



Customer information packet

CEM4114T

50HP, 3540RPM, 3PH, 60HZ, 326TSC, 1252M, TEFC

Class - None

Division - Not Applicable

Specifications

| | |
|--------------------------------|--|
| Enclosure | TEFC |
| Frame | 326TSC |
| 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 | 50.000 HP @ 60 HZ |
| Phase | 3 |
| Synchronous Speed @ Frequency | 3600 RPM @ 60 HZ |
| Voltage @ Frequency | 460.0 V @ 60 HZ 230.0 V @ 60 HZ |
| Agency Approvals | NEMA PREMIUM NEMA_PREMIUM UR CSA EEV |
| Ambient Temperature | 40 °C |
| Auxillary Box | No Auxillary Box |
| Auxillary Box Lead Termination | None |
| Base Indicator | Rigid |
| Bearing Grease Type | Polyrex EM (-20F +300F) |
| Blower | None |
| Current @ Voltage | 122.000 A @ 208.0 V 56.000 A @ 460.0 V 112.000 A @ 230.0 V |
| Design Code | A |
| Drip Cover | No Drip Cover |
| Duty Rating | CONT |
| Efficiency @ 100% Load | 93.0 % |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device | NO FEEDBACK |
| Front Face Code | Standard |

Part detail

| | |
|--------------|------------|
| Revision | U |
| Type | AC |
| Mech. spec. | 12H41 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 12WGY291 |
| Layout | 12LYH041 |
| Eff. date | 06-27-2024 |
| CD Diagram | CD0180 |
| Poles | 02 |
| Leads | 9#8 |
| Proprietary | False |
| Created date | 09-15-2010 |

| | |
|-------------------------------|-----------------------|
| Front Shaft Indicator | None |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 56.0 a |
| Insulation Class | F |
| Inverter Code | Inverter Ready |
| KVA Code | H |
| Lifting Lugs | Standard Lifting Lugs |
| Locked Bearing Indicator | Locked Bearing |
| Motor Lead Exit | Ko Box |
| Motor Lead Quantity/Wire Size | 9 @ 8 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 1252M |
| Mounting Arrangement | F1 |
| Number of Poles | 2 |
| Overall Length | 28.78 IN |
| Power Factor | 90 |
| Product Family | General Purpose |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | C-Face |
| Pulley Shaft Indicator | Standard |
| Rodent Screen | None |
| Service Factor | 1.15 |
| Shaft Diameter | 1.875 IN |
| Shaft Extension Location | Pulley End |
| Shaft Ground Indicator | No Shaft Grounding |
| Shaft Rotation | Reversible |
| Shaft Slinger Indicator | Shaft Slinger |
| Speed | 3540 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

NP3443LUA

| | | | | | | | |
|------------------|----------------------------|--------------------------------|------|-----------------------------------|------------|----------------|-------------|
| CAT.NO. | CEM4114T | CUST. P/N | | | | ENCL | TEFC |
| SPEC. | 12H041Y291G2 | CC | 010A | FRAME | 326TSC | SER.NO. | |
| HP | 50 | CLASS | F | HZ | 60 | | |
| R.P.M. | 3540 | PH. | 3 | DES. | A | | |
| VOLTS | 230/460 | CODE | H | ODE BRG | 6311 | DE BRG | 6312 |
| AMPS | 112/56 | | | | | | |
| RATING | 40C AMB-CONT | NEMA NOM. EFF. | 93 | GREASE | POLYREX EM | | |
| P.F. | 90 | SER.F. | 1.15 | CT6-60H(10:1)VT3-60H(20:1) | | | |
| USABLE AT | 50Hz 50HP 190/380V 134/67A | SF1.0 | | | | | |
| VOLTS | AMPS | MAX. SPACE HEATER TEMP. | | | | | |

