ABB BALDOR RELIANCE

# Customer information packet

## VECP2334T

20HP, 1770RPM, 3PH, 60HZ, 256TC, 0960M, TEFC, F
Class - CLI GP A,B,C,D
Division - Division II

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 256TC |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | CLI GP A,B,C,D |
| **Haz Area Division** | Division II |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 20.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| | 230.0 V @ 60 HZ |
| **Agency Approvals** | CCSA US |
| | CSA EEV |
| | NEMA PREMIUM |
| | NEMA_PREMIUM |
| | UR |
| **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 |
| **Constant Torque Speed Range** | 1.0 |
| **Current @ Voltage** | 52.000 A @ 208.0 V |
| | 48.000 A @ 230.0 V |
| | 24.000 A @ 460.0 V |
| **Design Code** | A |
| **Drip Cover** | Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 93.0 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |

## Part Detail

| | |
|---|---|
| **Revision** | P |
| **Type** | AC |
| **Mech. spec.** | 09H181 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 09WGT459 |
| **Layout** | 09LYH181 |
| **Eff. date** | 09-16-2025 |
| **CD Diagram** | CD0180 |
| **Poles** | 04 |
| **Leads** | 9#10 |
| **Proprietary** | False |
| **Created date** | 11-27-2017 |

| | |
|---|---|
| **Feedback Device** | NO FEEDBACK |
| **Front Face Code** | Standard |
| **Front Shaft Indicator** | None |
| **Haz Area Temp Code** | T3C |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 24.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |
| **KVA Code** | J |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Max Speed** | 2700 rpm |
| **Motor Lead Exit** | Ko Box |
| **Motor Lead Quantity/Wire Size** | 9 @ 10 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0960M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 27.41 IN |
| **Power Factor** | 83 |
| **Product Family** | Super-E Chemical Processing |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | C-Face |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 1.625 IN |
| **Shaft Extension Location** | Pulley End |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **Speed** | 1770 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**

**NP3995ABEL**

| | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT #** | VECP2334T | | | **SER** | | | | **CC** | 010A | | | | | | | | | | |
| **SPEC** | 09H181T459G1 | | | **RATING** | 40C AMB-CONT | | | | | | | | | | | | | | |
| **HZ** | **VOLTS** | | **AMPS** | | **RPM** | **HP** | **CODE** | | **SF** | **DES** | **PF** | | **NEMA NOM. EFF** | | | | | | |
| 60 | 230/460 | | 48/24 | | 1770 | 20 | J | | 1.15 | A | 83 | % | 93 | % | | | | | |
| | | | | | | | | | | | | % | | % | | | | | |
| **PH** | 3 | **CL** | F | **MAX RPM** | 2700 | **MAX CORR KVAR** | 5.35 | | | **USABLE AT 208V** | N/A | | | | | | | | |
| IP55 | | **FR** | 256TC | **ENCL** | TEFC | **DE BRG** | 6309 | | | **ODE BRG** | 6309 | | | | | | | | |
| **GREASE** | POLYREX EM | | | | | | | | **MTR WT** | 354 | **LBS** | | | | | | | | |
| **USABLE AT** | 50HZ 15HP 190/380V 44/22A | | | | | | | | SF1.0 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| **CL I DIV 2 GRPS A,B,C,D** | | | | **CL I ZONE 2 GRPS** | | | | | **IIA,IIB,IIC** | | **TEMP T** | 160 | C | | | | | | |
| **1.0 SF ON PWM INVERTER** | | | | **POWER** | | **INV TEMP CL** | 180 | C | | | | | | | | | | | |
| **CHP** | 60-90 | **HZ** | 1.5:1 | **CT** | 1.0-60 | **HZ** | 60:1 | **VT** | 0-60 | **HZ** | 1000:1 | | | | | | | | |
| **SPACE HEATER LEADS H1-H2:** | | | | **TIE LIKE NUMBERS** | | | | **TOGETHER** | | | | | | | | | | | |
| **V** | | **A** | | **W** | | **MAX SPACE HEATER TEMP** | | | | | | | | | | | | | |

