



Customer information packet

VEM3704T

3HP, 1160RPM, 3PH, 60HZ, 213TC, 3738M, TEFC, F1

Class - None

Division - Not Applicable

Specifications

| | |
|--------------------------------|---|
| Enclosure | TEFC |
| Frame | 213TC |
| Frame Material | Steel |
| Frequency | 60.00 Hz |
| Haz Area Class and Group | None |
| Haz Area Division | Not Applicable |
| Motor Letter Type | Three Phase |
| Output @ Frequency | 3.000 HP @ 60 HZ |
| Phase | 3 |
| Synchronous Speed @ Frequency | 1200 RPM @ 60 HZ |
| Voltage @ Frequency | 230.0 V @ 60 HZ 460.0 V @ 60 HZ |
| Agency Approvals | CURUSEEV NEMA PREMIUM NEMA_PREMIUM UR CSA EEV |
| Ambient Temperature | 40 °C |
| Auxillary Box | No Auxillary Box |
| Auxillary Box Lead Termination | None |
| Base Indicator | No Mounting |
| Bearing Grease Type | Polyrex EM (-20F +300F) |
| Blower | None |
| Current @ Voltage | 9.600 A @ 208.0 V 9.200 A @ 230.0 V 4.600 A @ 460.0 V |
| Design Code | B |
| Drip Cover | No Drip Cover |
| Duty Rating | CONT |
| Efficiency @ 100% Load | 89.5 % |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device | NO FEEDBACK |

Part detail

| | |
|--------------|------------|
| Revision | N |
| Type | AC |
| Mech. spec. | 37A003 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 37WGS519 |
| Layout | 37LYA003 |
| Eff. date | 06-07-2024 |
| CD Diagram | CD0005 |
| Poles | 06 |
| Leads | 9#14 |
| Proprietary | False |
| Created date | 04-23-2015 |

| | |
|-------------------------------|-----------------------|
| Front Face Code | Standard |
| Front Shaft Indicator | None |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 4.6 a |
| Insulation Class | F |
| Inverter Code | Inverter Ready |
| IP Rating | NONE |
| KVA Code | L |
| Lifting Lugs | Standard Lifting Lugs |
| Locked Bearing Indicator | Locked Bearing |
| Motor Lead Exit | Ko Box |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 3738M |
| Mounting Arrangement | F1 |
| Number of Poles | 6 |
| Overall Length | 19.75 IN |
| Power Factor | 68 |
| Product Family | General Purpose |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | C-Face |
| Pulley Shaft Indicator | Standard |
| Rodent Screen | None |
| RoHS Status | ROHS COMPLIANT |
| Service Factor | 1.15 |
| Shaft Diameter | 1.375 IN |
| Shaft Extension Location | Pulley End |
| Shaft Ground Indicator | No Shaft Grounding |
| Shaft Rotation | Reversible |
| Shaft Slinger Indicator | No Slinger |
| Speed | 1160 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. | VEM3704T | | | | | | |
| SPEC | 37A003S519G2 | | | | | | |
| HP | 3 | | | | | | |
| VOLTS | 230/460 | | | | | | |
| AMPS | 9.2/4.6 | | | | | | |
| RPM | 1160 | | | | | | |
| FRAME | 213TC | HZ | 60 | PH | 3 | | |
| SF | 1.15 | CODE | L | DES | B | CLASS | F |
| NEMA NOM. EFF | 89.5 | PF | 68 | | | | |
| RATING | 40C AMB-CONT | | | | | | |
| CC | 010A | | | | | | |
| ENCL | TEFC | SER | | | | | |
| DE | 6307 | ODE | 6206 | | | | |
| VPWM INVERTER READY | | | | | | | |
| CT6-60H(10:1)VT3-60H(20:1 | 50Hz 3HP 190/380V 10.6/5.3A | | | | | | SF1.0 |

