ABB BALDOR RELIANCE

# Customer information packet

## CECP83581T-4

1HP, 1770RPM, 3PH, 60HZ, 143TC, 0520M, TEFC, F1
Class - CLI GP A,B,C,D
Division - Division II

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 143TC |
| **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** | 1.000 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** | 1.2 |
| **Current @ Voltage** | 1.600 A @ 460.0 V |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 85.5 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Front Shaft Indicator** | None |
| **Haz Area Temp Code** | T4 |

## Part Detail

| | |
|---|---|
| **Revision** | E |
| **Type** | AC |
| **Mech. spec.** | 05E943 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 05WGX565 |
| **Layout** | 05LYE943 |
| **Eff. date** | 05-12-2025 |
| **CD Diagram** | CD0006 |
| **Poles** | 04 |
| **Leads** | 3#18 |
| **Proprietary** | False |
| **Created date** | 03-11-2022 |

| | |
|---|---|
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 1.6 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | N |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Max Speed** | 2700 rpm |
| **Motor Lead Quantity/Wire Size** | 3 @ 18 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0520M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 13.38 IN |
| **Power Factor** | 68 |
| **Product Family** | Chem Process S/P 32-8 IEEE 841 |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 0.875 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **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**

| NP4328 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | CECP83581T-4 | | | | | | | | |
| **SPEC.** | 05E943X565G1 | | | | | | | | |
| **HP** | 1 TE | | | **IP** | 56 | | | | |
| **VOLTS** | 460 | | | | | | | | |
| **AMPS** | 1.6 | | | | | | | | |
| **R.P.M.** | 1770 | | | | | | | | |
| **FRAME** | 143TC | **HZ** | 60 | | | **PH** | 3 | | |
| **SER.F.** | 1.15 | **CODE** | N | **DES.** | B | | **CLASS** | F | |
| **RATING** | 40C AMB-CONT | | | | | | | | |
| **SN** | | | | | | | | | |
| **DE** | 6205 | **ODE** | 6205 | | | | | | |
| **NEMA NOM. EFF.** | 85.5 | **P.F.** | 68 | | | | | | |
| **GUAR. MIN. EFF.** | 82.5 | **CC** | 010A | | | | | | |
| **T. CODE** | T4 | **TEMP=** | 135 | | | | | | |

| NP3186 | | | | | | | |
|---|---|---|---|---|---|---|---|
| **SPEC.** | 05E943X565G1 | | | | | | |
| **ABMA DE BRG** | 25BC02X30X | | | | | | |
| **ABMA ODE BRG** | 25BC02X30X | | | | | | |
| **GREASE** | POLYREX EM | | | | | | |
| **MOTOR WEIGHT** | 56 | **ROTOR BARS** | 27 | **STATOR BARS** | 36 | | |
| **MAX. R.P.M.** | 2700 | **MAX. KVAR** | 0.52 | | | | |
| | SFA 1.75 | | | | | | |
| **INV.TYPE** | PWM | | | | | | |
| **T=** | 135 | | | | | | |
| **CHP** | 60 | **TO** | 90 | | | | |
| **CT** | 1.2 | **TO** | 60 | | | | |
| **VT** | -0 | **TO** | 60 | | | | |
| **HTR-VOLTS** | | **HTR-AMPS** | | | | | |
| **HTR-WATTS** | | **MAX. SPACE HEATER TEMP.** | | | | | |

