ABB BALDOR RELIANCE

# Customer information packet

## EM3581T

1HP, 1760RPM, 3PH, 60HZ, 143T, 0520M, TEFC, F1
Class - None
Division - Not Applicable

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.
11/5/2026 5:20:25 PM

## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 143T |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | None |
| **Haz Area Division** | Not Applicable |
| **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 |
| | 230.0 V @ 60 HZ |
| **Agency Approvals** | CURUSEEV |
| | NEMA PREMIUM |
| | NEMA PREMIUM (OLD LOGO) |
| **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 |
| **Current @ Voltage** | 3.200 A @ 208.0 V |
| | 3.260 A @ 230.0 V |
| | 1.630 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 |
| **Heater Indicator** | No Heater |

## Part Detail

| | |
|---|---|
| **Revision** | P |
| **Type** | AC |
| **Mech. spec.** | 05C001 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 05WGX508 |
| **Layout** | 05LYC001 |
| **Eff. date** | 11-05-2025 |
| **CD Diagram** | CD0005 |
| **Poles** | 04 |
| **Leads** | 9#18 |
| **Proprietary** | False |
| **Created date** | 01-15-2019 |

| | |
|---|---|
| **High Voltage Full Load Amps** | 1.6 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **IP Rating** | NONE |
| **KVA Code** | N |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | No Locked Bearing |
| **Motor Lead Quantity/Wire Size** | 9 @ 18 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0520M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 12.54 IN |
| **Power Factor** | 67 |
| **Product Family** | General Purpose |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **RoHS Status** | ROHS COMPLIANT |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 0.875 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1760 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**

| NP3441LUA | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | EM3581T | | | | | | | | | |
| **SPEC** | 05C001X508G1 | | | | | | | | | |
| **HP** | 1 | | | | | | | | | |
| **VOLTS** | 230/460 | | | | | | | | | |
| **AMPS** | 3.26/1.63 | | | | | | | | | |
| **RPM** | 1760 | | | | | | | | | |
| **FRAME** | 143T | **HZ** | 60 | **PH** | 3 | | | | | |
| **SF** | 1.15 | **CODE** | N | **DES** | B | **CLASS** | F | | | |
| **NEMA NOM. EFF** | 85.5 | **PF** | 67 | | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | | |
| **CC** | 010A | | | | | | | | | |
| **ENCL** | TEFC | **SER** | | | | | | | | |
| **DE** | 6205 | **ODE** | 6203 | | | | | | | |
| **VPWM INVERTER READY** | SFA 3.52/1.76 | | | | | | | | | |
| **CT6-60H(10:1)VT3-60H(20:1** | | | | | | | | | | |
| | 50HZ 1HP 190/380V 3.6/1.8A | | | | | | | | | SF1.0 |

**Accessories**

| Part number | Description | Multiplier |
|---|---|---|
| 35-1300 | C FACE KIT | A8 |

**AC Induction Motor Performance Data**
Record # 82131
Typical performance - not guaranteed values

| **Winding:** 05WGX508-R001 | **Type:** 0520M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | **460 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|
| **Rated Output (HP)** | | 1 | **Full Load Torque** | 2.979 LB-FT |
| **Volts** | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | 3.2-3.2/1.6 | **Breakdown Torque** | 13.9 LB-FT |
| **R.P.M.** | | 1760 | **Pull-up Torque** | 8 LB-FT |
| **Hz** | 60 **Phase** | 3 | **Locked-rotor Torque** | 9.18 LB-FT |
| **NEMA Design Code** | B **KVA Code** | N | **Starting Current** | 14.4 A |
| **Service Factor (S.F.)** | | 1.15 | **No-load Current** | 1.11 A |
| **NEMA Nom. Eff.** | 0 **Power Factor** | 0 | **Line-line Res. @ 25ºC** | 16.215 Ω |
| **Rating - Duty** | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 24°C |
| **S.F. Amps** | | | **Temp. Rise @ S.F. Load** | 28°C |
| | | | **Locked-rotor Power Factor** | 62 |

