

BALDOR® • RELIANCE 

Product Information Packet

FPM2543TS

50//40HP,1770//1470RPM,3PH,60//50HZ,326T

| Part Detail | | | | | | | |
|-------------|-------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | G | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 40WGX317 | CD Diagram: | CD0104 | Mfg Plant: | |
| Mech. Spec: | 40H07 | Layout: | 40LYH007 | Poles: | 04 | Created Date: | 09-16-2015 |
| Base: | RG | Eff. Date: | 08-22-2018 | Leads: | 12#8 | | |

| Specs | | | |
|---------------------------------|-------------------|--------------------------------|-----------------------|
| Catalog Number: | FPM2543TS | Front Shaft Indicator: | None |
| Enclosure: | ODP | Heater Indicator: | No Heater |
| Frame: | 326TS | Insulation Class: | F |
| Frame Material: | Steel | Inverter Code: | Not Inverter |
| Output @ Frequency: | 40.000 HP @ 50 HZ | KVA Code: | F |
| | 50.000 HP @ 60 HZ | Lifting Lugs: | Standard Lifting Lugs |
| Synchronous Speed @ Frequency: | 1800 RPM @ 60 HZ | Locked Bearing Indicator: | No Locked Bearing |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | Motor Lead Quantity/Wire Size: | 12 @ 8 AWG |
| | 380.0 V @ 50 HZ | Motor Lead Exit: | Ko Box |
| | 230.0 V @ 60 HZ | Motor Lead Termination: | Flying Leads |
| | 190.0 V @ 50 HZ | Motor Type: | 4064M |
| Agency Approvals: | CSA | Mounting Arrangement: | F1 |
| | CSA EEV | Power Factor: | 83 |
| | UL | Product Family: | Fire Pump Motor |
| | UR | Pulley End Bearing Type: | Ball |
| Auxillary Box: | No Auxillary Box | Pulley Face Code: | Standard |
| Auxillary Box Lead Termination: | None | Pulley Shaft Indicator: | Standard |
| Base Indicator: | Rigid | Rodent Screen: | None |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|-----------------------|
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Shaft Extension Location: | Pulley End |
| Blower: | None | Shaft Ground Indicator: | No Shaft Grounding |
| Current @ Voltage: | 60.000 A @ 460.0 V | Shaft Rotation: | Reversible |
| | 58.000 A @ 380.0 V | Shaft Slinger Indicator: | No Slinger |
| | 120.000 A @ 230.0 V | Speed Code: | Single Speed |
| | 116.000 A @ 190.0 V | Motor Standards: | NEMA |
| Design Code: | B | Starting Method: | Wye Start - Delta Run |
| Drip Cover: | No Drip Cover | Thermal Device - Bearing: | None |
| Duty Rating: | CONT | Thermal Device - Winding: | None |
| Electrically Isolated Bearing: | Not Electrically Isolated | Vibration Sensor Indicator: | No Vibration Sensor |
| Feedback Device: | NO FEEDBACK | Winding Thermal 1: | None |
| Front Face Code: | Standard | Winding Thermal 2: | None |

| Nameplate NP3454L | | | | | | | | | | | |
|-------------------|--------------|----------|------|-----------|----------|-------|---------|--------|------|----------|------------|
| CAT.NO. | FPM2543TS | | | | CUST P/N | | | | | I.P. | 23 |
| SPEC. | 40H007X317H2 | | | | SER.NO. | | | | | FRAME | 326TS |
| HZ | 60 | HP | 50 | RPM | 1770 | HZ | 50 | HP | 40 | RPM | 1470 |
| VOLTS | 230/460 | | | CODE | F | VOLTS | 190/380 | | | CODE | F |
| AMPS | 120/60 | | | DES | B | AMPS | 116/58 | | | DES | B |
| EFF | 93 | SER.F. | 1.15 | PF | 83 | EFF | 92.4 | SER.F. | 1.15 | PF | 83 |
| RATING | 40C AMB-CONT | | | | DE BRG | 6312 | | | | GREASE | POLYREX EM |
| BLANK | | | | | ODE BRG | 6309 | | | | MTR. WT. | 385 |
| | | | | | CLASS | F | | PH | 3 | | |
| | | | | | ENCL | ODP | | CC | 010A | | |
| HTR-VOLTS | | HTR-AMPS | | HTR-WATTS | | | | | | | |

