ABB BALDOR RELIANCE

# Customer information packet

## ECP84115T-4

50HP, 1770RPM, 3PH, 60HZ, 326T, TEFC, F1
Class - CLI GP A,B,C,D
Division - Division II

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 326T |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | CLI GP A,B,C,D |
| **Haz Area Division** | Division II |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 50.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| **Agency Approvals** | CCSA US |
| | CSA EEV |
| | NEMA PREMIUM |
| | NEMA_PREMIUM |
| | UR |
| **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 |
| **Constant Torque Speed Range** | 1 |
| **Current @ Voltage** | 57.000 A @ 460.0 V |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 94.5 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Enclosure Modification** | 841 |
| **Feedback Device** | NO FEEDBACK |
| **Haz Area Temp Code** | T3 |

## Part Detail

| | |
|---|---|
| **Revision** | P |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 12WGX731 |
| **Layout** | 12LYG135 |
| **Eff. date** | 09-04-2026 |
| **CD Diagram** | CD0006 |
| **Poles** | 04 |
| **Leads** | 3#8 |
| **Proprietary** | False |
| **Created date** | 12-12-2018 |

| | |
|---|---|
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 57.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |
| **IP Rating** | IP56 |
| **KVA Code** | G |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Max Speed** | 2700 rpm |
| **Motor Lead Termination** | Ring Terminals |
| **Motor Standards** | NEMA |
| **Motor Type** | 1272M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 30.74 IN |
| **Power Factor** | 87 |
| **Product Family** | Chem Process S/P 32-8 IEEE 841 |
| **Pulley Face Code** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 2.125 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **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 |

**Nameplate**

| NP4332 | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | ECP84115T-4 | | | **P/N** | | | | | **ENCLOSURE** | TEFC | | | |
| **SPEC.** | 12-0000-0367 | | | **CC** | 010A | **FRAME** | 326T | | **S/N** | | | | |
| **HP** | 50 | | | **CLASS** | F | **HZ** | 60 | **ODE BRG** | 6312 | **DE BRG** | 6312 | | |
| **RPM** | 1770 | **RPM MAX** | 2700 | **PH** | 3 | **DES** | B | **D.E. BRG.** | 60BC03X30X | | | | |
| **VOLT** | 460 | | | **KVA-CODE** | G | | | **O.D.E. BRG.** | 60BC03X30X | | | | |
| **AMP** | 57 | | | **MOTOR WEIGHT** | 679 | **GREASE** | POLYREX EM | | | | | | |
| **RATING** | 40C AMB-CONT | | | **MAX. KVAR** | 9.4 | **BLANK** | | | | | | | |
| **NEMA-NOM-EFF** | 94.5 | **# OF ROTOR BARS** | 40 | **SER.F.** | 1.15 | **IP** | 56 | | | | | | |
| **G.MIN.EFF** | 93.6 | **# OF STATOR SLOTS** | 48 | **PF** | 87 | **INV.TYPE** | PWM | | | | | | |
| **TEMP CODE** | T3 | **INVERTER-TEMP-CODE** | 200 | | | | | | | | | | |
| **TEMP =** | 200 | **C HP FR** | 60 | **C HP TO** | 90 | | | | | | | | |
| **CT HZ FROM** | 1 | **CT HZ TO** | 60 | | | | | | | | | | |
| **HTR-VOLTS** | | **HTR-AMPS** | | **HTR-WATTS** | | **MAX. SPACE HEATER TEMP.** | | **VT HZ FROM** | 0- | **VT HZ TO** | 60 | | |

**AC Induction Motor Performance Data**
Record # 93262
Typical performance - not guaranteed values

| **Winding:** 12WGX731-R055 | **Type:** 1272M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 50 | **Full Load Torque** | 148 LB-FT |
| **Volts** | | | 460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 57 | **Breakdown Torque** | 446 LB-FT |
| **R.P.M.** | | | 1770 | **Pull-up Torque** | 183 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 254 LB-FT |
| **NEMA Design Code** | B | **KVA Code** | G | **Starting Current** | 362.5 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 18.3 A |
| **NEMA Nom. Eff.** | 94.5 | **Power Factor** | 87 | **Line-line Res. @ 25ºC** | 0.118 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 61°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 75°C |
| | | | | **Locked-rotor Power Factor** | 24.4 |
| | | | | **Rotor inertia** | 9.59 lb-ft² |

