ABB BALDOR RELIANCE

# Customer information packet

## FDEM4108T-5

50M 2P TEFC HOR 286TS FARM DUTY SE
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 286TS |
| **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** | 30.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 3600 RPM @ 60 HZ |
| **Voltage @ Frequency** | 575.0 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** | 28.000 A @ 575.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 91.7 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Front Shaft Indicator** | None |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 28.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |

## Part Detail

| | |
|---|---|
| **Revision** | M |
| **Type** | AC |
| **Mech. spec.** | 09L813 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 09WGT509 |
| **Layout** | 09LYL813 |
| **Eff. date** | 12-16-2025 |
| **CD Diagram** | CD0006 |
| **Poles** | 02 |
| **Leads** | 3#10 |
| **Proprietary** | False |
| **Created date** | 06-14-2018 |

| | |
|---|---|
| **KVA Code** | J |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Motor Lead Quantity/Wire Size** | 3 @ 10 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0950M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 2 |
| **Overall Length** | 24.77 IN |
| **Power Factor** | 88 |
| **Product Family** | General Purpose |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 1.625 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **Speed** | 3520 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**

| NP3126L | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | FDEM4108T-5 | | | | | | | | |
| **SPEC.** | 09L813T509G1 | | | | | | | | |
| **HP** | 30 | | | | | | | | |
| **VOLTS** | 575 | | | | | | | | |
| **AMP** | 28 | | | | | | | | |
| **RPM** | 3520 | | | | | | | | |
| **FRAME** | 286TS | **HZ** | 60 | | | | **PH** | 3 | |
| **SER.F.** | 1.15 | **CODE** | J | **DES** | A | **CL** | F | | |
| **NEMA-NOM-EFF** | 91.7 | **PF** | 88 | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | |
| **CC** | 010A | | | | | | | | |
| **DE** | 6311 | **ODE** | 6208 | | | | | | |
| **ENCL** | TEFC | **SN** | | | | | | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA357355 | SA 09L813T509G1 | 1.000 ea |
| RA346347 | RA 09L813T509G1 | 1.000 ea |
| 09FN3001D01SP | EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO | 1.000 ea |
| HW1002A63 | WASHER, 5/8 HI-COLLAR SPRLCKWASHER | 1.000 ea |
| 10CB3000SP | KOBX, CAST W/2.00 LEAD HOLE | 1.000 ea |
| 09GS1000 | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE | 1.000 ea |
| 10XN3118K12 | 5/16-18 X .75 GRADE 5, ZINC PLATED | 4.000 ea |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| WD1000B25 | GND LUG, BURNDY L125HP OR T&B L125HP-BB | 1.000 ea |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN | 1.000 ea |
| 09EP1100A198 | ENDPLATE, MACH | 1.000 ea |
| HA3400A33 | STUD- 3/8-16 X 4.96 HEX | 4.000 ea |
| XY3816A12 | 3/8-16 FINISHED NUT W/SERRATIONS | 4.000 ea |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| HW4600B44 | V-RING SLINGER 1.500 X 1.810 X .28 VITON | 1.000 ea |
| HW5100A08 | W3118-035 WVY WSHR (WB) | 1.000 ea |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 ea |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| 09EP1116A33 | PU ENDPLATE, MACH FOR LIP SEAL,"O" DRAIN | 1.000 ea |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5 | 4.000 ea |
| HW4600A53 | SEAL 2.00 X 3.00 X 0.313 SINGLE LIP | 1.000 ea |
| HW4600B40 | V-RING SLINGER 2.000 X 2.680 X .28 VITON | 1.000 ea |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| 09FH4000SP | 309 FH - BLACK PRIMER | 1.000 ea |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| 10CB3500 | CONDUIT BOX LID, CAST | 1.000 ea |
| 10GS1000 | GASKET, CONDUIT BOX LID | 1.000 ea |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 4.000 ea |
| HW2501G17 | KEY, 3/8 SQ X 1.875 | 1.000 ea |
| HA4066A01 | PUSH IN T-DRAIN FITTING (BLACK) | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.080 lb |

| | | |
|---|---|---|
| HA4066A01 | PUSH IN T-DRAIN FITTING (BLACK) | 1.000 ea |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| MG1025C02 | WILKOFAST SG, 787.105, TAN | 0.050 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0006 | CONNECTION LABEL | 1.000 ea |
| NP3126L | ALUM FARM DUTY SUPER-E UL CSA-EEV PREM | 1.000 ea |
| 40PA1005 | PACKAGING GROUP, 09 STD | 1.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |
| LD7020E03 | LEAD SET, 10AWG, 3 LEAD, 20" LONG LEADS | 1.000 ea |