**AC Induction Motor Performance Data**
Record # 68075
Typical performance - not guaranteed values

| **Winding:** 09WGT459-R011 | **Type:** 0960M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 20 | **Full Load Torque** | 59.27 LB-FT |
| **Volts** | | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 48/24 | **Breakdown Torque** | 232 LB-FT |
| **R.P.M.** | | | 1770 | **Pull-up Torque** | 126 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 141 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | J | **Starting Current** | 198 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 10.4 A |
| **NEMA Nom. Eff.** | 93 | **Power Factor** | 83 | **Line-line Res. @ 25ºC** | 0.33814 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 58°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 70°C |
| | | | | **Locked-rotor Power Factor** | 26.5 |

**Load Characteristics 460 V, 60 Hz, 20 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 45 | 67 | 78 | 83 | 86 | 87 | 85 |
| **Efficiency** | 89.2 | 93 | 93.7 | 93.6 | 93.1 | 92.4 | 93.3 |
| **Speed** | 1793.2 | 1786.4 | 1779.1 | 1771.9 | 1763.7 | 1755.3 | 1767 |
| **Line amperes** | 11.8 | 15 | 19.2 | 24 | 29.3 | 34.9 | 27.2 |

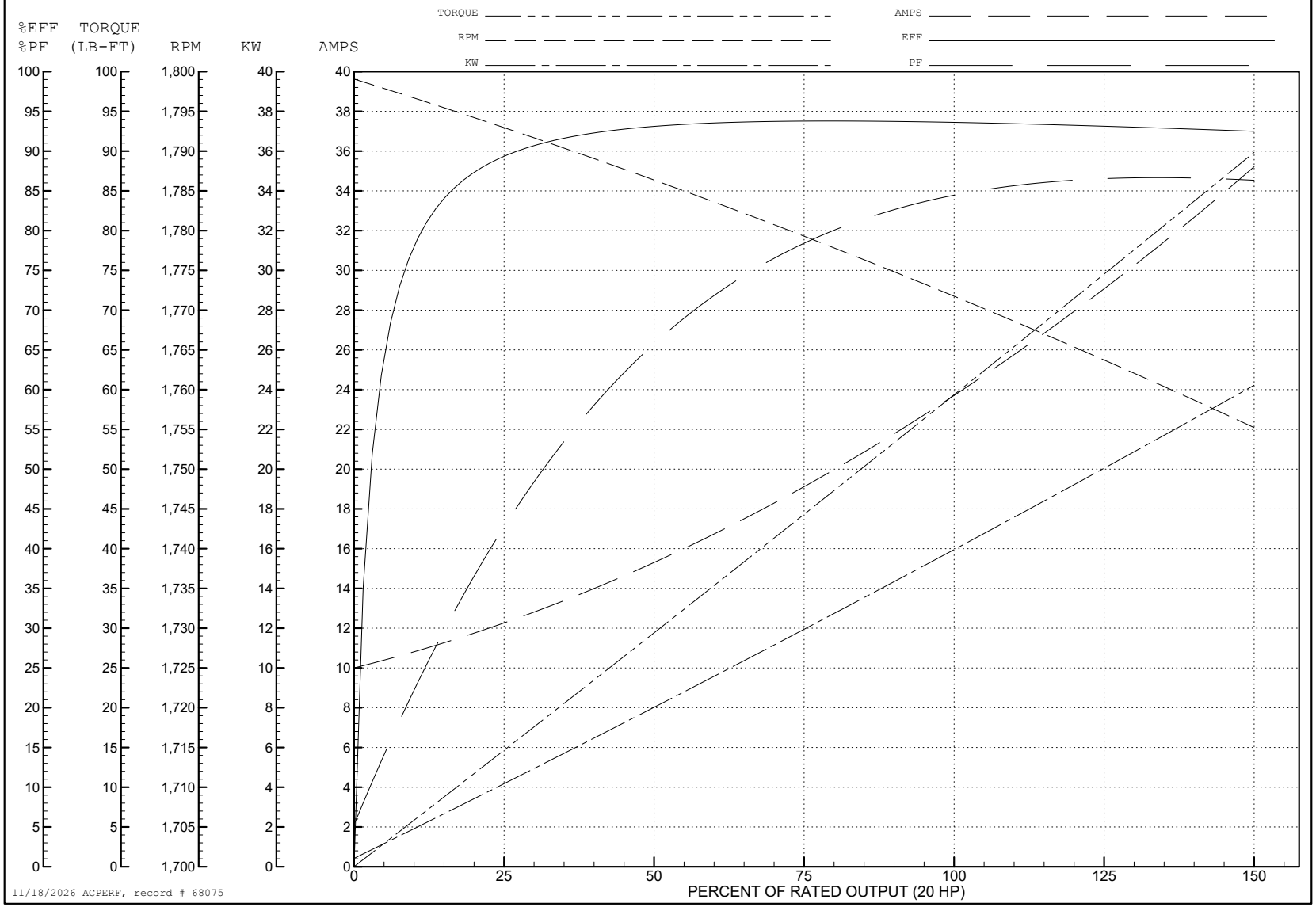
ABB Motors and Mechanical Inc.