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

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 58 | 78 | 85 | 87 | 87 | 87 | 88 |
| **Efficiency** | 92.1 | 94.7 | 94.9 | 94.5 | 93.9 | 92.9 | 94.1 |
| **Speed** | 1791 | 1785 | 1779 | 1772 | 1765 | 1756 | 1768 |
| **Line amperes** | 22.3 | 31.9 | 43.5 | 56.9 | 71.3 | 87.1 | 65.5 |

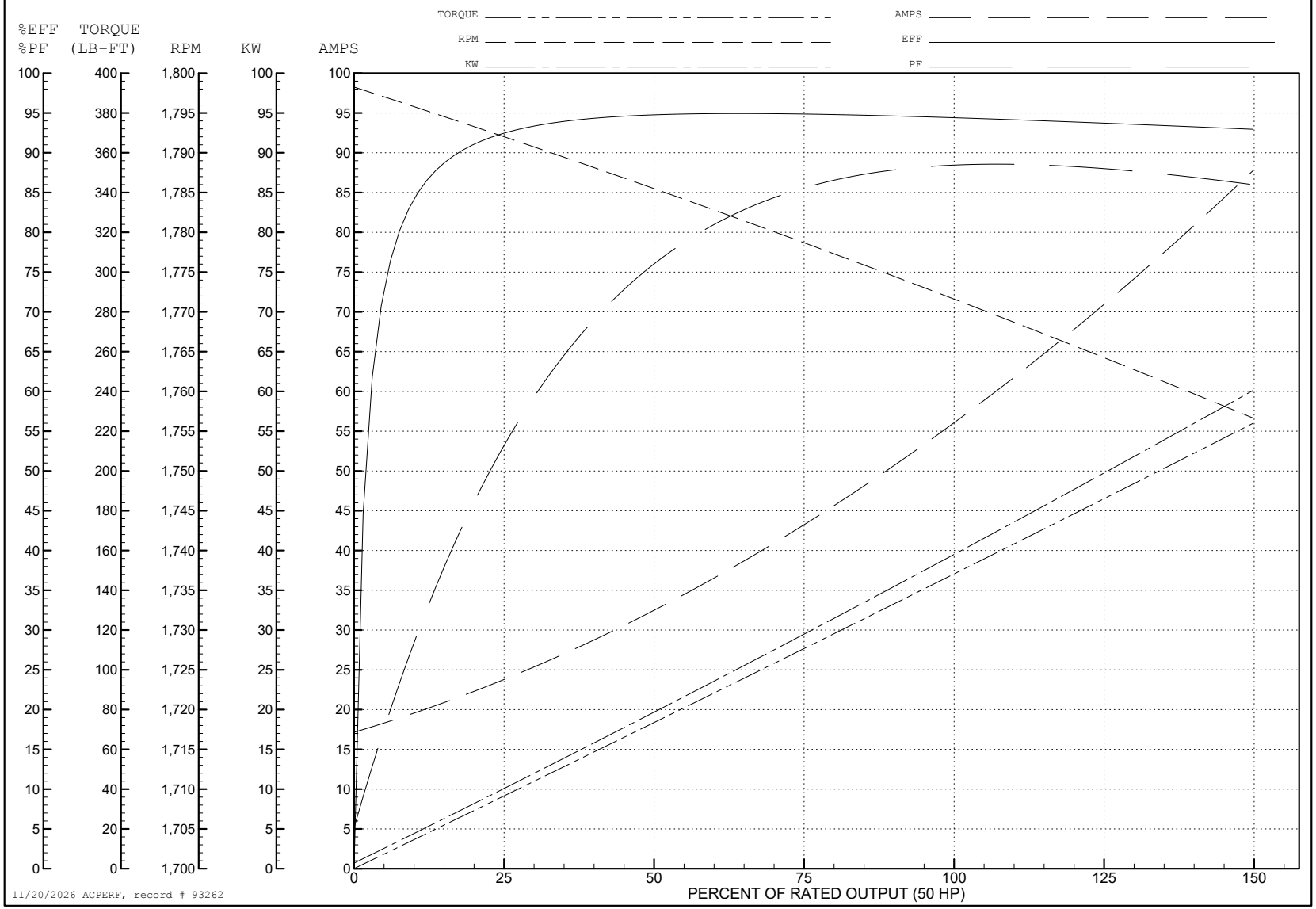
ABB Motors and Mechanical Inc.

