ABB BALDOR RELIANCE

# Customer information packet

## VEM3774T

10HP, 1765RPM, 3PH, 60HZ, 215TC, 0748M, TEFC, F
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 215TC |
| **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** | 10.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 230.0 V @ 60 HZ |
| | 460.0 V @ 60 HZ |
| **Agency Approvals** | CURUSEEV |
| | NEMA PREMIUM |
| **Ambient Temperature** | 40 °C |
| **Auxiliary Box** | NO AUXILLARY BOX |
| **Auxiliary Box Lead Termination** | None |
| **Base Indicator** | No Mounting |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Blower** | None |
| **Current @ Voltage** | 12.300 A @ 460.0 V |
| | 24.600 A @ 230.0 V |
| | 27.000 A @ 208.0 V |
| **Design Code** | B |
| **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** | 12.3 a |

## Part Detail

| | |
|---|---|
| **Revision** | H |
| **Type** | AC |
| **Mech. spec.** | 07G082 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 07WGT511 |
| **Layout** | 07LYG082 |
| **Eff. date** | 05-28-2025 |
| **CD Diagram** | CD0005 |
| **Poles** | 04 |
| **Leads** | 9#14 |
| **Proprietary** | False |
| **Created date** | 02-08-2021 |

| | |
|---|---|
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | H |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Motor Lead Quantity/Wire Size** | 9 @ 14 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0748M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 19.20 IN |
| **Power Factor** | 83 |
| **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** | 1.375 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1765 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.** | VEM3774T | | | | | | | | | |
| **SPEC** | 07G082T511G1 | | | | | | | | | |
| **HP** | 10 | | | | | | | | | |
| **VOLTS** | 230/460 | | | | | | | | | |
| **AMPS** | 24.6/12.3 | | | | | | | | | |
| **RPM** | 1765 | | | | | | | | | |
| **FRAME** | 215TC | **HZ** | 60 | **PH** | 3 | | | | | |
| **SF** | 1.15 | **CODE** | H | **DES** | B | **CLASS** | F | | | |
| **NEMA NOM. EFF** | 91.7 | **PF** | 83 | | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | | |
| **CC** | 010A | | | | | | | | | |
| **ENCL** | TEFC | **SER** | | | | | | | | |
| **DE** | 6307 | **ODE** | 6206 | | | | | | | |
| **VPWM INVERTER READY** | SFA 28.2/14.1 | | | | | | | | | |
| **CT6-60H(10:1)VT3-60H(20:1** | | | | | | | | | | |
| | 50HZ 10HP 190/380V 29.8/14.9A | | | | | | | | | SF1.0 |

**AC Induction Motor Performance Data**
Record # 85502
Preliminary Data Sheet

| **Winding:** 07WGT511-R001 | **Type:** 0748M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | |
|---|---|---|---|
| **Rated Output (HP)** | | | 10 |
| **Volts** | | | 230/460 |
| **Full Load Amps** | | | 24.6/12.3 |
| **R.P.M.** | | | 1765 |
| **Hz** | 60 | **Phase** | 3 |
| **NEMA Design Code** | B | **KVA Code** | H |
| **Service Factor (S.F.)** | | | 1.15 |
| **NEMA Nom. Eff.** | 91.7 | **Power Factor** | 83 |
| **Rating - Duty** | | | 40C AMB-CONT |
| **S.F. Amps** | | | 28.3/14.15 |

| **460 V, 60 Hz: High Voltage Connection** | |
|---|---|
| **Full Load Torque** | 29.8 LB-FT |
| **Start Configuration** | direct on line |
| **Breakdown Torque** | 84.1 LB-FT |
| **Pull-up Torque** | 39.8 LB-FT |
| **Locked-rotor Torque** | 50.9 LB-FT |
| **Starting Current** | 85.9 A |
| **No-load Current** | 4.67 A |
| **Line-line Res. @ 25ºC** | 1.11 Ω |
| **Temp. Rise @ Rated Load** | 70°C |
| **Temp. Rise @ S.F. Load** | 93°C |
| **Locked-rotor Power Factor** | 40.4 |
| **Rotor inertia** | 1.18 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 10 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 48 | 70 | 79 | 83 | 85 | 85 | 84 |
| **Efficiency** | 89.8 | 92.6 | 92.6 | 91.7 | 90.4 | 88.8 | 90.7 |
| **Speed** | 1791 | 1783 | 1774 | 1763 | 1752 | 1739 | 1753 |
| **Line amperes** | 5.44 | 7.24 | 9.6 | 12.3 | 15.3 | 18.6 | 14.1 |