**AC Induction Motor Performance Data**
Record # 68011
Typical performance - not guaranteed values

| **Winding:** 09WGT509-R001 | **Type:** 0950M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **575 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 30 | **Full Load Torque** | 44.62 LB-FT |
| **Volts** | | | 575 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 28 | **Breakdown Torque** | 181 LB-FT |
| **R.P.M.** | | | 3520 | **Pull-up Torque** | 92.38 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 110 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | J | **Starting Current** | 238 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 9.64 A |
| **NEMA Nom. Eff.** | 91.7 | **Power Factor** | 88 | **Line-line Res. @ 25ºC** | 0.367 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 79°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 96°C |
| | | | | **Locked-rotor Power Factor** | 28.2 |
| | | | | **Rotor inertia** | 1.28 lb-ft² |

**Load Characteristics 575 V, 60 Hz, 30 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 54 | 76 | 84 | 88 | 90 | 90 | 89 |
| **Efficiency** | 87.4 | 91.7 | 92.4 | 92.1 | 91.4 | 90.4 | 91.7 |
| **Speed** | 3581 | 3563 | 3544 | 3523 | 3501 | 3475 | 3510 |
| **Line amperes** | 11.76 | 16.13 | 21.62 | 27.74 | 34.22 | 41.24 | 31.6 |

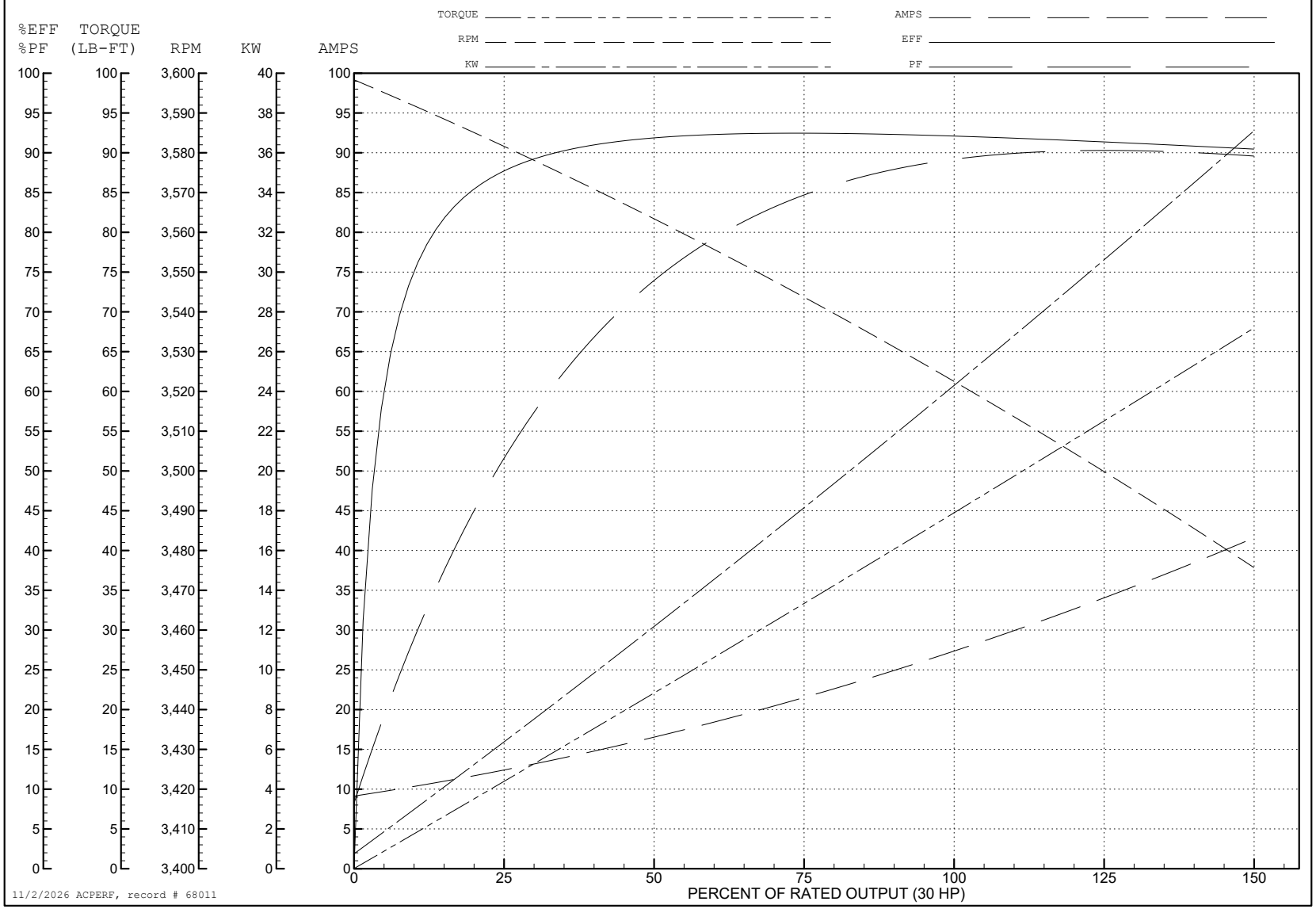
ABB Motors and Mechanical Inc.