| Parts List | | |
|-------------|--|----------|
| Part Number | Description | Quantity |
| SA307356 | SA 40H007X317H2 | 1.000 EA |
| RA294657 | RA 40H007X317H2 | 1.000 EA |
| HA6361A01 | LIFTING LUG FOR 37, 39 & 40 FRAME ZINC | 2.000 EA |
| HA6017 | CAST ADAPTER, 40,42 KOBX | 1.000 EA |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II | 2.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 2.000 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 |
| 10CB3001 | CONDUIT BOX CAST W/2.500 LEAD HOLE | 1.000 EA |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 40EP3200A02 | STD FREP OPEN 309 BRG | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW5100A11 | W3917-042 WVY WSHR (WB) | 1.000 EA |
| 40EP3201A01 | PU ENDPLATE, MACH - OPEN - FOR 312 BRG | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| XY3816A12 | 3/8-16 FINISHED NUT | 8.000 EA |
| 10CB3500SP | CONDUIT BOX LID, CAST | 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 |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |

| Parts List (continued) | | |
|-------------------------------|--|-----------------|
| Part Number | Description | Quantity |
| MJ1000A02 | GREASE, MOBIL POLYREX EM - 124047 | 0.050 LB |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HA3159A08 | THRUBOLT- .38-16 X 20.00 LONG STUD | 4.000 EA |
| MG1025R44 | WILKOFASST, 784.109, CARMINE RED #3002 | 0.050 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 EA |
| 40AD2002A01 | LEXAN BAFFLE 40 FR OPEN | 1.000 EA |
| 40AD2002A01 | LEXAN BAFFLE 40 FR OPEN | 1.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0104A01 | CONNECTION DIAGRAM | 1.000 EA |
| NP3454L | ALUM FIRE PUMP MOTOR(LEGACY/BALDOR ONLY) | 1.000 EA |
| 40PA1000 | PACKAGING GROUP | 1.000 EA |

AC Induction Motor Performance Data

Record # 54093 - Typical performance - not guaranteed values

| | | |
|-------------------------------|--------------------|------------------------|
| Winding: 40WGX317-R001 | Type: 4064M | Enclosure: OPSB |
|-------------------------------|--------------------|------------------------|

| Nameplate Data | | | | 460 V, 60 Hz: High Voltage Connection | |
|-----------------------|------------------|--------------|----|--|----------------|
| Rated Output (HP) | 50//40 | | | Full Load Torque | 149 LB-FT |
| Volts | 230/460//190/380 | | | Start Configuration | direct on line |
| Full Load Amps | 120/60//116/58 | | | Breakdown Torque | 374 LB-FT |
| R.P.M. | 1770//1470 | | | Pull-up Torque | 190 LB-FT |
| Hz | 60//50 | Phase | 3 | Locked-rotor Torque | 236 LB-FT |
| NEMA Design Code | B | KVA Code | F | Starting Current | 342 A |
| Service Factor (S.F.) | 1.15 | | | No-load Current | 22.8 A |
| NEMA Nom. Eff. | 93 | Power Factor | 83 | Line-line Res. @ 25°C | 0.16058 Ω |
| Rating - Duty | 40C AMB-CONT | | | Temp. Rise @ Rated Load | 55°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 68°C |

Load Characteristics 460 V, 60 Hz, 50 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor | 48 | 70 | 80 | 83 | 85 | 85 | 84 |
| Efficiency | 90.5 | 93.6 | 94 | 93.6 | 92.9 | 91.7 | 93.2 |
| Speed | 1794.3 | 1786.4 | 1778.8 | 1770.7 | 1762.3 | 1751.3 | 1766 |
| Line amperes | 26.6 | 35.8 | 47.1 | 60.1 | 74.7 | 90.7 | 68.9 |