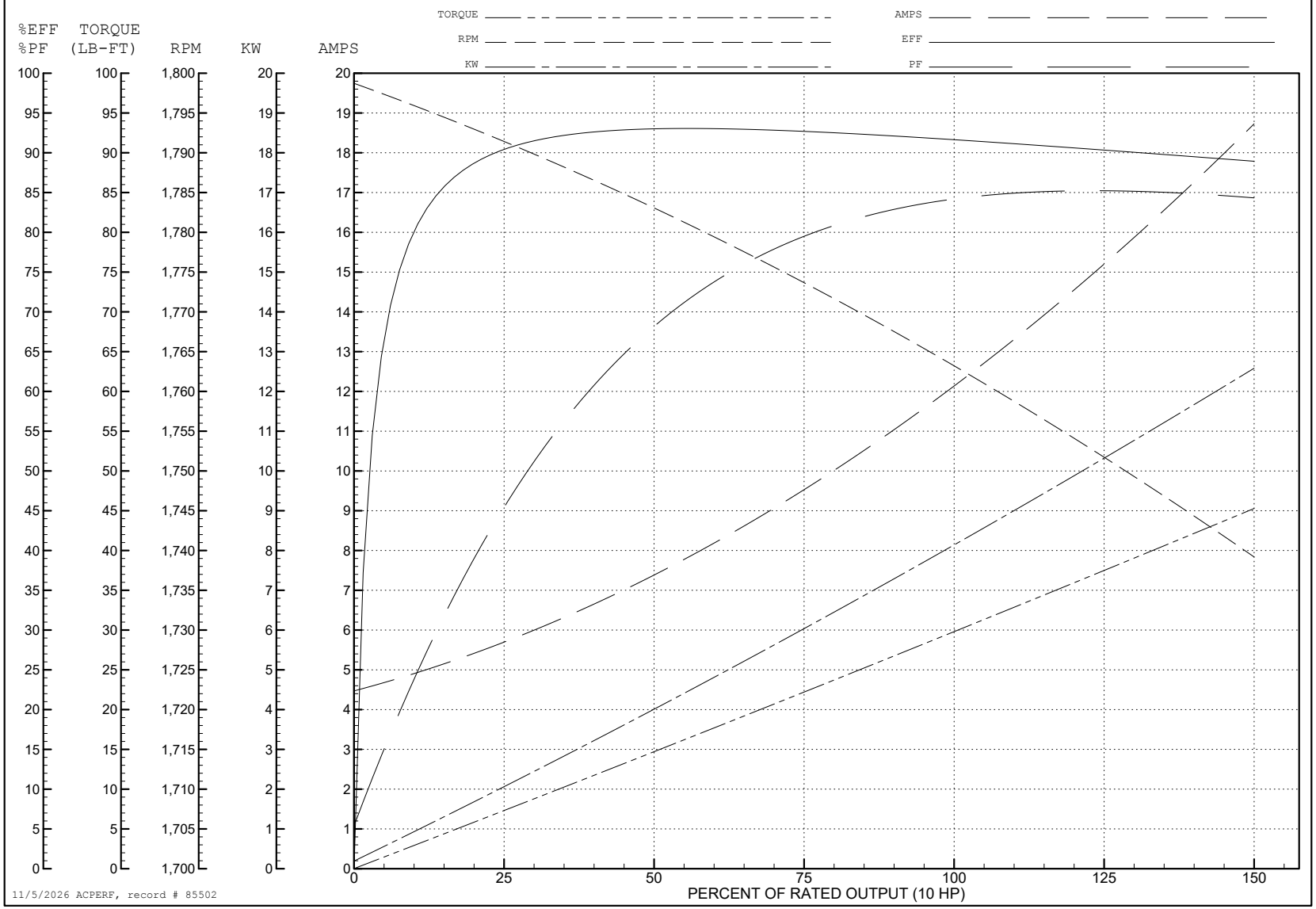
ABB Motors and Mechanical Inc.