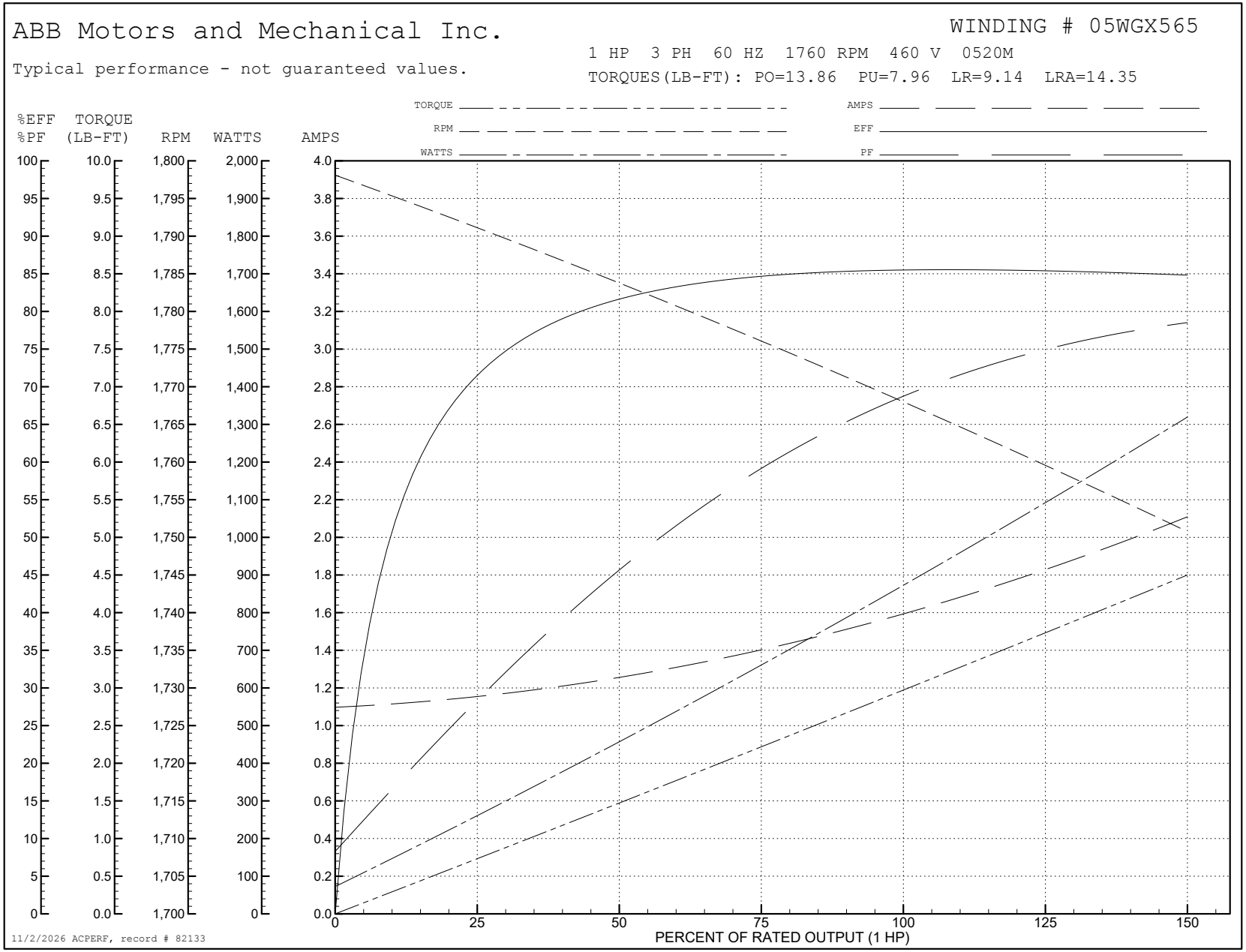
**AC Induction Motor Performance Data**
Record # 82133
Typical performance - not guaranteed values