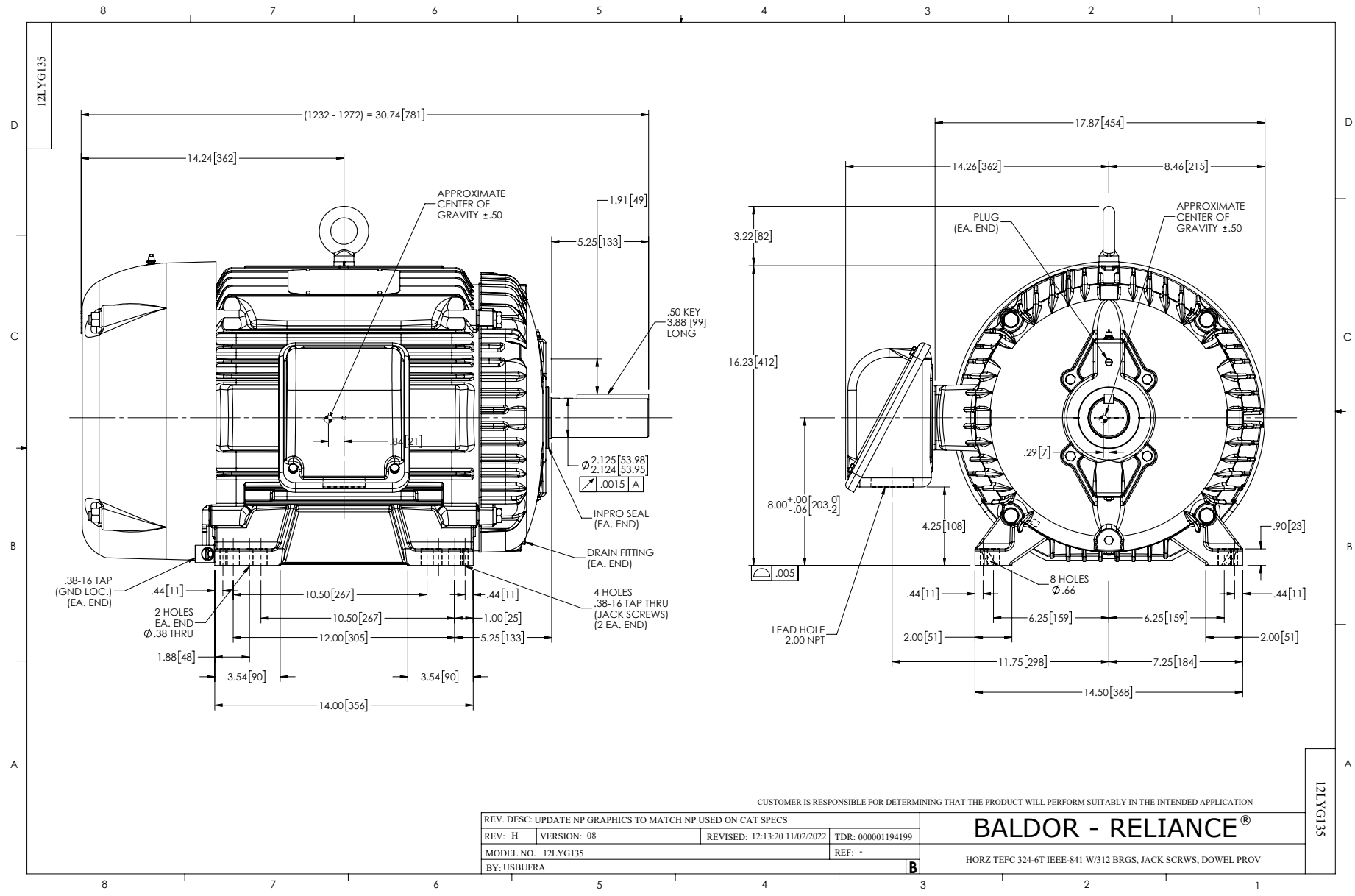
WINDING # 12WGX731

50 HP 3 PH 60 HZ 1770 RPM 460 V 1272M

Typical performance - not guaranteed values.