WINDING # 07WGT511

10 HP 3 PH 60 HZ 1765 RPM 460 V 0748M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=84.1 PU=39.8 LR=50.9 LRA=85.9



**AC Induction Motor Performance Data**
Record # 88389
Typical performance - not guaranteed values

| **Winding:** 07WGT511-R001 | **Type:** 0748M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **400 V, 50 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 10 | **Full Load Torque** | 35.99 LB-FT |
| **Volts** | | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 24.6/12.3 | **Breakdown Torque** | 89.52 LB-FT |
| **R.P.M.** | | | 1765 | **Pull-up Torque** | 46.23 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 59.13 LB-FT |
| **NEMA Design Code** | B | **KVA Code** | H | **Starting Current** | 88.53 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 5.03 A |
| **NEMA Nom. Eff.** | 91.7 | **Power Factor** | 83 | **Line-line Res. @ 25ºC** | 1.09 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 91°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 117°C |
| | | | | **Locked-rotor Power Factor** | 35.2 |
| | | | | **Rotor inertia** | 1.18 lb-ft² |

**Load Characteristics 400 V, 50 Hz, 10 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 50 | 71 | 80 | 84 | 85 | 85 | 85 |
| **Efficiency** | 90 | 92.4 | 91.9 | 90.4 | 88.9 | 86.5 | 89.5 |
| **Speed** | 1491 | 1482 | 1472 | 1460 | 1448 | 1433 | 1453 |
| **Line amperes** | 5.96 | 8.13 | 10.95 | 14.22 | 17.88 | 21.98 | 16.4 |

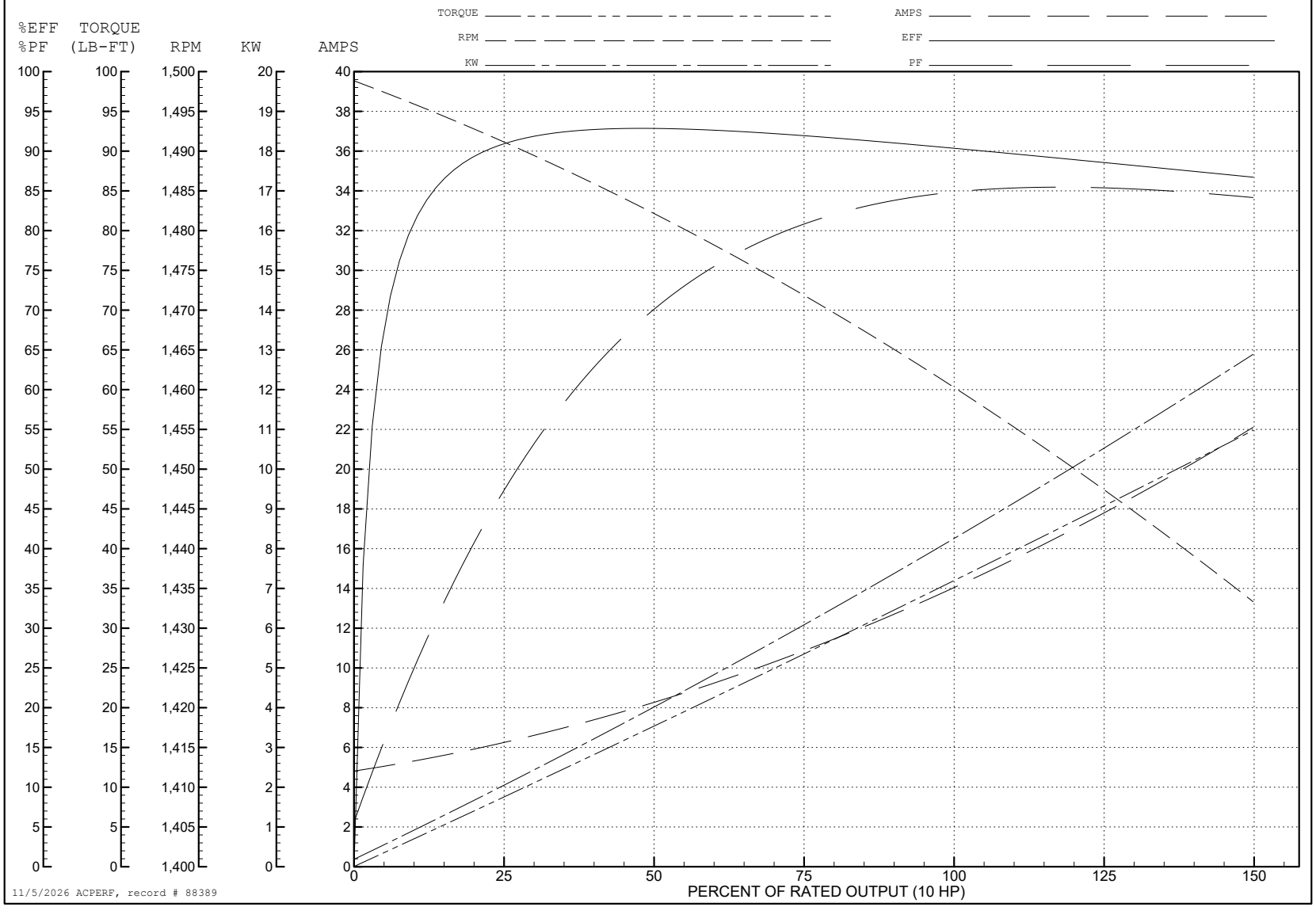
ABB Motors and Mechanical Inc.