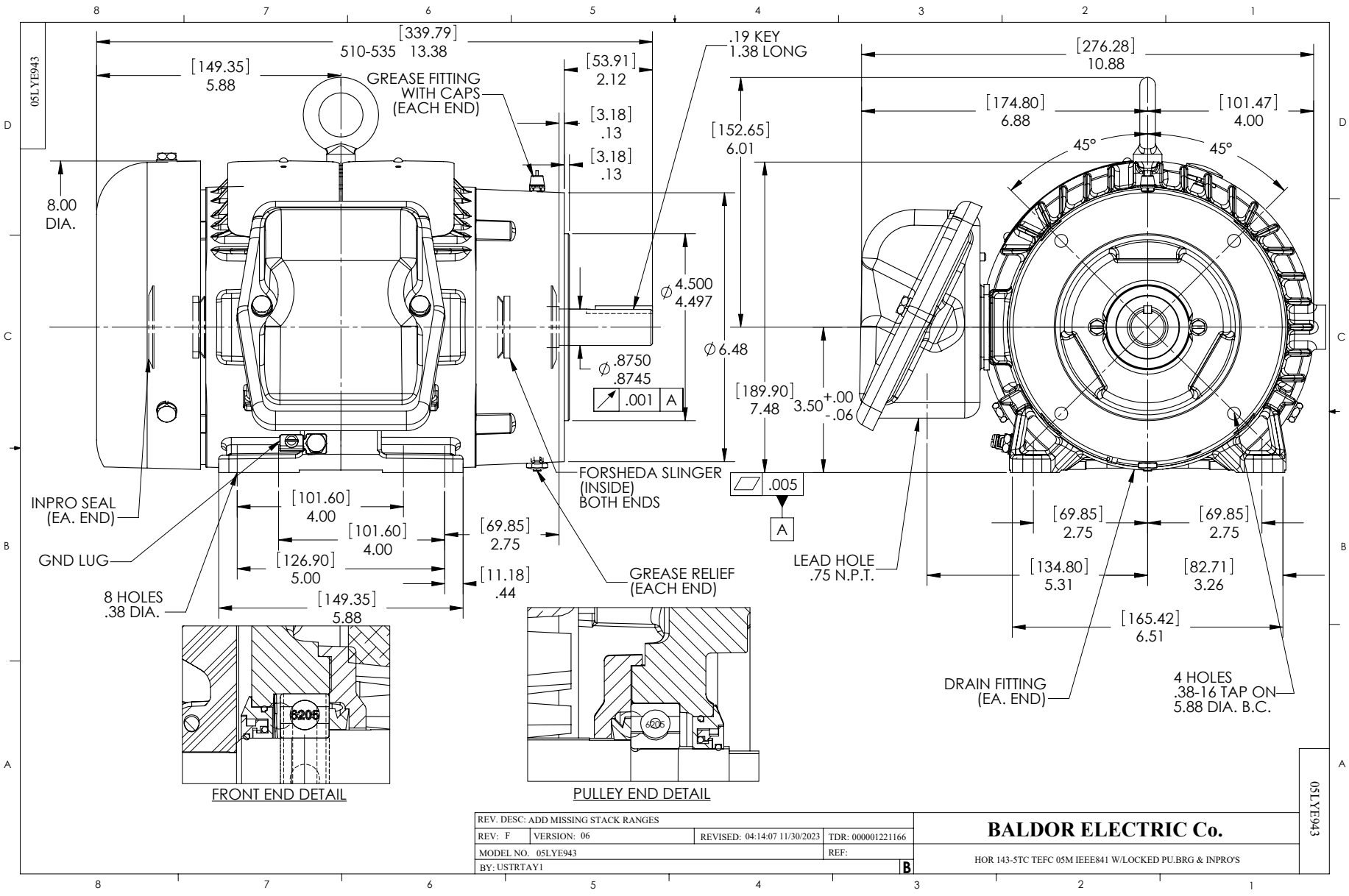
| **Winding:** 05WGX565-R001 | **Type:** 0520M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 1 | **Full Load Torque** | 2.97 LB-FT |
| **Volts** | | | 460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 1.6 | **Breakdown Torque** | 13.86 LB-FT |
| **R.P.M.** | | | 1760 | **Pull-up Torque** | 7.96 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 9.14 LB-FT |
| **NEMA Design Code** | B | **KVA Code** | N | **Starting Current** | 14.35 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 1.11 A |
| **NEMA Nom. Eff.** | 85.5 | **Power Factor** | 67 | **Line-line Res. @ 25ºC** | 16.8 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 24°C |
| **S.F. Amps** | | | 1.8 | **Temp. Rise @ S.F. Load** | 28°C |
| | | | | **Locked-rotor Power Factor** | 61.8256 |
| | | | | **Rotor inertia** | 0.144 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 1 HP**

