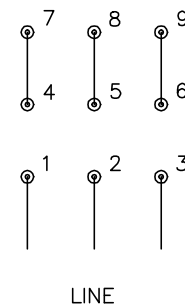
40 HP 3 PH 50 HZ 1480 RPM 380 V 1276M

TORQUES (LB-FT): PO=544 PU=248 LR=293 LRA=465





CD0180


 LOW VOLTAGE  
(2D)

 HIGH VOLTAGE  
(1D)

**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.

CD0180

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: —


**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1