**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 | 74 | 79 | 72 |
| **Efficiency** | 71.2 | 81.4 | 84.6 | 85.5 | 85.4 | 84.7 | 85.4 |
| **Speed** | 1791.4 | 1784.2 | 1776.7 | 1768.6 | 1760 | 1750.7 | 1763 |
| **Line amperes** | 1.14 | 1.25 | 1.41 | 1.61 | 1.84 | 2.11 | 1.75 |

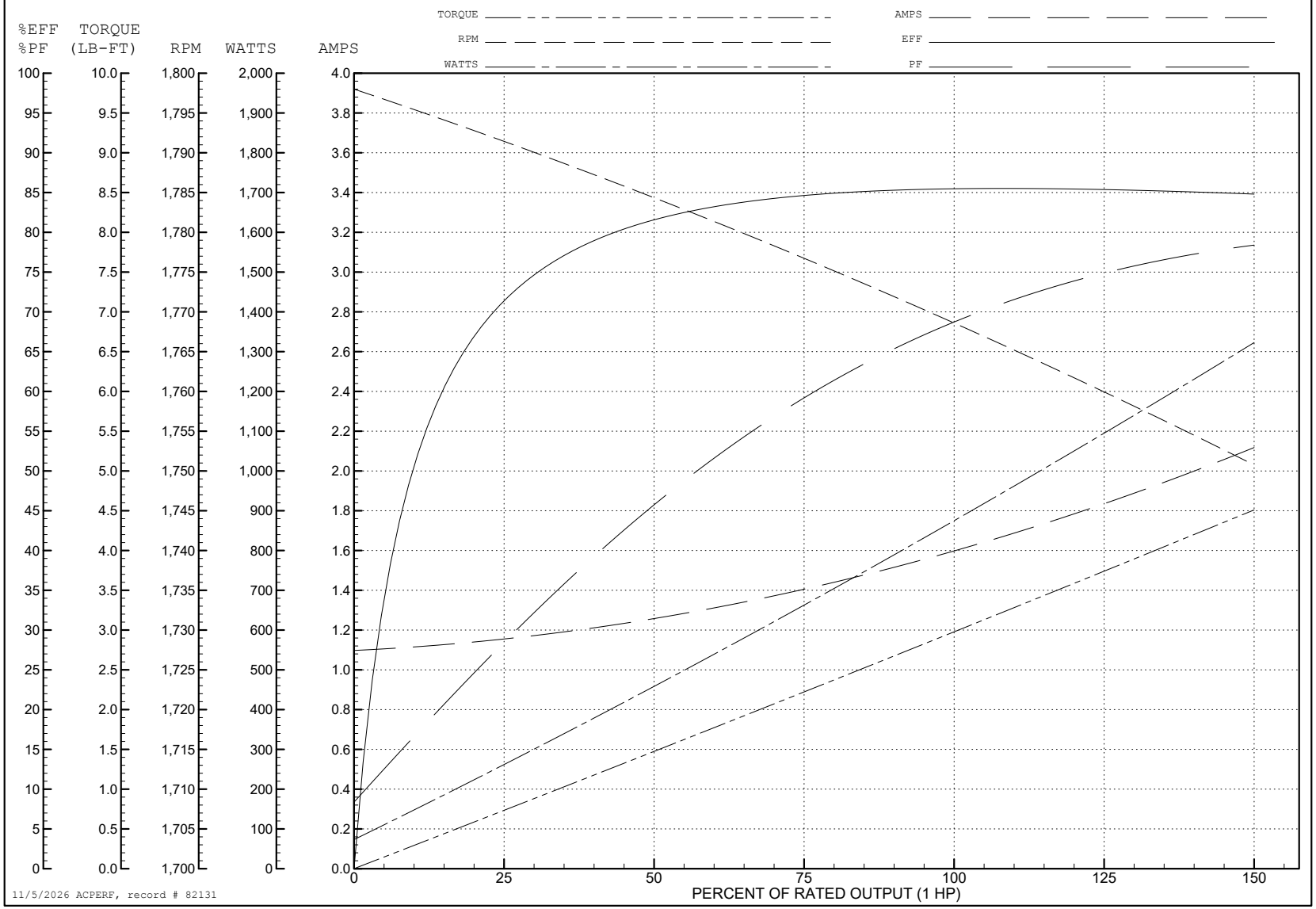
ABB Motors and Mechanical Inc.