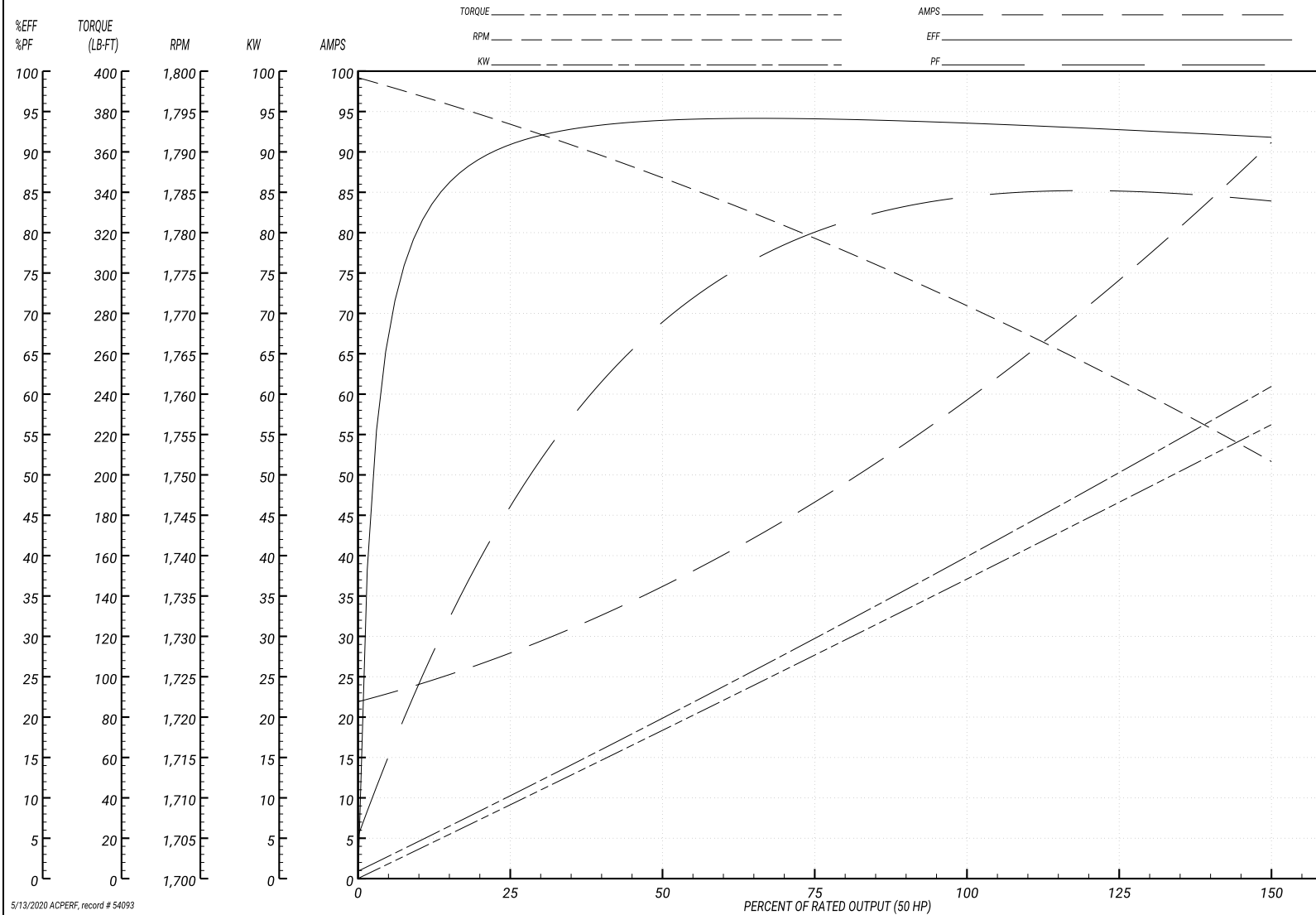
Performance Graph at 460V, 60Hz, 50.0HP Typical performance - Not guaranteed values

ABB Motors and Mechanical Inc.

WINDING # 40WGX317

Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1770.7 RPM 460 V 4064M
 TORQUES(LB-FT): PO=374 PU=190 LR=236 LRA=342



5/13/2020 ACPERF, record # 54093

AC Induction Motor Performance Data

Record # 54094 - Typical performance - not guaranteed values

| | | |
|-------------------------------|--------------------|------------------------|
| Winding: 40WGX317-R001 | Type: 4064M | Enclosure: OPSB |
|-------------------------------|--------------------|------------------------|