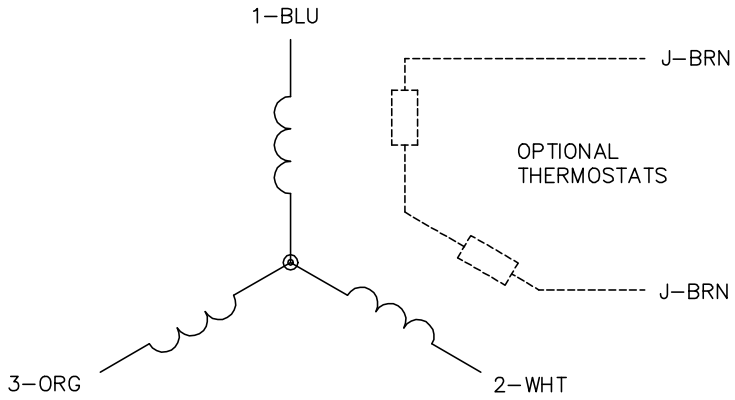
| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 29 | 46 | 59 | 68 | 75 | 79 | 73 |
| **Efficiency** | 71.7 | 81.5 | 84.6 | 85.6 | 85.4 | 84.8 | 85.6 |
| **Speed** | 1791 | 1784 | 1776 | 1768 | 1759 | 1751 | 1763 |
| **Line amperes** | 1.14 | 1.25 | 1.4 | 1.61 | 1.84 | 2.1 | 1.73 |

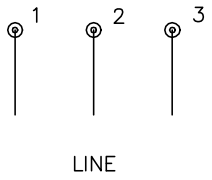

ABB Motors and Mechanical Inc.
WINDING # 05WGX565
Typical performance - not guaranteed values.
1 HP 3 PH 60 HZ 1760 RPM 460 V 0520M
TORQUES(LB-FT): PO=13.86 PU=7.96 LR=9.14 LRA=14.35
TORQUE
RPM
WATTS
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
WATTS
AMPS
PERCENT OF RATED OUTPUT (1 HP)
11/2/2026 ACPERF, record # 82133


[339.79]
510-535 13.38
[149.35]
5.88
GREASE FITTING
WITH CAPS
(EACH END)
[53.91]
2.12
[3.18]
.13
[3.18]
.13
.19 KEY
1.38 LONG
[276.28]
10.88
[174.80]
6.88
[101.47]
4.00
45°
45°
[152.65]
6.01
8.00
DIA.
⌀4.500
4.497
⌀6.48
⌀.8750
.8745
.001 A
[189.90]
7.48
3.50 +.00 -.06
.005
A
FORSHEDA SLINGER
(INSIDE)
BOTH ENDS
INPRO SEAL
(EA. END)
GND LUG
8 HOLES
.38 DIA.
[101.60]
4.00
[101.60]
4.00
[126.90]
5.00
[69.85]
2.75
[11.18]
.44
[149.35]
5.88
GREASE RELIEF
(EACH END)
LEAD HOLE
.75 N.P.T.
[69.85]
2.75
[69.85]
2.75
[134.80]
5.31
[82.71]
3.26
[165.42]
6.51
DRAIN FITTING
(EA. END)
4 HOLES
.38-16 TAP ON
5.88 DIA. B.C.
6205
6205
FRONT END DETAIL
PULLEY END DETAIL
REV. DESC: ADD MISSING STACK RANGES
REV: F
VERSION: 06
REVISED: 04:14:07 11/30/2023
TDR: 000001221166
MODEL NO. 05LYE943
REF:
BY: USTRTAY1
B
BALDOR ELECTRIC Co.
HOR 143-5TC TEFC 05M IEEE841 W/LOCKED PU.BRG & INPRO'S
05LYE943

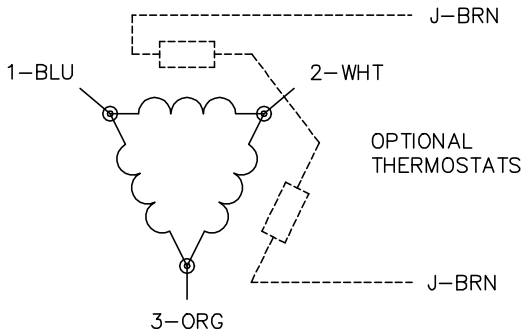
CD0006

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 | | | BALDOR - RELIANCE® |
| REV. LTR: E | VERSION: 01 | TDR: 000001099922 | |
| FILE: \AAA\00005\141 | REVISED: 10:24:49 02/19/2019 | BY: ENBRIR0 | 3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED |
| MTL: – | | | SH 1 of 1 |