WINDING # 09WGT459

20 HP 3 PH 60 HZ 1770 RPM 460 V 0960M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=232 PU=126 LR=141 LRA=198




11/18/2026 ACPERF, record # 68075

**AC Induction Motor Performance Data**
Record # 114686
Typical performance - not guaranteed values

| **Winding:** 09WGT459-RXXX | **Type:** 0960M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **400 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 15 | **Full Load Torque** | 44.44 LB-FT |
| **Volts** | | | 200/400 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 40.6/20.3 | **Breakdown Torque** | 172 LB-FT |
| **R.P.M.** | | | 1770 | **Pull-up Torque** | 91 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 102 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | J | **Starting Current** | 168 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 7.96 A |
| **NEMA Nom. Eff.** | 92.4 | **Power Factor** | 83 | **Line-line Res. @ 25ºC** | 0.332 Ω |
| **Rating - Duty** | | | 50C AMB-CONT | **Temp. Rise @ Rated Load** | 43°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 51°C |
| | | | | **Locked-rotor Power Factor** | 27 |
| | | | | **Rotor inertia** | 2.65 lb-ft² |

**Load Characteristics 400 V, 60 Hz, 15 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 49 | 70 | 80 | 85 | 87 | 88 | 86 |
| **Efficiency** | 88.6 | 92.6 | 93.5 | 93.5 | 93 | 92.4 | 93.2 |
| **Speed** | 1793 | 1787 | 1779 | 1772 | 1764 | 1756 | 1767 |
| **Line amperes** | 9.41 | 12.38 | 16.14 | 20.34 | 24.94 | 29.8 | 23.1 |

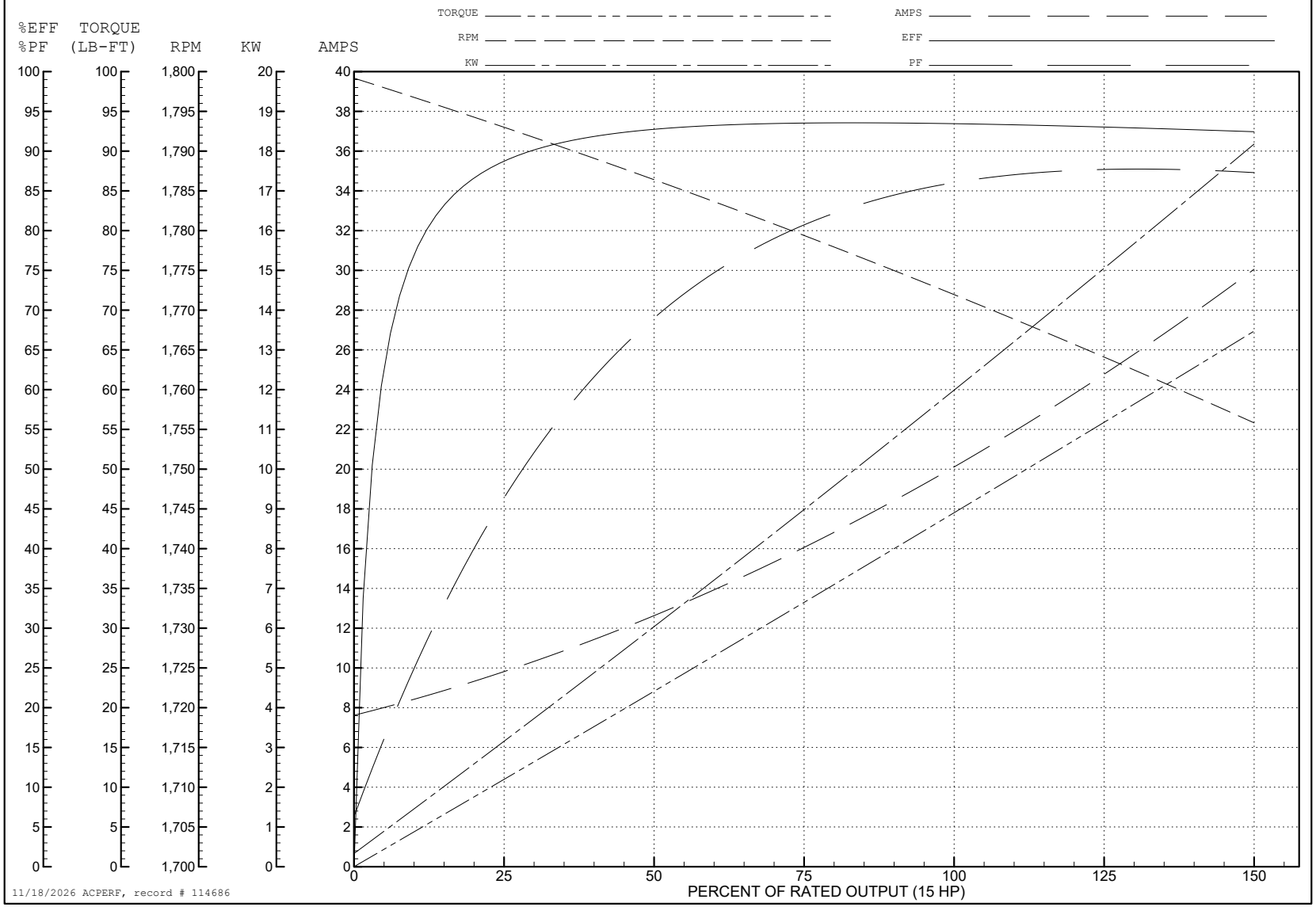
ABB Motors and Mechanical Inc.