| Nameplate Data | | | | 380 V, 50 Hz: High Voltage Connection | |
|-----------------------|------------------|--------------|----|--|-------------------------|
| Rated Output (HP) | 50//40 | | | Full Load Torque | 143 LB-FT |
| Volts | 230/460//190/380 | | | Start Configuration | direct on line |
| Full Load Amps | 120/60//116/58 | | | Breakdown Torque | 363 LB-FT |
| R.P.M. | 1770//1470 | | | Pull-up Torque | 194 LB-FT |
| Hz | 60//50 | Phase | 3 | Locked-rotor Torque | 241 LB-FT |
| NEMA Design Code | B | KVA Code | F | Starting Current | 325 A |
| Service Factor (S.F.) | 1.15 | | | No-load Current | 22 A |
| NEMA Nom. Eff. | 93 | Power Factor | 83 | Line-line Res. @ 25°C | 0.155 Ω |
| Rating - Duty | 40C AMB-CONT | | | Temp. Rise @ Rated Load | 53°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 67°C |
| | | | | Locked-rotor Power Factor | 34.2 |
| | | | | Rotor inertia | 5.09 LB-FT ² |

Load Characteristics 380 V, 50 Hz, 40 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor | 49 | 71 | 80 | 84 | 85 | 85 | 85 |
| Efficiency | 89.6 | 93.2 | 93.5 | 92.7 | 91.9 | 90.6 | 92.2 |
| Speed | 1494 | 1487 | 1479 | 1471 | 1463 | 1452 | 1466 |
| Line amperes | 25.7 | 34.7 | 45.6 | 58.3 | 72.6 | 88.3 | 66.9 |

Performance Graph at 380V, 50Hz, 40.0HP Typical performance - Not guaranteed values

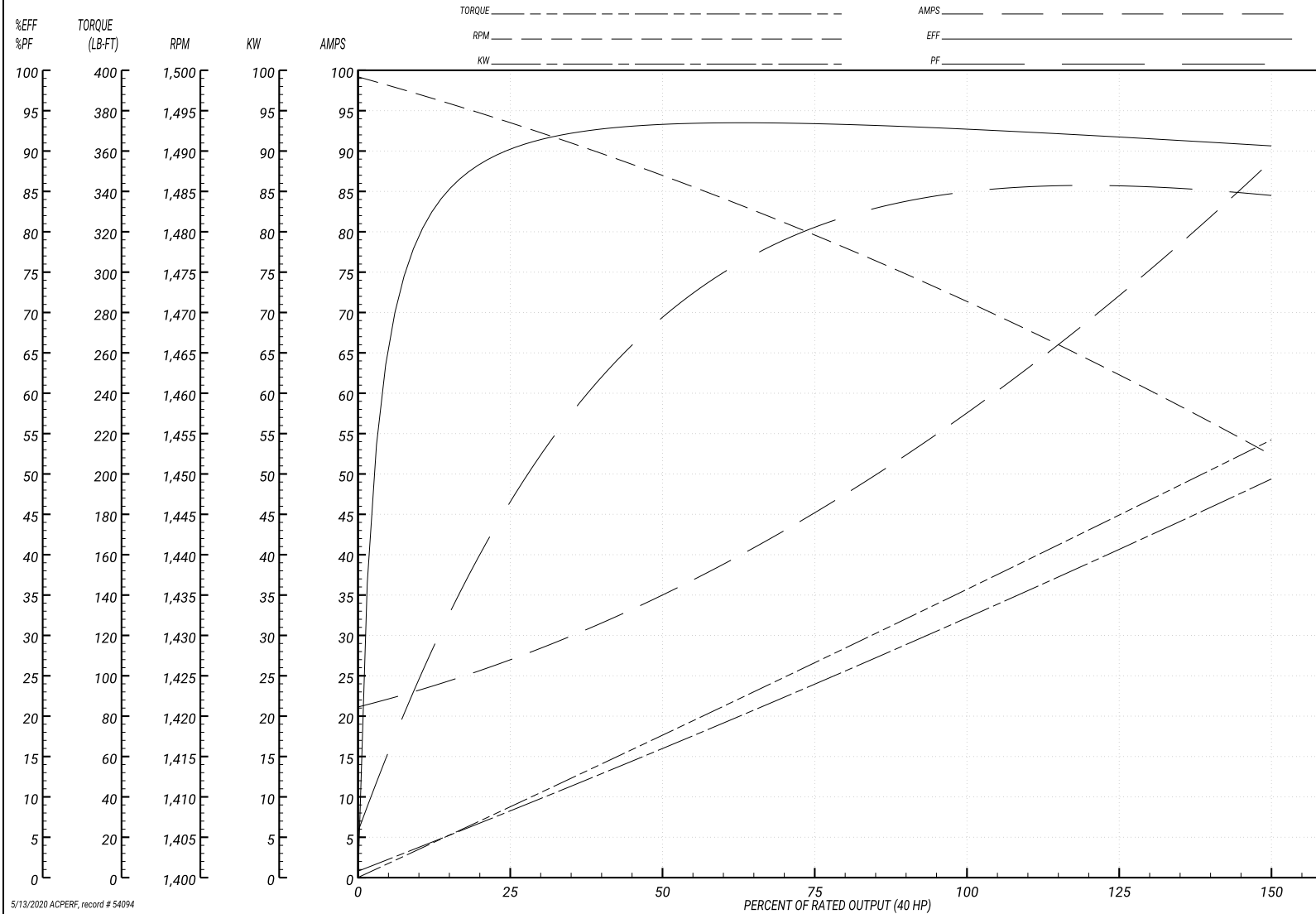
ABB Motors and Mechanical Inc.

