

**BALDOR • RELIANCE**

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# Customer information packet

## VENM3581T

1HP, 1770RPM, 3PH, 60HZ, 143TC, 0522M, TENV, F1

Class - None

Division - Not Applicable

## Specifications

Enclosure	TENV
Frame	143TC
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	1.000 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	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	1.600 A @ 460.0 V 3.200 A @ 230.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	85.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

## Part detail

Revision	C
Type	AC
Mech. spec.	05E124
Base	
Status	PRD/A
Elec. spec.	05WGX545
Layout	05LYE124
Eff. date	04-29-2024
CD Diagram	CD0005
Poles	04
Leads	9#18 Y
Proprietary	False
Created date	03-11-2022

High Voltage Full Load Amps	1.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0522M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	11.36 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
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No 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**

**NP3441LUA**

<b>CAT.NO.</b>	VENM3581T						
<b>SPEC</b>	05E124X545G1						
<b>HP</b>	1						
<b>VOLTS</b>	230/460						
<b>AMPS</b>	3.2/1.6						
<b>RPM</b>	1770						
<b>FRAME</b>	143TC	<b>HZ</b>	60	<b>PH</b>	3		
<b>SF</b>	1.15	<b>CODE</b>	N	<b>DES</b>	B	<b>CLASS</b>	F
<b>NEMA NOM. EFF</b>	85.5	<b>PF</b>	68				
<b>RATING</b>	40C AMB-CONT						
<b>CC</b>	010A						
<b>ENCL</b>	TENV	<b>SER</b>					
<b>DE</b>	6205	<b>ODE</b>	6203				
<b>VPWM INVERTER READY</b>	SFA 3.5/1.75						
<b>CT6-60H(10:1)VT3-60H(20:1)</b>	50HZ 1HP 190/380V 3.6/1.8A						SF1.0

**AC Induction Motor Performance Data**

Record # 87235

Preliminary Data Sheet

<b>Winding:</b> 05WGX545-R004		<b>Type:</b> 0522M		<b>Enclosure:</b> TENV	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	1	<b>Full Load Torque</b>	3 LB-FT		
<b>Volts</b>	230/460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	3.2/1.6	<b>Breakdown Torque</b>	15.27 LB-FT		
<b>R.P.M.</b>	1770	<b>Pull-up Torque</b>	6.77 LB-FT		
<b>Hz</b>	60	<b>Locked-rotor Torque</b>	9.41 LB-FT		
<b>NEMA Design Code</b>	B	<b>Starting Current</b>	15.07 A		
<b>Service Factor (S.F.)</b>	1.15	<b>No-load Current</b>	1.16 A		
<b>NEMA Nom. Eff.</b>	85.5	<b>Line-line Res. @ 25°C</b>	16.4 Ω		
<b>Rating - Duty</b>	40C AMB-CONT	<b>Temp. Rise @ Rated Load</b>	65°C		
<b>S.F. Amps</b>		<b>Temp. Rise @ S.F. Load</b>	75°C		
		<b>Locked-rotor Power Factor</b>	61.4		
		<b>Rotor inertia</b>	0.159 lb-ft <sup>2</sup>		

**Load Characteristics 460 V, 60 Hz, 1 HP**

<b>% of Rated Load</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>S.F.</b>
<b>Power Factor</b>	29	45	58	68	75	79	72
<b>Efficiency</b>	70.9	81.1	84.4	85.7	85.4	84.6	85.5
<b>Speed</b>	1793	1786	1780	1772	1765	1756	1768
<b>Line amperes</b>	1.18	1.28	1.43	1.62	1.83	2.09	1.75