Parts list

| Part number | Description | Quantity |
|-------------|--|----------|
| SA203006 | SA 12H041Y291G2 | 1.000 ea |
| RA190268 | RA 12H041Y291G2 | 1.000 ea |
| 37FN3002C04 | EXFN, PLASTIC, 6.00 OD, 2.003 ID | 1.000 ea |
| 10CB3001 | CONDUIT BOX CAST W/2.500 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 |
| 12EP1107A05 | FR ENDPLATE, MACH | 1.000 ea |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 ea |
| HA3400A13 | STUD, 1/2-13 X 7" WELKER | 4.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| HW4600B41 | V-RING SLINGER 2.125 X 2.880 X 0.280 | 1.000 ea |
| HW5100A13 | W4627-047 WVY WSHR | 1.000 ea |
| 10XN3118K40 | 5/16-18 X 2.25" HEX HD, GRADE 5 | 2.000 ea |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 2.000 ea |
| 10XN3118K40 | 5/16-18 X 2.75" HEX HD, GRADE 5 | 4.000 ea |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| 12EP1105A01 | PU ENDPLATE | 1.000 ea |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 ea |
| 10XN5013K28 | 1/2-13 X 1.75 HEX HEAD MACH SCREW,GRAD | 4.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| 12FH1002SP | FAN COVER, CAST | 1.000 ea |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I | 4.000 ea |
| XY5013A12 | NUT,1/2-13,HEX,STEEL,ZINCPLATED | 4.000 ea |
| 10CB3500SP | CONDUIT BOX LID, CAST | 1.000 ea |
| 10GS1000SP | GASKET, CONDUIT BOX LID | 1.000 ea |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 4.000 ea |
| HW2501H18 | KEY, 1/2 SQ X 2.000 | 1.000 ea |
| HW4500A21 | 1618BALEMITE FITTING 825 UNIVERSAL | 1.000 ea |

| | | |
|-------------|--|----------|
| HA4017A01 | 1/8 X 4 GREASE EXT (F/S) | 1.000 ea |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 ea |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.200 lb |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 ea |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 ea |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 ea |
| MG1050Y01 | CELEROL BALDOR GOLD *** NLA IN 5 GALLON | 0.080 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 4.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500bx)4/22 | 1.000 ea |
| LC0181 | CONNECTION LABEL | 1.000 ea |
| NP3443LUA | SS SUPER-E,CURUS-EEV,NEMA PREM, CC | 1.000 ea |
| 12PA1000 | PACKAGING GROUP PRINT PK1024A07 | 1.000 ea |
| PE-0000013 | ZRTG PE ASSEMBLY | 1.000 ea |
| FE-0000022 | ZRTG FE ASSEMBLY | 1.000 ea |

AC Induction Motor Performance Data

Record # 35504

Typical performance - not guaranteed values

| Winding: 12WGY291-R005 | | Type: 1252M | | Enclosure: TEFC | |
|-------------------------------|------------------------|--------------------|--|-------------------------|--|
| Nameplate Data | | | 460 V, 60 Hz: High Voltage Connection | | |
| Rated Output (HP) | 50 | | Full Load Torque | 74.4 LB-FT | |
| Volts | 230/460 | | Start Configuration | direct on line | |
| Full Load Amps | 112/56 | | Breakdown Torque | 292 LB-FT | |
| R.P.M. | 3540 | | Pull-up Torque | 112 LB-FT | |
| Hz | 60 Phase | 3 | Locked-rotor Torque | 139 LB-FT | |
| NEMA Design Code | A KVA Code | H | Starting Current | 408 A | |
| Service Factor (S.F.) | 1.15 | | No-load Current | 14.9 A | |
| NEMA Nom. Eff. | 93 Power Factor | 90 | Line-line Res. @ 25°C | 0.11257 Ω | |
| Rating - Duty | 40C AMB-CONT | | Temp. Rise @ Rated Load | 77°C | |
| S.F. Amps | | | Temp. Rise @ S.F. Load | 95°C | |
| | | | Locked-rotor Power Factor | 20.9 | |
| | | | Rotor inertia | 4.07 LB-FT ² | |

Load Characteristics 460 V, 60 Hz, 50 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| Power Factor | 66 | 82 | 88 | 90 | 91 | 90 | 91 |
| Efficiency | 91.1 | 93.8 | 94.2 | 93.9 | 93.2 | 92.3 | 93.5 |
| Speed | 3584.1 | 3571.8 | 3558.2 | 3544.1 | 3528.2 | 3511.2 | 3535 |
| Line amperes | 20.4 | 30.8 | 42.9 | 55.8 | 69.5 | 84.6 | 64 |