WINDING # 40WGX317

Typical performance - not guaranteed values.

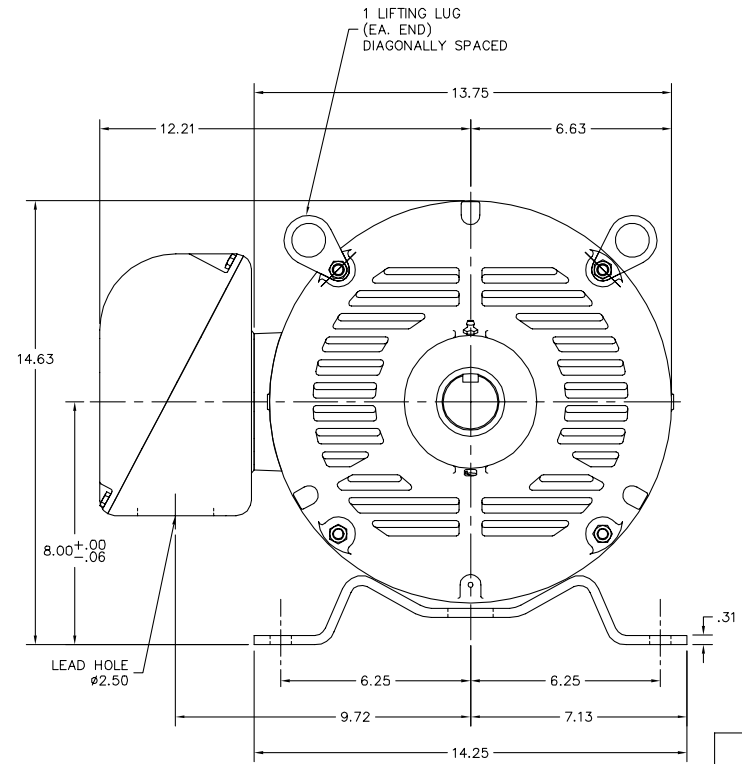
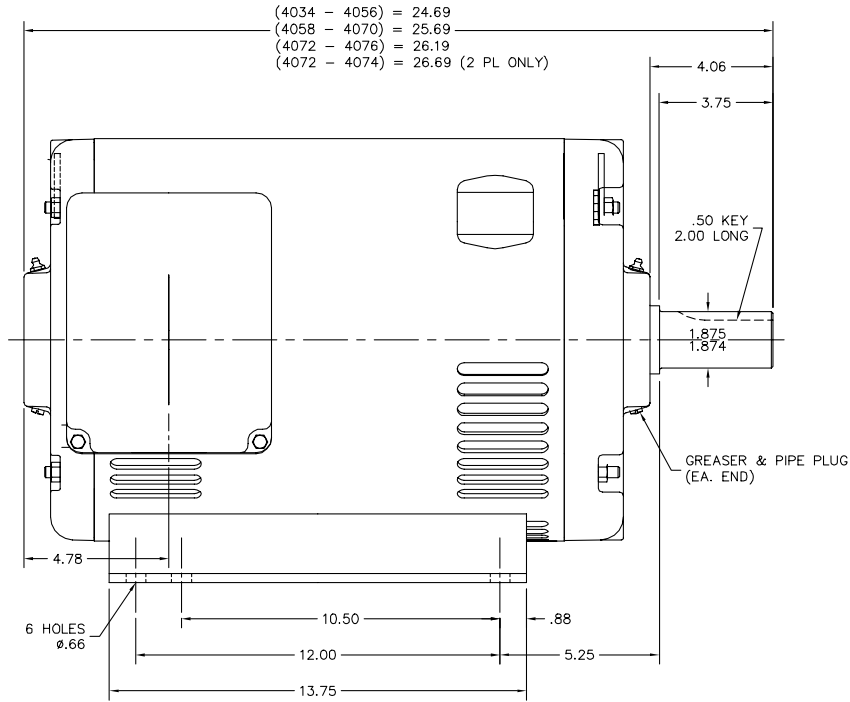
40 HP 3 PH 50 HZ 1471 RPM 380 V 4064M