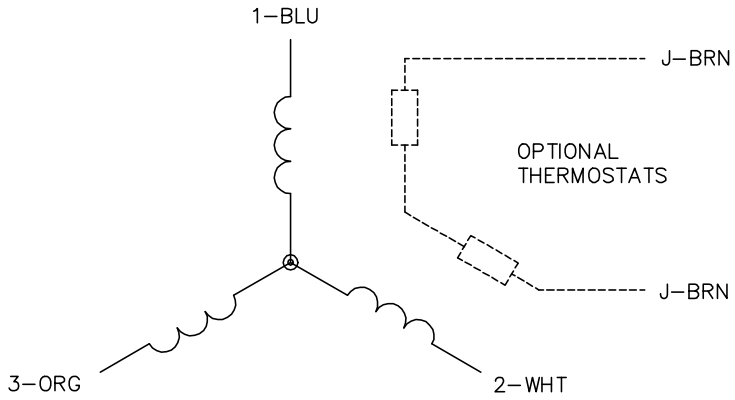
TORQUES(LB-FT): PO=446 PU=183 LR=254 LRA=362.5

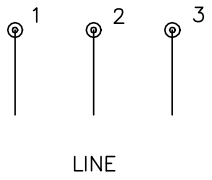



12LYG135
(1232 - 1272) = 30.74[781]
14.24[362]
APPROXIMATE CENTER OF GRAVITY ±.50
1.91[49]
5.25[133]
.50 KEY 3.88 [99] LONG
.84[21]
Ø2.125 [53.98] 2.124 [53.95]
.0015 A
INPRO SEAL (EA. END)
DRAIN FITTING (EA. END)
.38-16 TAP (GND LOC.) (EA. END)
.44[11]
10.50[267]
.44[11]
2 HOLES EA. END Ø.38 THRU
10.50[267]
1.00[25]
12.00[305]
5.25[133]
1.88[48]
3.54[90]
3.54[90]
14.00[356]
4 HOLES .38-16 TAP THRU (JACK SCREWS) (2 EA. END)
17.87[454]
14.26[362]
8.46[215]
PLUG (EA. END)
APPROXIMATE CENTER OF GRAVITY ±.50
3.22[82]
16.23[412]
.29[7]
8.00 +.00 -.06 [203 0 -2]
4.25[108]
.005
.90[23]
8 HOLES Ø.66
.44[11]
.44[11]
6.25[159]
6.25[159]
2.00[51]
2.00[51]
LEAD HOLE 2.00 NPT
11.75[298]
7.25[184]
14.50[368]
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE NP GRAPHICS TO MATCH NP USED ON CAT SPECS
REV: H
VERSION: 08
REVISED: 12:13:20 11/02/2022
TDR: 000001194199
MODEL NO. 12LYG135
REF: -
BY: USBUFRA
B
BALDOR - RELIANCE®
HORZ TEFC 324-6T IEEE-841 W/312 BRGS, JACK SCRWS, DOWEL PROV
12LYG135

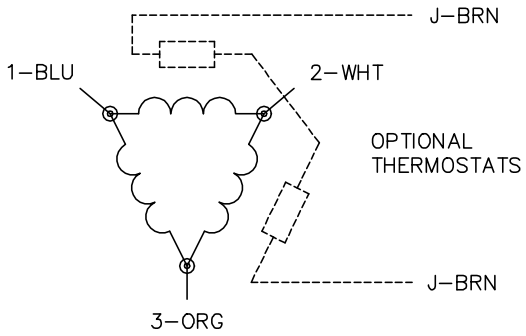
CD0006

TYPICAL WYE–CONNECTED MOTOR




TYPICAL DELTA–CONNECTED MOTOR




NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

| | | |
|---|---|---|
| REV. DESC: ADD CLASS CONN00000007 | | |
| REV. LTR: E | VERSION: 01 | TDR: 000001099922 |
| FILE: \AAA\00005\141 | REVISED: 10:24:49 02/19/2019 | BY: ENBRIR0 |
| MTL: – | | |

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3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1