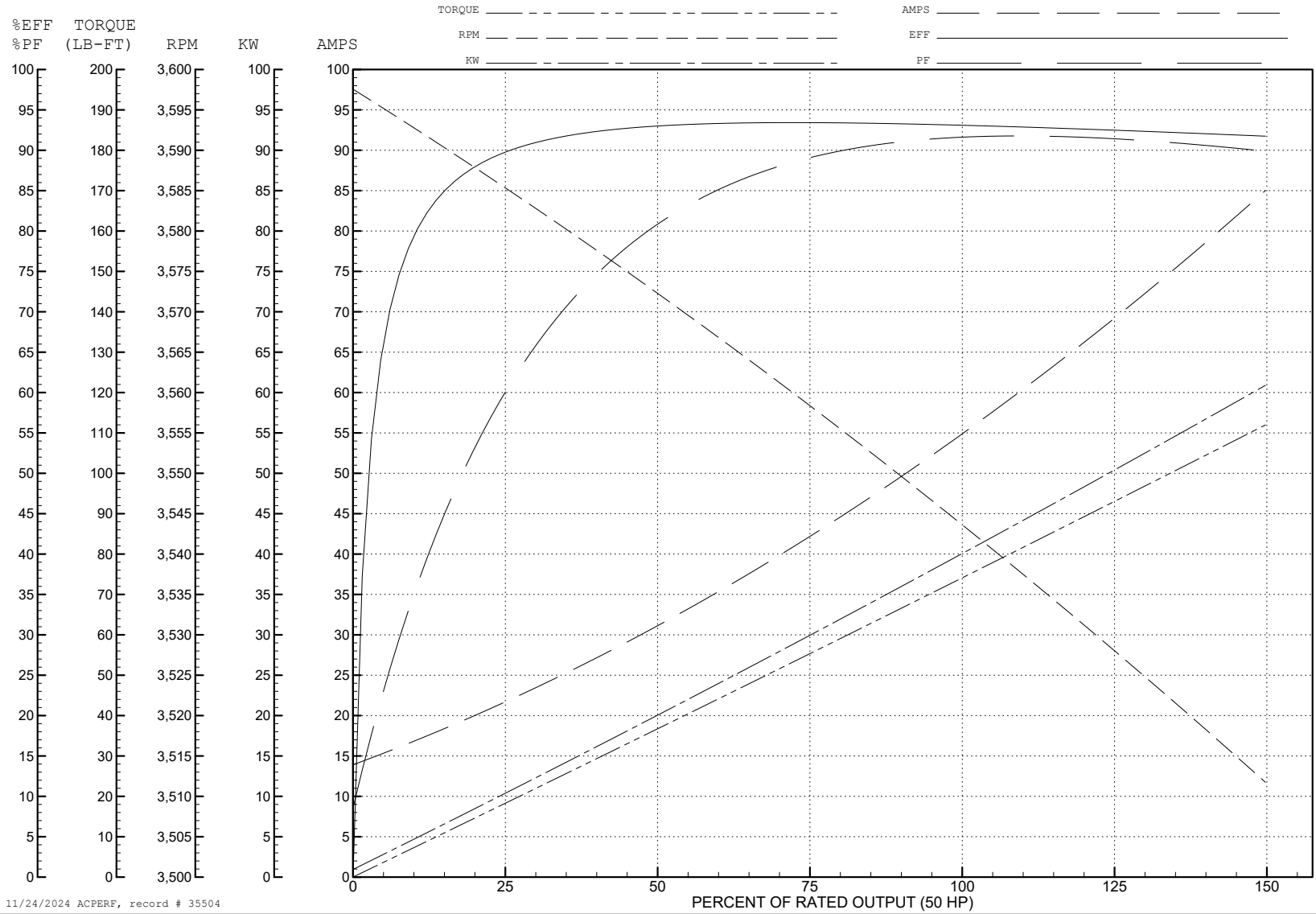
ABB Motors and Mechanical Inc.