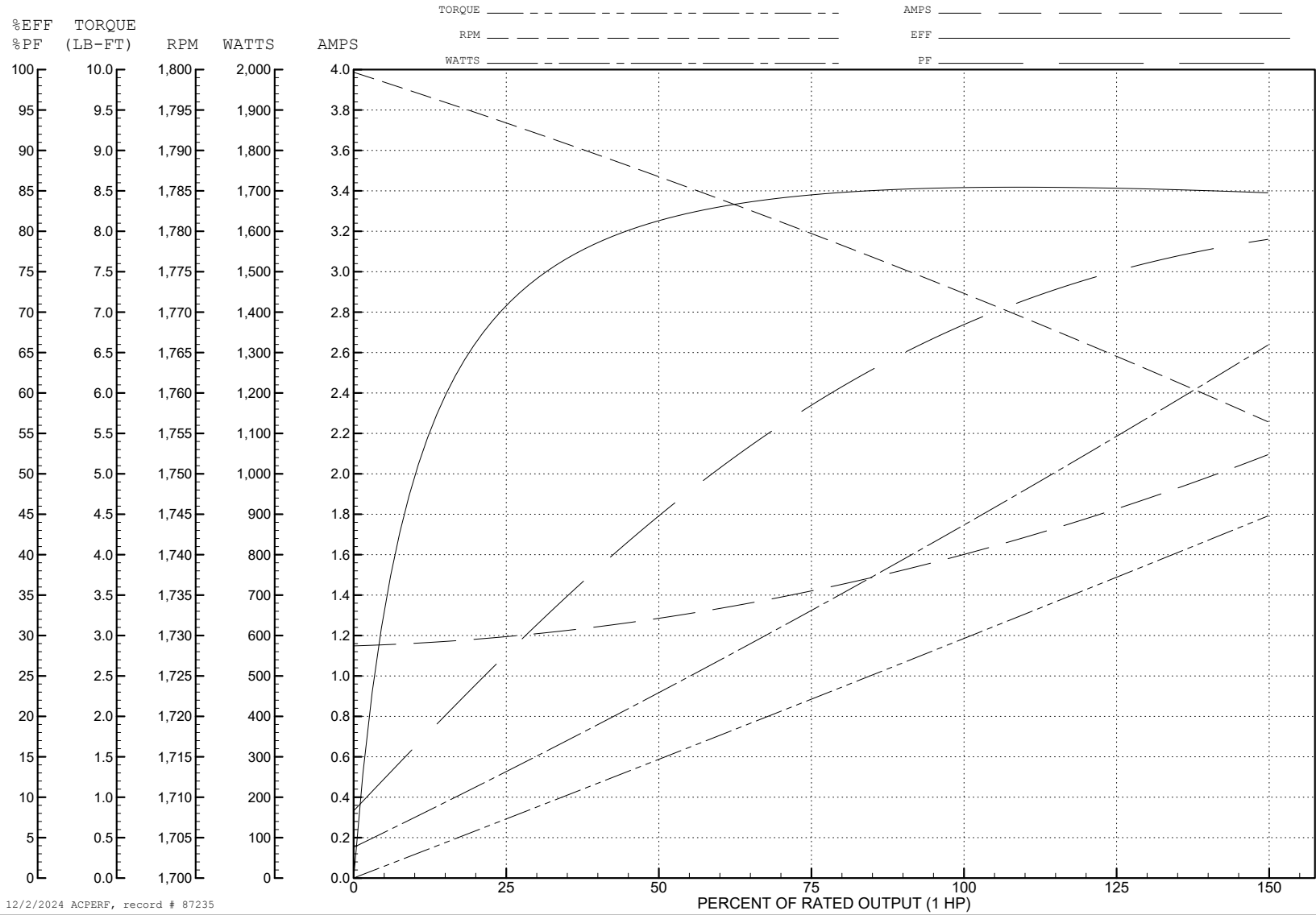
ABB Motors and Mechanical Inc.