Parts list

| Part number | Description | Quantity |
|-------------|--|----------|
| SA299817 | SA 37A003S519G2 | 1.000 ea |
| RA286849 | RA 37A003S519G2 | 1.000 ea |
| 37FN3002C01 | EXFN, PLASTIC, 6.00 OD, 1.155 ID | 1.000 ea |
| HW3200A01 | 3/8-16X3/4 EYEBOLT WELDED F/S | 1.000 ea |
| 37CB3006 | 37 CB CASTING W/1.38 LEAD HOLE @ 6:00 | 1.000 ea |
| 37GS1000SP | GASKET, CONDUIT BOX STD., .06 THICK LEXI | 1.000 ea |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 37EP3101A01 | FR ENDPLATE, FOR ROUTING PURPOSES | 1.000 ea |
| HW4500A01 | 1641B(ALEMITE)400 UNIV, GREASE FITT | 1.000 ea |
| HW5100A06 | W2420-025 WVY WSHR (WB) | 1.000 ea |
| 37EP3300A01 | PUEP ASSEMBLY FOR ROUTING | 1.000 ea |
| HW4500A01 | 1641B(ALEMITE)400 UNIV, GREASE FITT | 1.000 ea |
| 10XN2520A30 | HEX HD CAP SCREW-STD THD-.25 X 20 THD PE | 4.000 ea |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| XY3118A12 | 5/16-18 HEX NUT DIRECTIONAL SERRATION | 4.000 ea |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 ea |
| 07FH4007SP | PRIMED | 1.000 ea |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 ea |
| 37CB4516 | LIPPED LID FOR 37 FRAME NEC KOBX | 1.000 ea |
| 37GS1008 | 37 GS FOR CB LID - LEXIDE | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| HW2501F21 | KEY, 5/16 SQ X 2.375 | 1.000 ea |
| HA7000A02 | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.050 lb |
| MG1050Y01 | CELEROL BALDOR GOLD *** NLA IN 5 GALLON | 0.028 ga |
| HA3104A17 | 5/16-18X13.250 T-BLT/OHIO | 4.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0005 | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING | 1.000 ea |
| NP3441LUA | AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM | 1.000 ea |

| | | |
|----------|---------------------------------------|----------|
| 37PA1074 | PALLET PACK GRP, PRINT BOX PK1026A06 | 1.000 ea |
| PK3082 | STYROFOAM CRADLE | 2.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500bx)4/22 | 1.000 ea |

AC Induction Motor Performance Data

Record # 53388

Typical performance - not guaranteed values

| Winding: 37WGS519-R032 | | Type: 3738M | | Enclosure: TEFC | |
|-------------------------------|------|---------------------|--|----------------------------------|--------------------------|
| Nameplate Data | | | 460 V, 60 Hz: High Voltage Connection | | |
| Rated Output (HP) | | 3 | Full Load Torque | | 13.4 LB-FT |
| Volts | | 230/460 | Start Configuration | | direct on line |
| Full Load Amps | | 9.2/4.6 | Breakdown Torque | | 50.4 LB-FT |
| R.P.M. | | 1160 | Pull-up Torque | | 31.8 LB-FT |
| Hz | 60 | Phase | 3 | Locked-rotor Torque | 33.9 LB-FT |
| NEMA Design Code | | B KVA Code | L | Starting Current | 34 A |
| Service Factor (S.F.) | | | 1.15 | No-load Current | 2.56 A |
| NEMA Nom. Eff. | 89.5 | Power Factor | 68 | Line-line Res. @ 25°C | 2.67 Ω |
| Rating - Duty | | | 40C AMB-CONT | Temp. Rise @ Rated Load | 38°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 45°C |
| | | | | Locked-rotor Power Factor | 22.9 |
| | | | | Rotor inertia | 0.945 LB-FT ² |

Load Characteristics 460 V, 60 Hz, 3 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| Power Factor | 30 | 50 | 62 | 69 | 73 | 75 | 70 |
| Efficiency | 82.1 | 88.6 | 89.5 | 89.8 | 89.1 | 87.6 | 89.1 |
| Speed | 1193 | 1186 | 1178 | 1170 | 1160 | 1149 | 1166 |
| Line amperes | 2.74 | 3.19 | 3.82 | 4.53 | 5.44 | 6.41 | 5.14 |