WINDING # 12WGY291

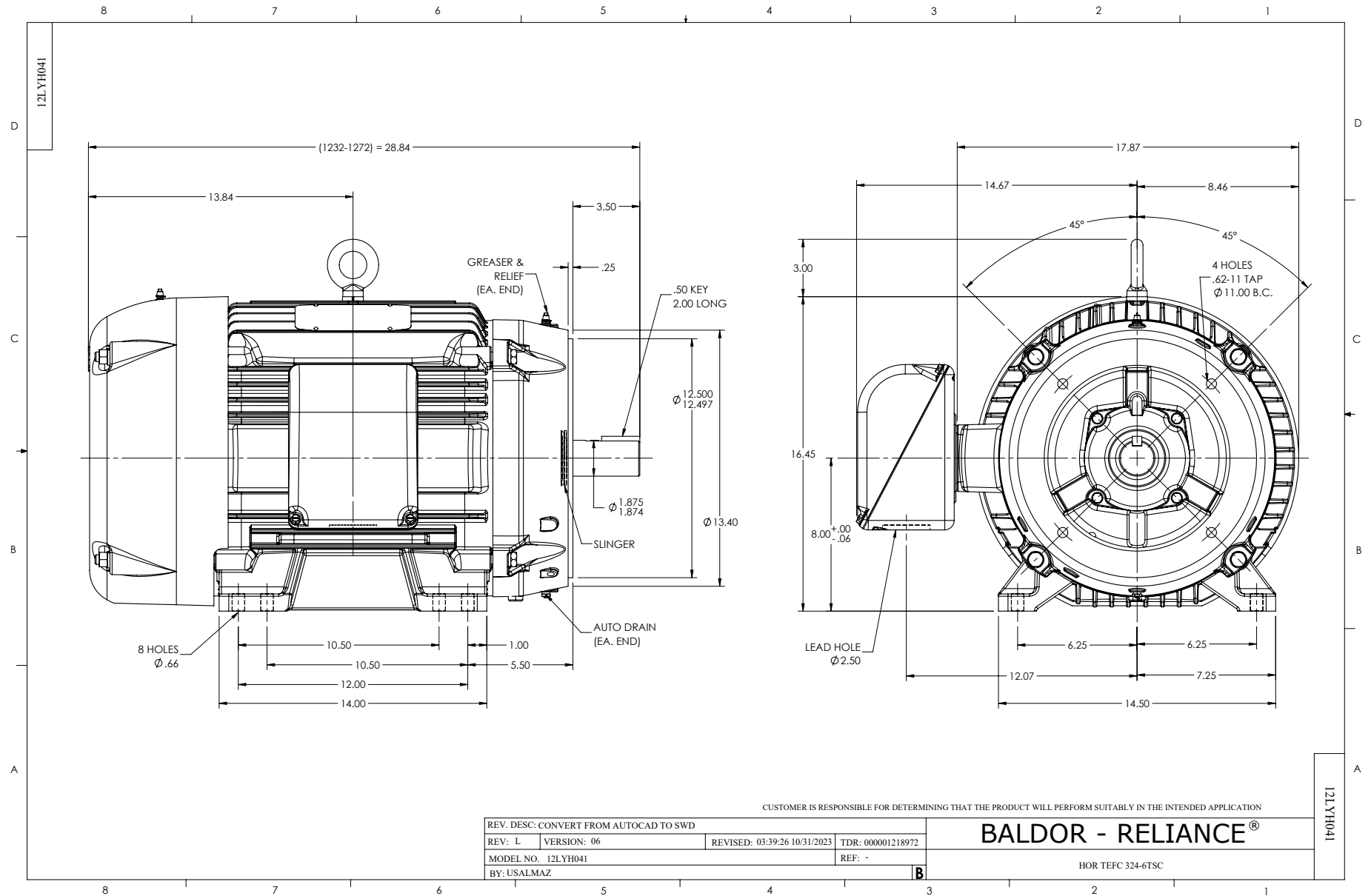
Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 3540 RPM 460 V 1252M

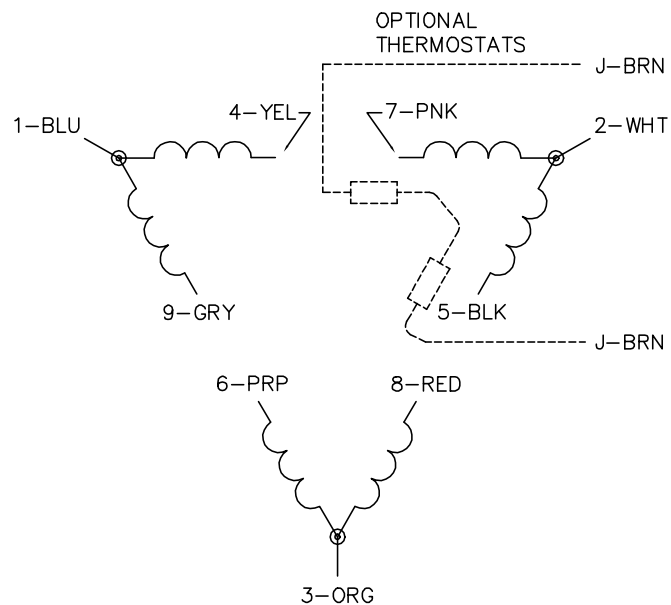
TORQUES (LB-FT): PO=292 PU=112 LR=139 LRA=408



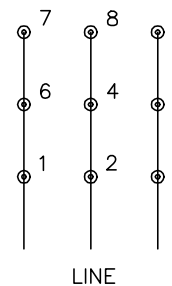
11/24/2024 ACPERP, record # 35504



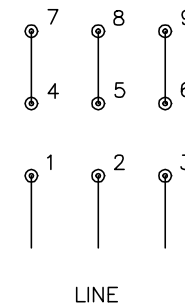
CD0180



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