WINDING # 05WGX545

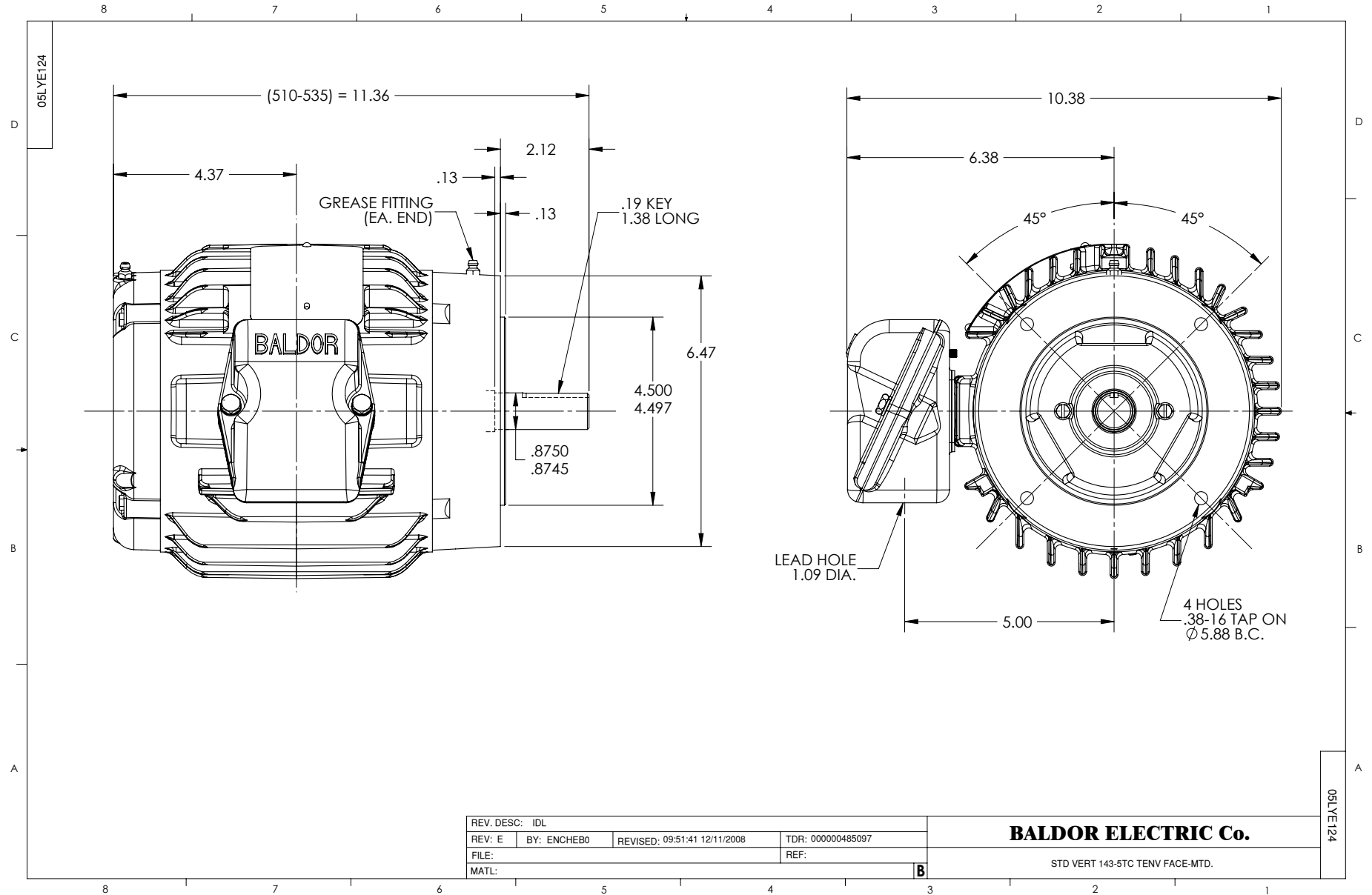
Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 1770 RPM 460 V 0522M

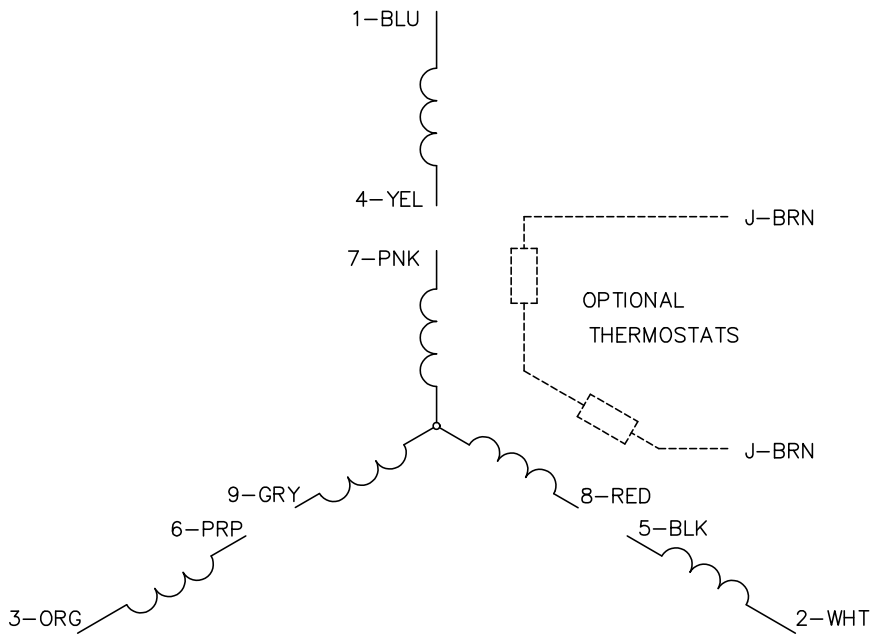
TORQUES (LB-FT): PO=15.27 PU=6.77 LR=9.41 LRA=15.07



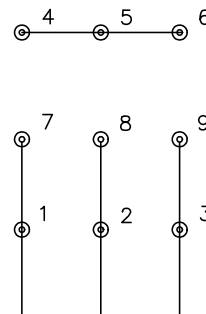
12/2/2024 ACPERF, record # 87235



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