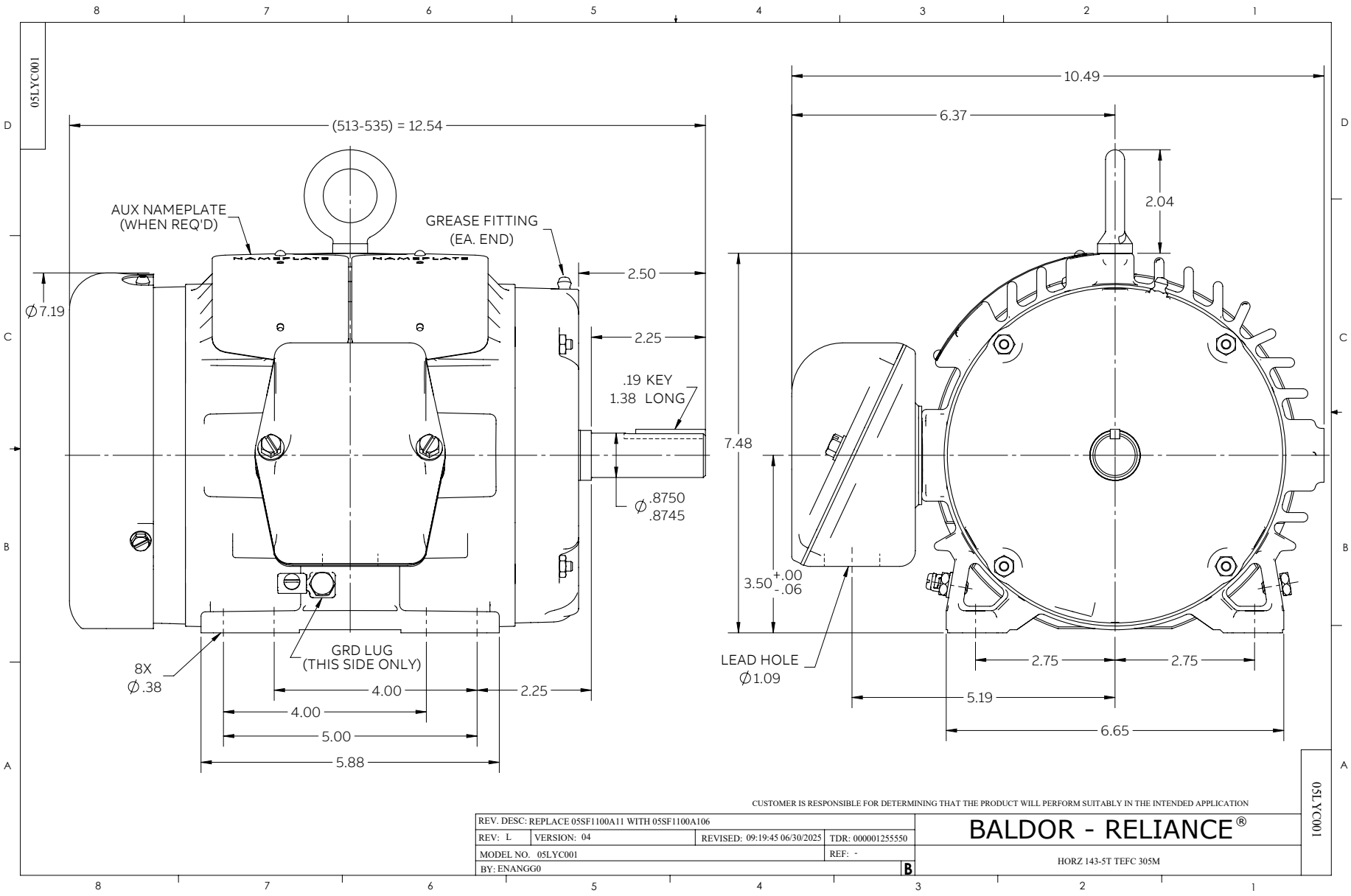
WINDING # 05WGX508

1 HP 3 PH 60 HZ 1760 RPM 460 V 0520M

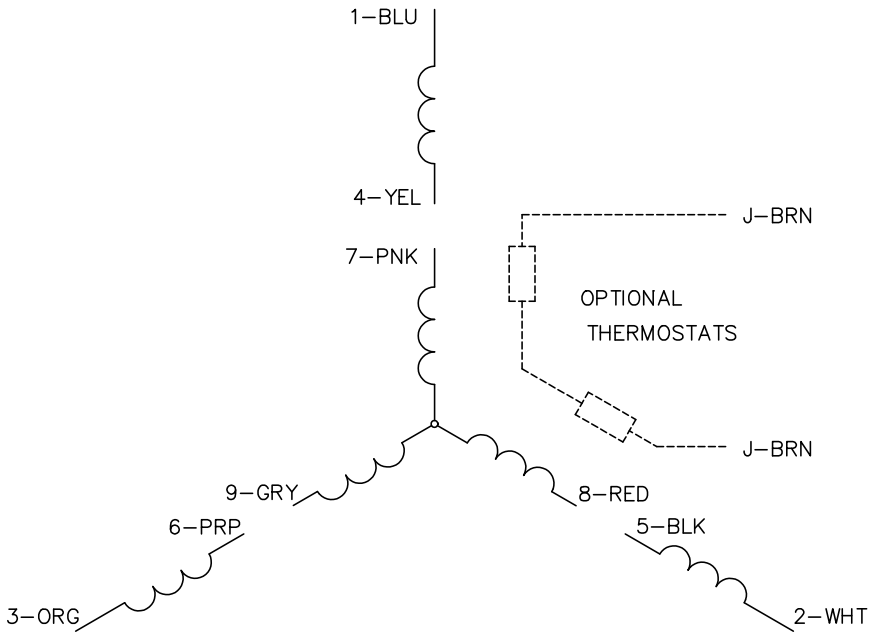
Typical performance - not guaranteed values.

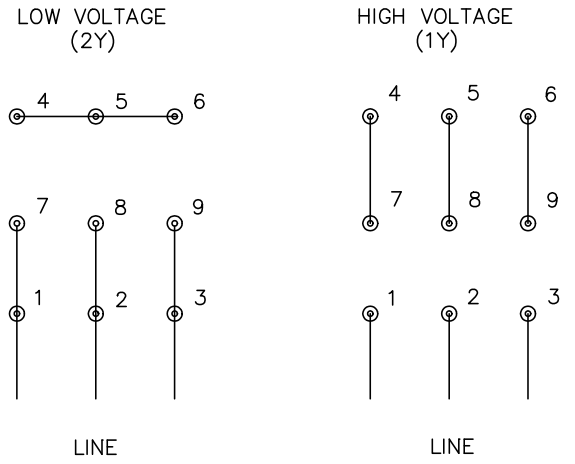
TORQUES(LB-FT): PO=13.9 PU=8 LR=9.18 LRA=14.4




05LYC001
(513-535) = 12.54
AUX NAMEPLATE
(WHEN REQ'D)
GREASE FITTING
(EA. END)
∅7.19
2.50
2.25
.19 KEY
1.38 LONG
∅.8750
.8745
8X
∅.38
GRD LUG
(THIS SIDE ONLY)
4.00
2.25
4.00
5.00
5.88
10.49
6.37
2.04
7.48
3.50 +.00 -.06
LEAD HOLE
∅1.09
2.75
2.75
5.19
6.65
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: REPLACE 05SF1100A11 WITH 05SF1100A106
REV: L
VERSION: 04
REVISED: 09:19:45 06/30/2025
TDR: 000001255550
MODEL NO. 05LYC001
REF: -
BY: ENANGG0
B
BALDOR - RELIANCE®
HORZ 143-5T TEFC 305M
05LYC001

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.

CD0005

| | | | |
|---|---|---|---|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | BALDOR ELECTRIC Co. |
| REV. LTR: E | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| CD0005 | | FILE: AAA00005140 | MDL: – |
| | | MTL: – | 3PH, DV, 9 LEADS |