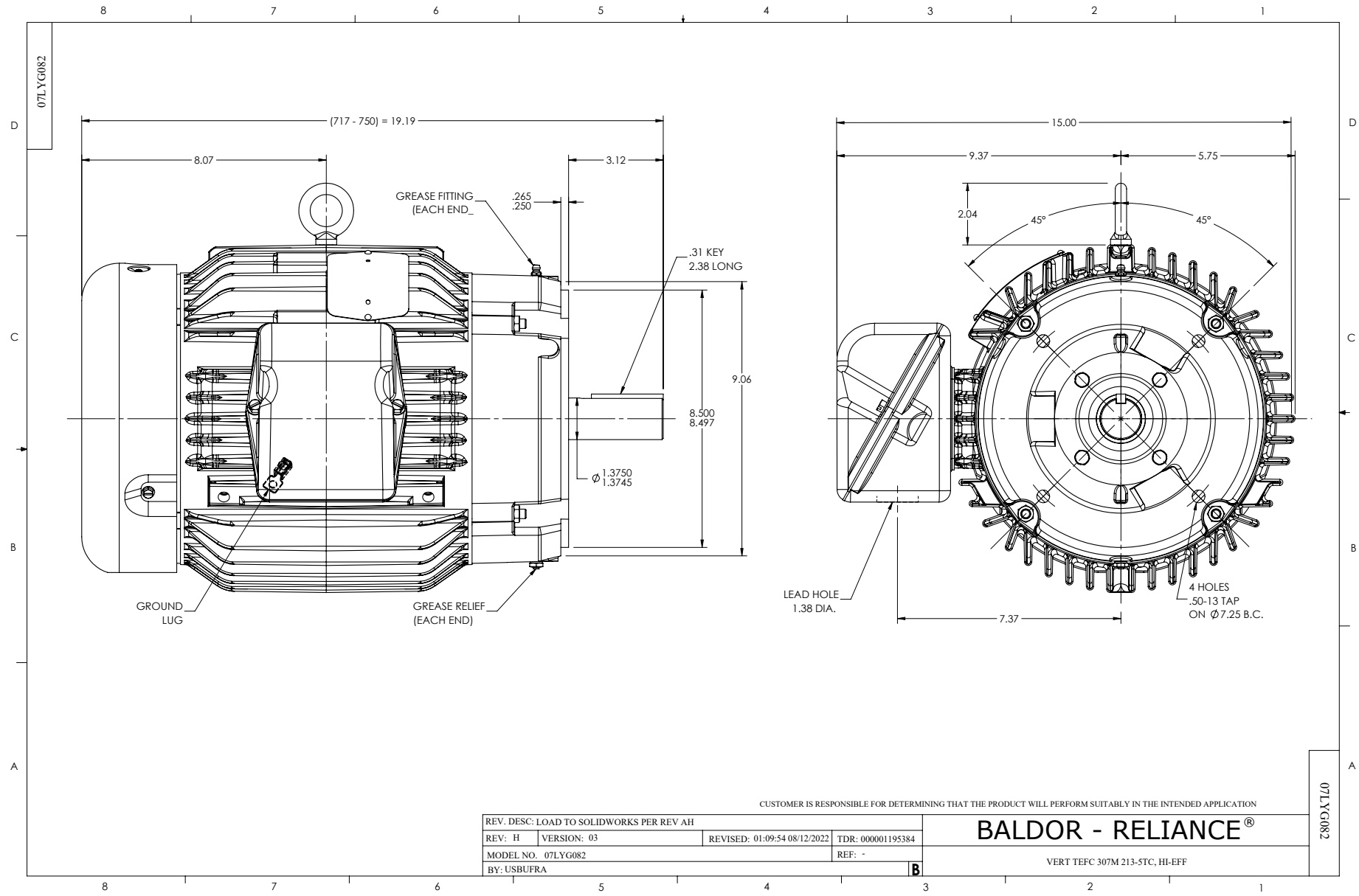
WINDING # 07WGT511

10 HP 3 PH 50 HZ 1765 RPM 400 V 0748M

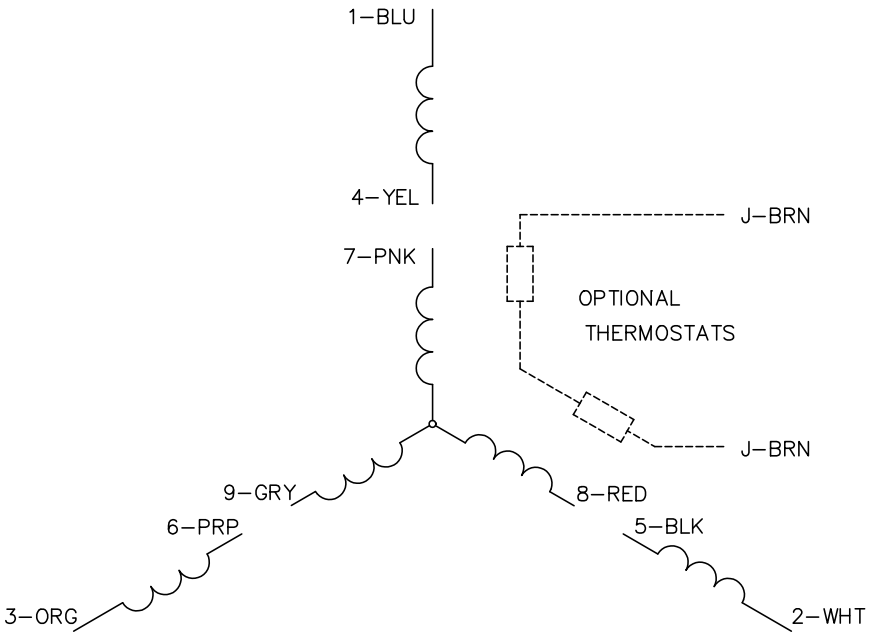
Typical performance - not guaranteed values.

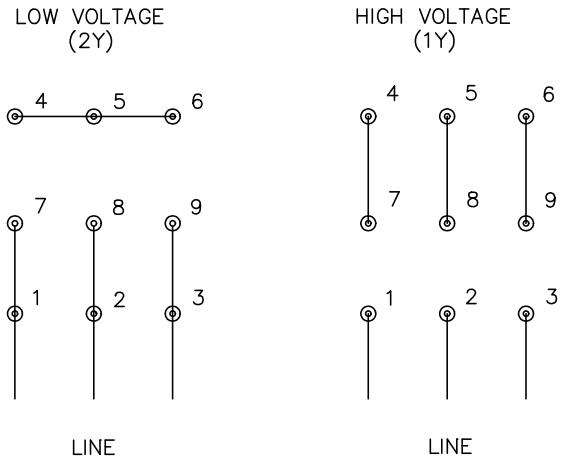
TORQUES(LB-FT): PO=89.52 PU=46.23 LR=59.13 LRA=88.53




07LYG082
(717 - 750) = 19.19
8.07
3.12
GREASE FITTING (EACH END_
.265
.250
.31 KEY
2.38 LONG
9.06
8.500
8.497
Ø 1.3750
1.3745
GROUND LUG
GREASE RELIEF (EACH END)
15.00
9.37
5.75
2.04
45°
45°
LEAD HOLE
1.38 DIA.
7.37
4 HOLES
.50-13 TAP
ON Ø7.25 B.C.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD TO SOLIDWORKS PER REV AH
REV: H
VERSION: 03
REVISED: 01:09:54 08/12/2022
TDR: 000001195384
MODEL NO. 07LYG082
REF: -
BY: USBUFRA
B
BALDOR - RELIANCE®
VERT TEFC 307M 213-5TC, HI-EFF
07LYG082

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 |