TORQUES(LB-FT): P0=363 PU=194 LR=241 LRA=325



5/13/2020 ACPERF, record # 54094

40L YH007



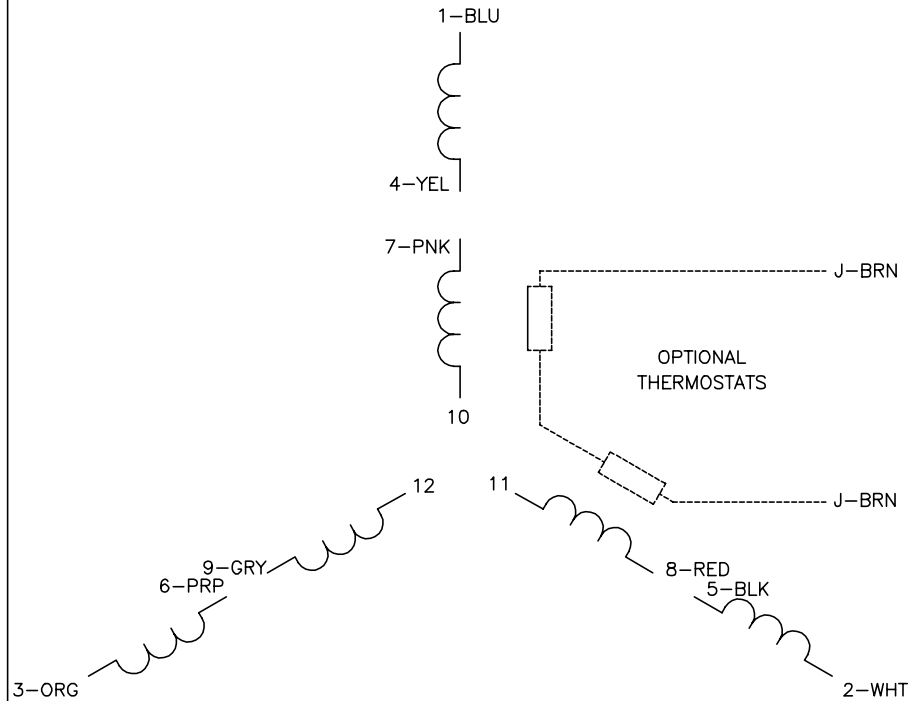
40L YH007

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

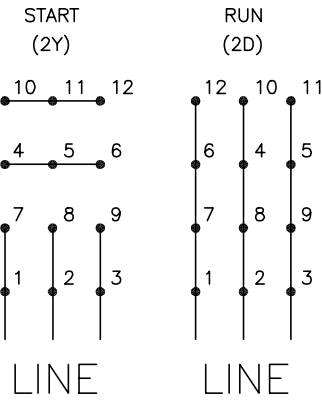
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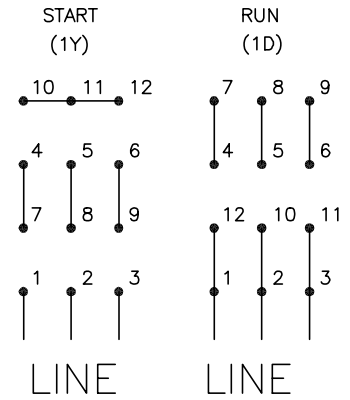
CD0104



LOW VOLTAGE



HIGH VOLTAGE



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.

CD0104

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BALDOR - RELIANCE®

3PH, DV, 12 LEADS, Y START/D RUN

SH 1 of 1

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