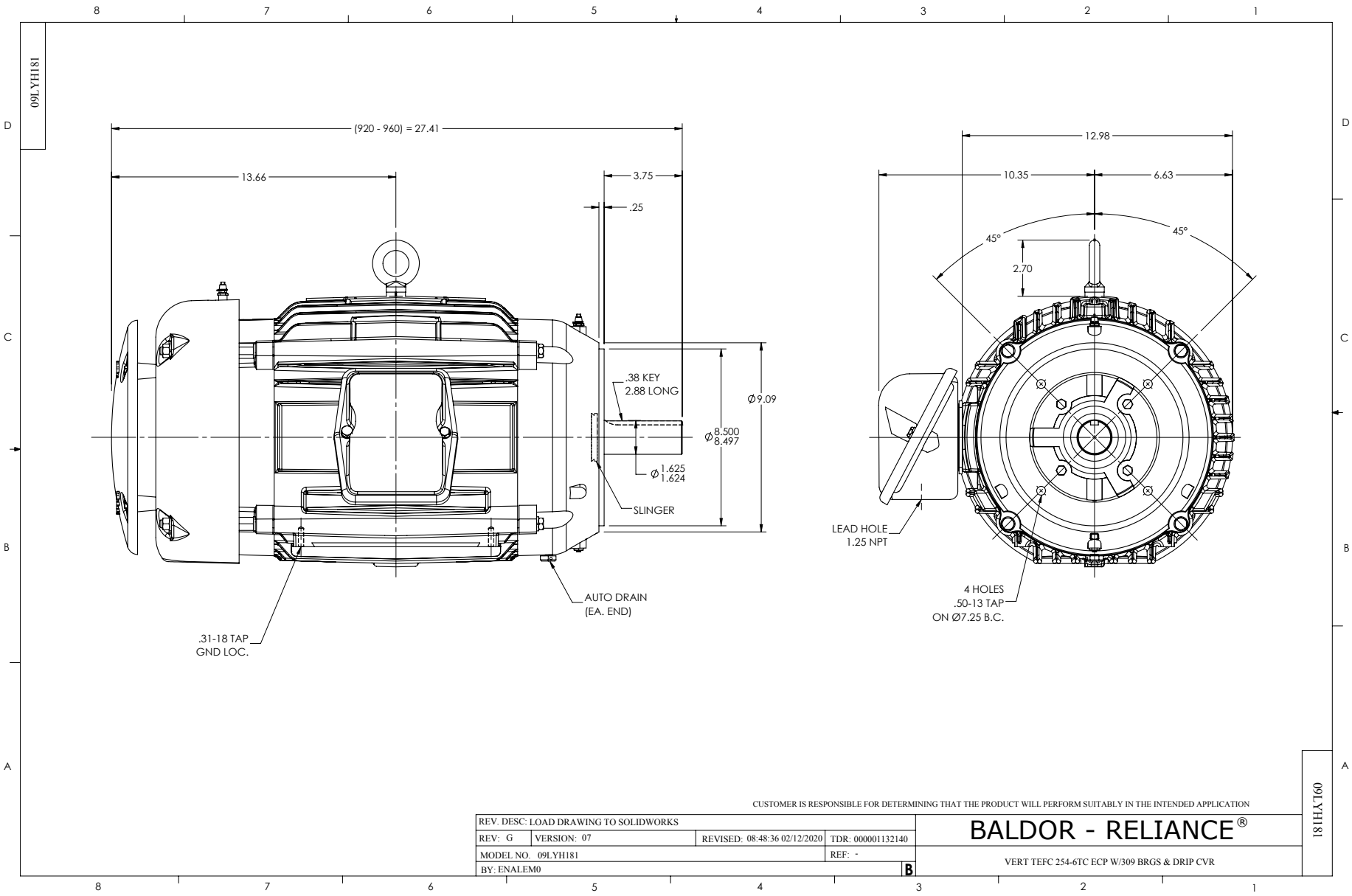
WINDING # 09WGT459

15 HP 3 PH 60 HZ 1770 RPM 400 V 0960M

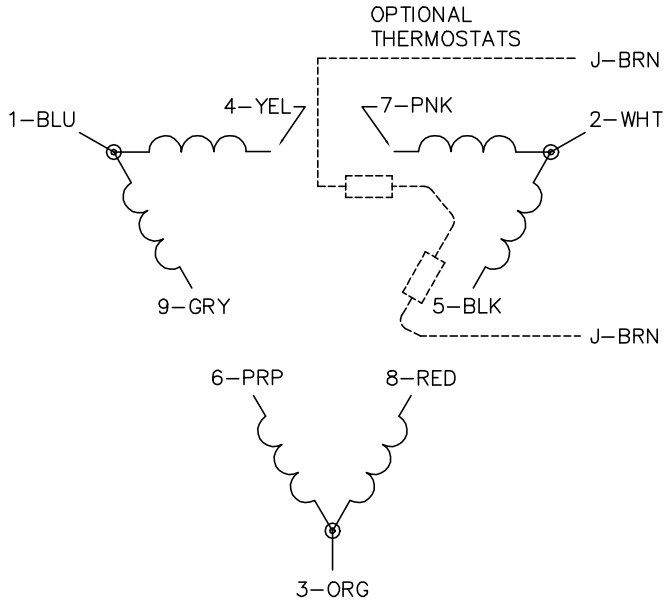
Typical performance - not guaranteed values.

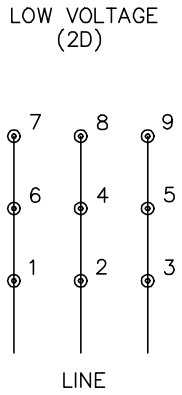
TORQUES(LB-FT): PO=172 PU=91 LR=102 LRA=168

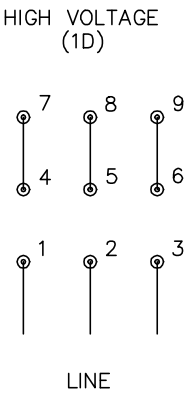



09LYH181
(920 - 960) = 27.41
13.66
3.75
.25
.38 KEY
2.88 LONG
Ø9.09
Ø8.500
8.497
Ø1.625
1.624
SLINGER
AUTO DRAIN
(EA. END)
.31-18 TAP
GND LOC.
12.98
10.35
6.63
45°
45°
2.70
LEAD HOLE
1.25 NPT
4 HOLES
.50-13 TAP
ON Ø7.25 B.C.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: G
VERSION: 07
REVISED: 08:48:36 02/12/2020
TDR: 000001132140
MODEL NO. 09LYH181
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
VERT TEFC 254-6TC ECP W/309 BRGS & DRIP CVR
09LYH181

CD0180




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 | | |
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| MTL: – | | |

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1