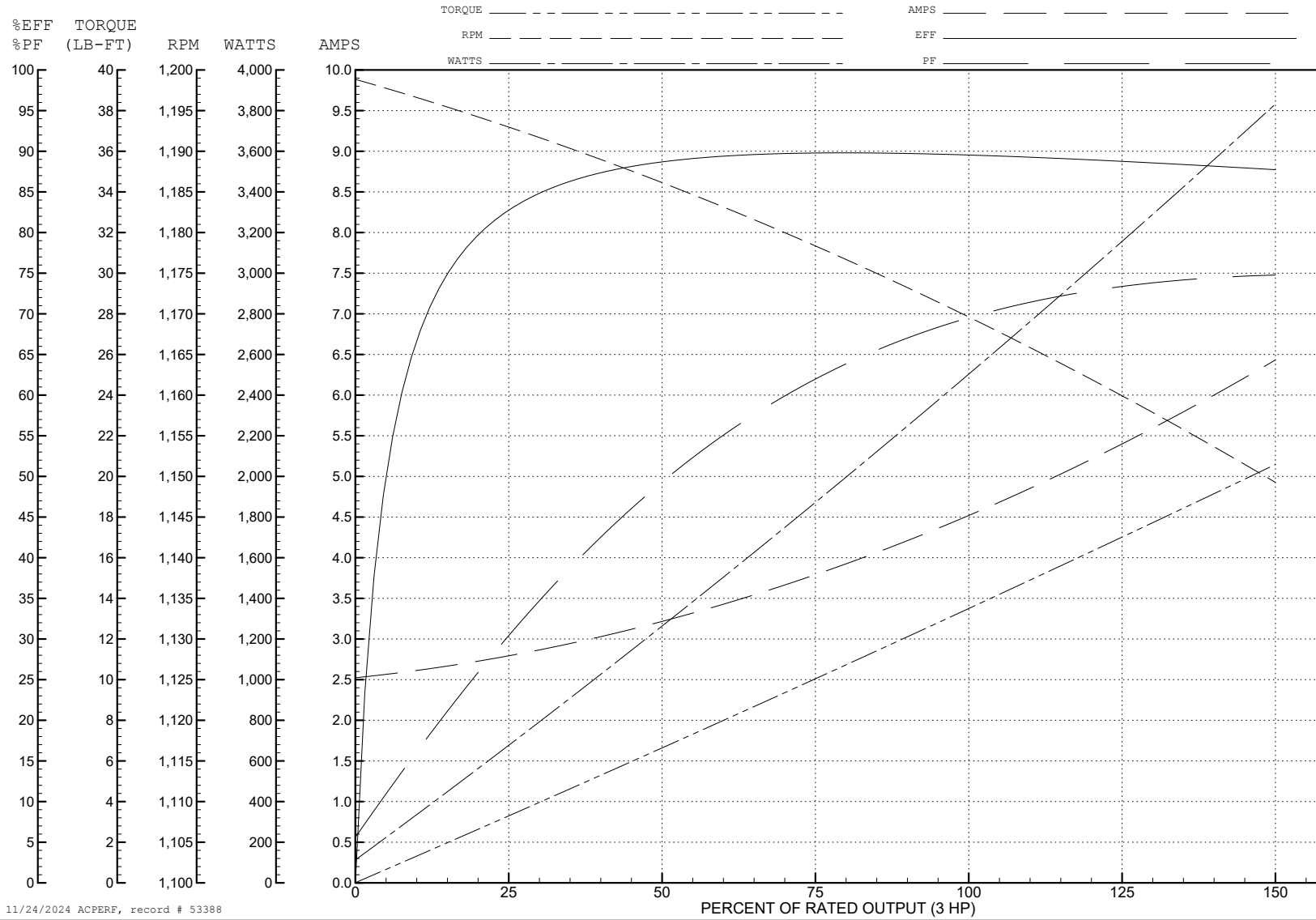
ABB Motors and Mechanical Inc.

WINDING # 37WGS519

3 HP 3 PH 60 HZ 1160 RPM 460 V 3738M

Typical performance - not guaranteed values.