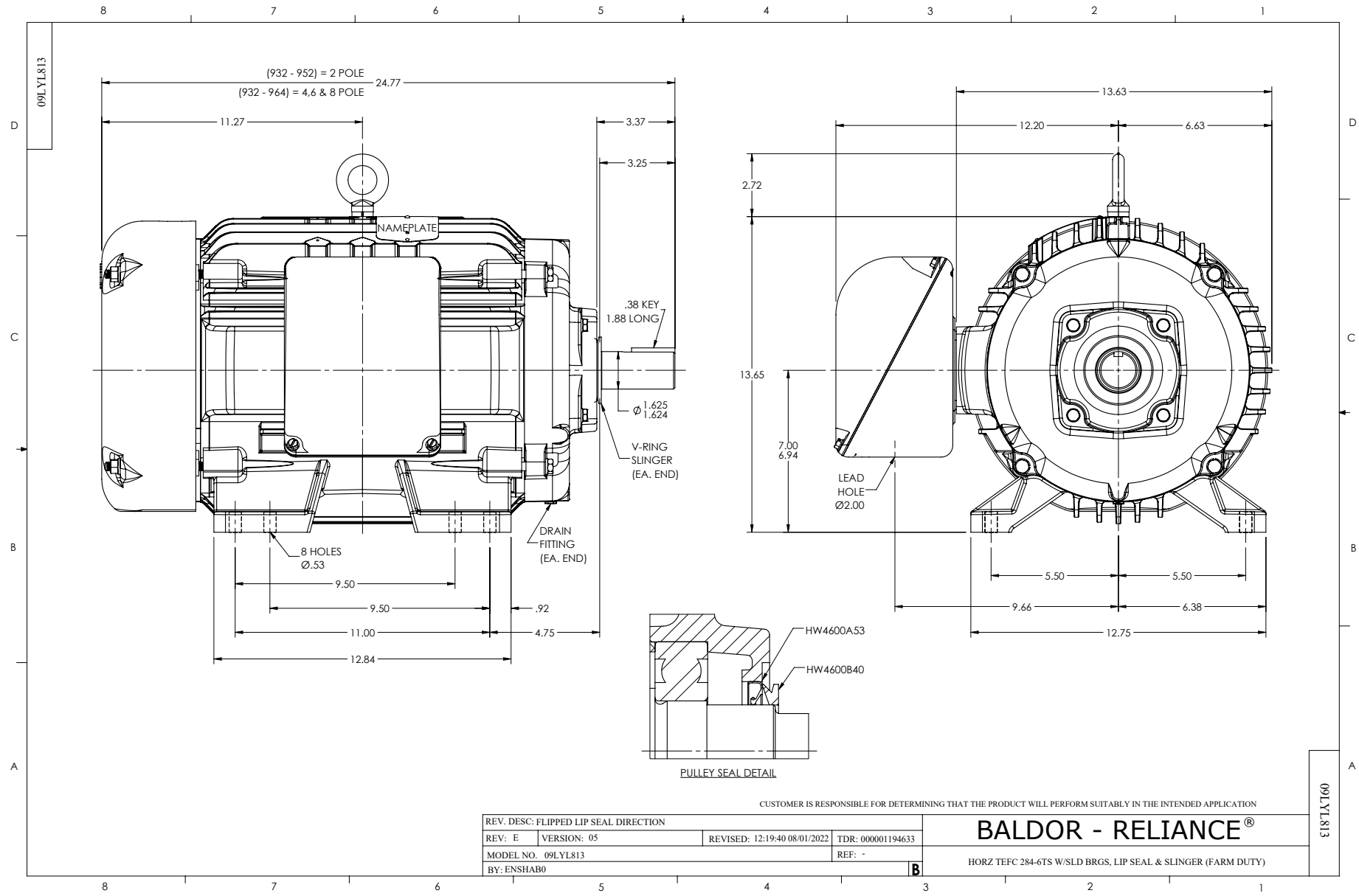
WINDING # 09WGT509

30 HP 3 PH 60 HZ 3520 RPM 575 V 0950M

Typical performance - not guaranteed values.

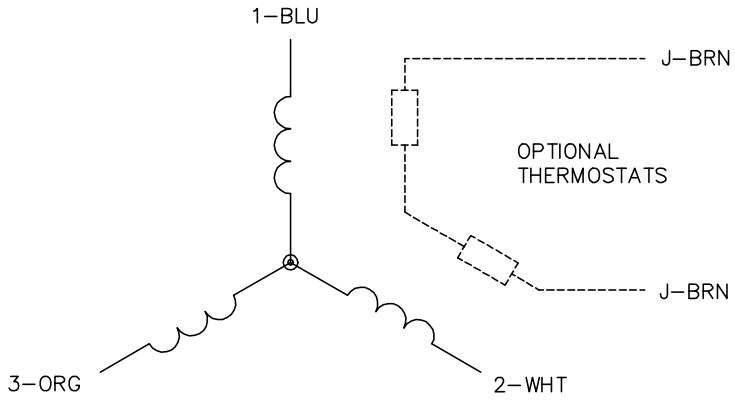
TORQUES(LB-FT): PO=181 PU=92.38 LR=110 LRA=238

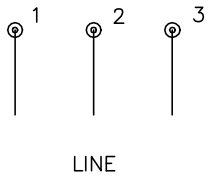



09LYL813
(932 - 952) = 2 POLE
(932 - 964) = 4,6 & 8 POLE
24.77
11.27
3.37
3.25
NAMEPLATE
.38 KEY
1.88 LONG
Ø 1.625
1.624
V-RING
SLINGER
(EA. END)
DRAIN
FITTING
(EA. END)
8 HOLES
Ø.53
9.50
9.50
.92
11.00
4.75
12.84
13.63
12.20
6.63
2.72
13.65
7.00
6.94
LEAD
HOLE
Ø2.00
5.50
5.50
9.66
6.38
12.75
HW4600A53
HW4600B40
PULLEY SEAL DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: FLIPPED LIP SEAL DIRECTION
REV: E
VERSION: 05
REVISED: 12:19:40 08/01/2022
TDR: 000001194633
MODEL NO. 09LYL813
REF: -
BY: ENSHAB0
B
BALDOR - RELIANCE®
HORZ TEFC 284-6TS W/SLD BRGS, LIP SEAL & SLINGER (FARM DUTY)
09LYL813

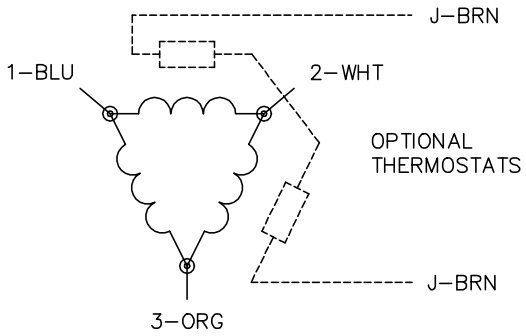
CD0006

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 |