TORQUES (LB-FT): PO=50.4 PU=31.8 LR=33.9 LRA=34



11/24/2024 ACPERF, record # 53388

AC Induction Motor Performance Data

Record # 60478

Typical performance - not guaranteed values

| Winding: 37WGS519-R032 | | Type: 3738M | | Enclosure: TEFC | |
|-------------------------------|--------------------------|--------------------|---|------------------------|--------------------------|
| Nameplate Data | | | 208 V, 60 Hz: Low Voltage Connection | | |
| Rated Output (HP) | | 3 | Full Load Torque | | 13.5 LB-FT |
| Volts | | 208-230/460 | Start Configuration | | direct on line |
| Full Load Amps | | 9.5-9.2/4.6 | Breakdown Torque | | 41 LB-FT |
| R.P.M. | | 1160 | Pull-up Torque | | 25.7 LB-FT |
| Hz | 60 Phase | 3 | Locked-rotor Torque | | 27.3 LB-FT |
| NEMA Design Code | B KVA Code | L | Starting Current | | 61 A |
| Service Factor (S.F.) | | 1.15 | No-load Current | | 4.52 A |
| NEMA Nom. Eff. | 89.5 Power Factor | 68 | Line-line Res. @ 25°C | | 0.668 Ω |
| Rating - Duty | | 40C AMB-CONT | Temp. Rise @ Rated Load | | 39°C |
| S.F. Amps | | | Temp. Rise @ S.F. Load | | 49°C |
| | | | Locked-rotor Power Factor | | 22.9 |
| | | | Rotor inertia | | 0.945 LB-FT ² |

Load Characteristics 208 V, 60 Hz, 3 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| Power Factor | 36 | 57 | 68 | 73 | 76 | 76 | 75 |
| Efficiency | 84.3 | 89.5 | 90.1 | 89.6 | 88 | 86.1 | 88.6 |
| Speed | 1192 | 1183 | 1173 | 1163 | 1150 | 1134 | 1155 |
| Line amperes | 4.98 | 6.11 | 7.69 | 9.46 | 11.7 | 14.3 | 10.8 |

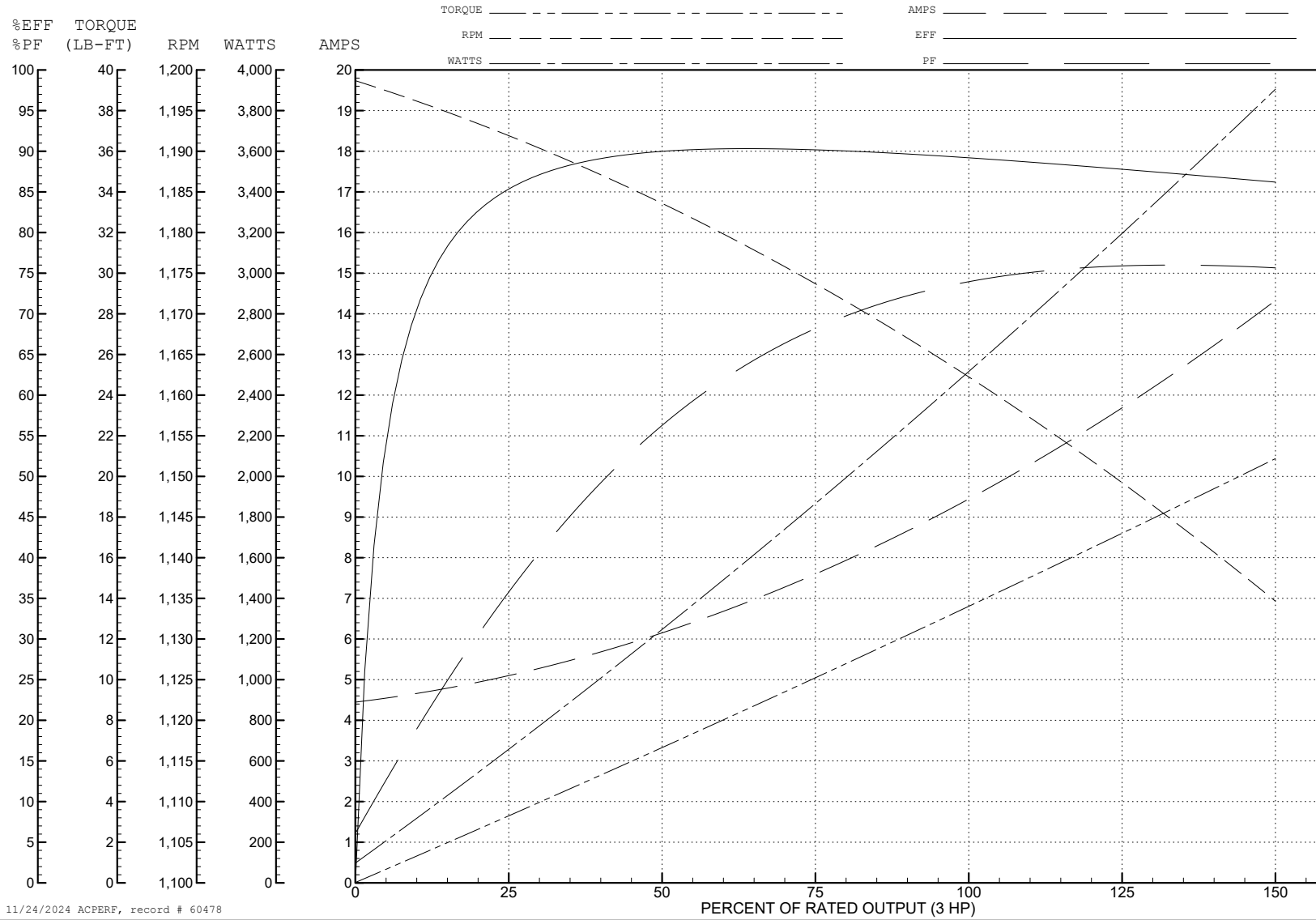
ABB Motors and Mechanical Inc.

WINDING # 37WGS519

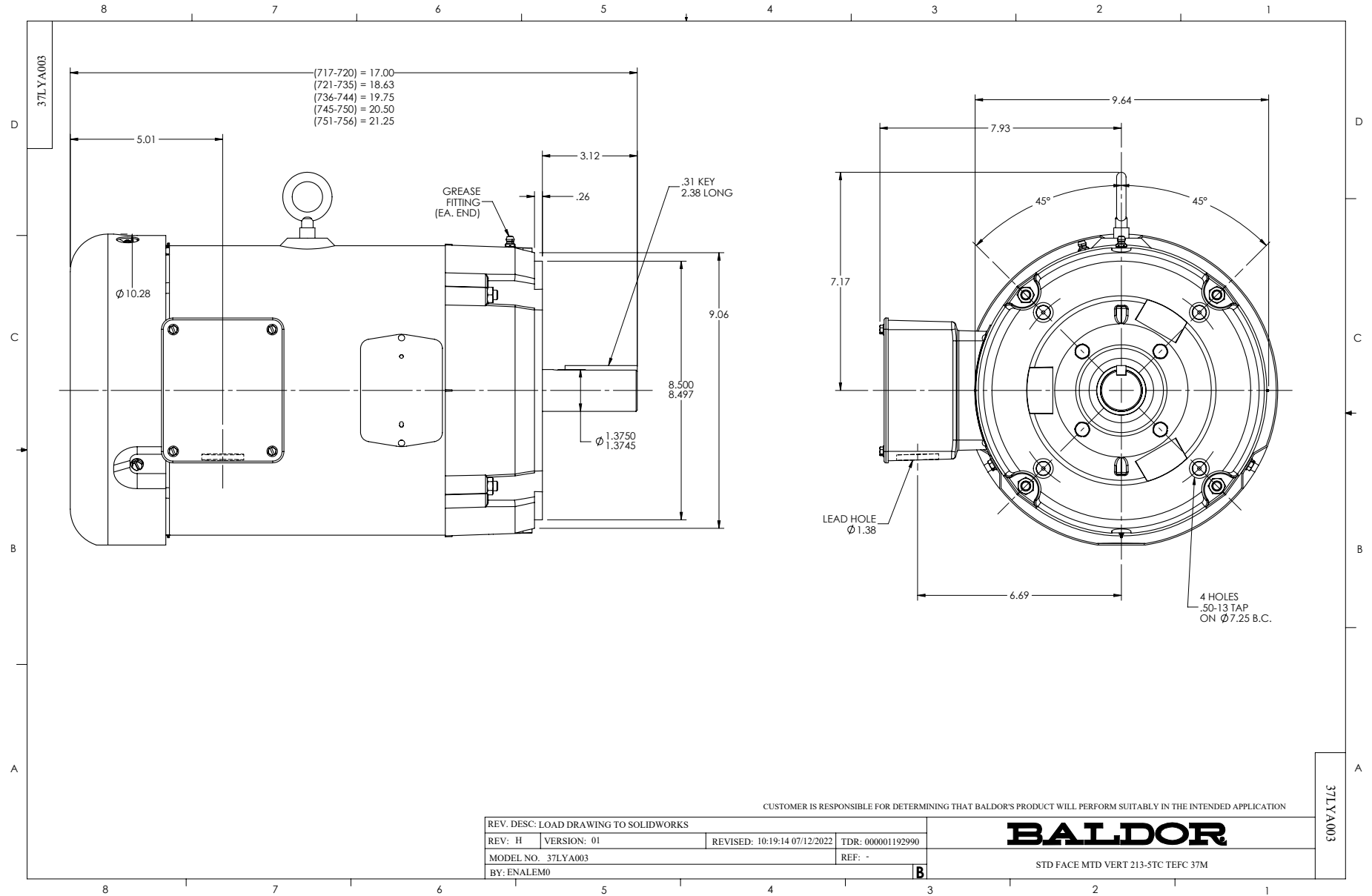
3 HP 3 PH 60 HZ 1160 RPM 208 V 3738M

Typical performance - not guaranteed values.

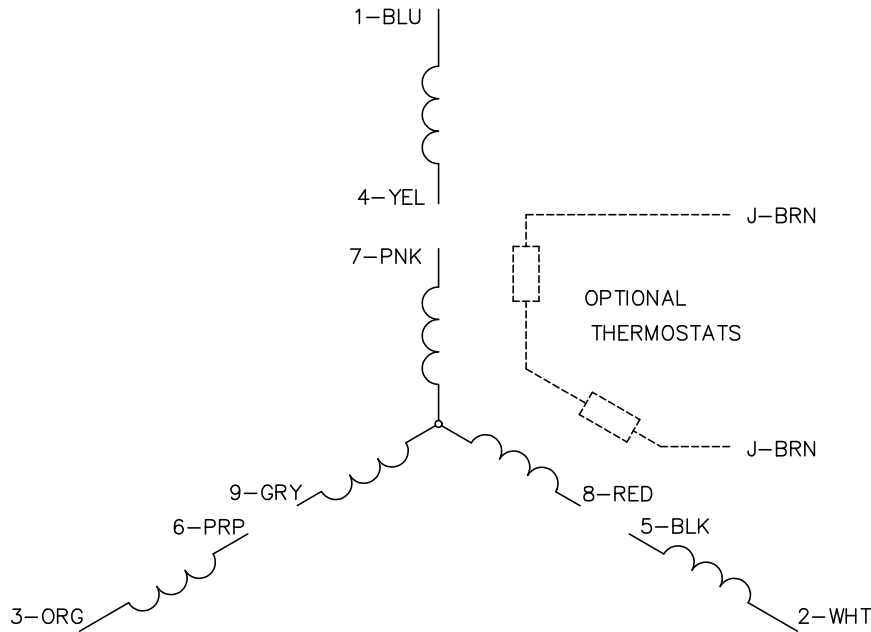
TORQUES (LB-FT): PO=41 PU=25.7 LR=27.3 LRA=61



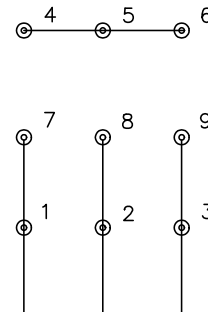
11/24/2024 ACPERF, record # 60478



CD0005

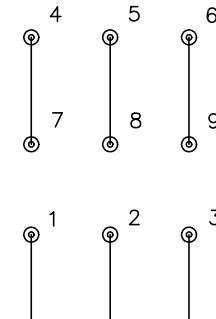


LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

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 | | | |
| REV. LTR: E | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| S00000 | | FILE: AAA00005140 | MDL: - |
| | | MTL: - | |

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS