ABB BALDOR RELIANCE

Customer information packet

VENM3581T

1HP, 1770RPM, 3PH, 60HZ, 143TC, 0522M, TENV, F1
Class - None
Division - Not Applicable

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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	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	3.200 A @ 230.0 V
	1.600 A @ 460.0 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
High Voltage Full Load Amps	1.6 a
Insulation Class	F

Part Detail

Revision	D
Type	AC
Mech. spec.	05E124
Base	
Status	PRD/A
Elec. spec.	05WGX545
Layout	05LYE124
Eff. date	01-05-2026
CD Diagram	CD0005
Poles	04
Leads	9#18 Y
Proprietary	False
Created date	03-11-2022

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

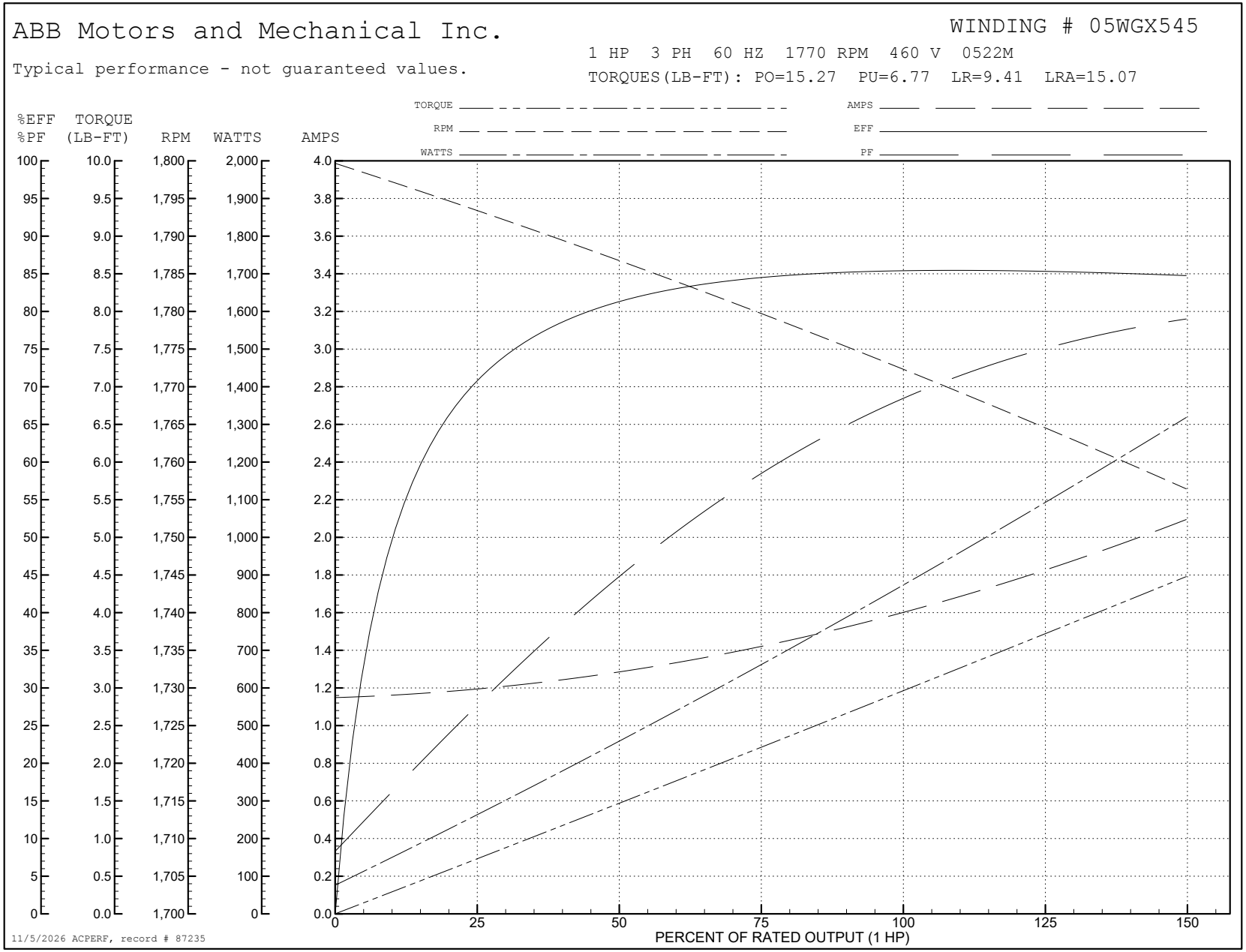
AC Induction Motor Performance Data
Record # 87235
Preliminary Data Sheet

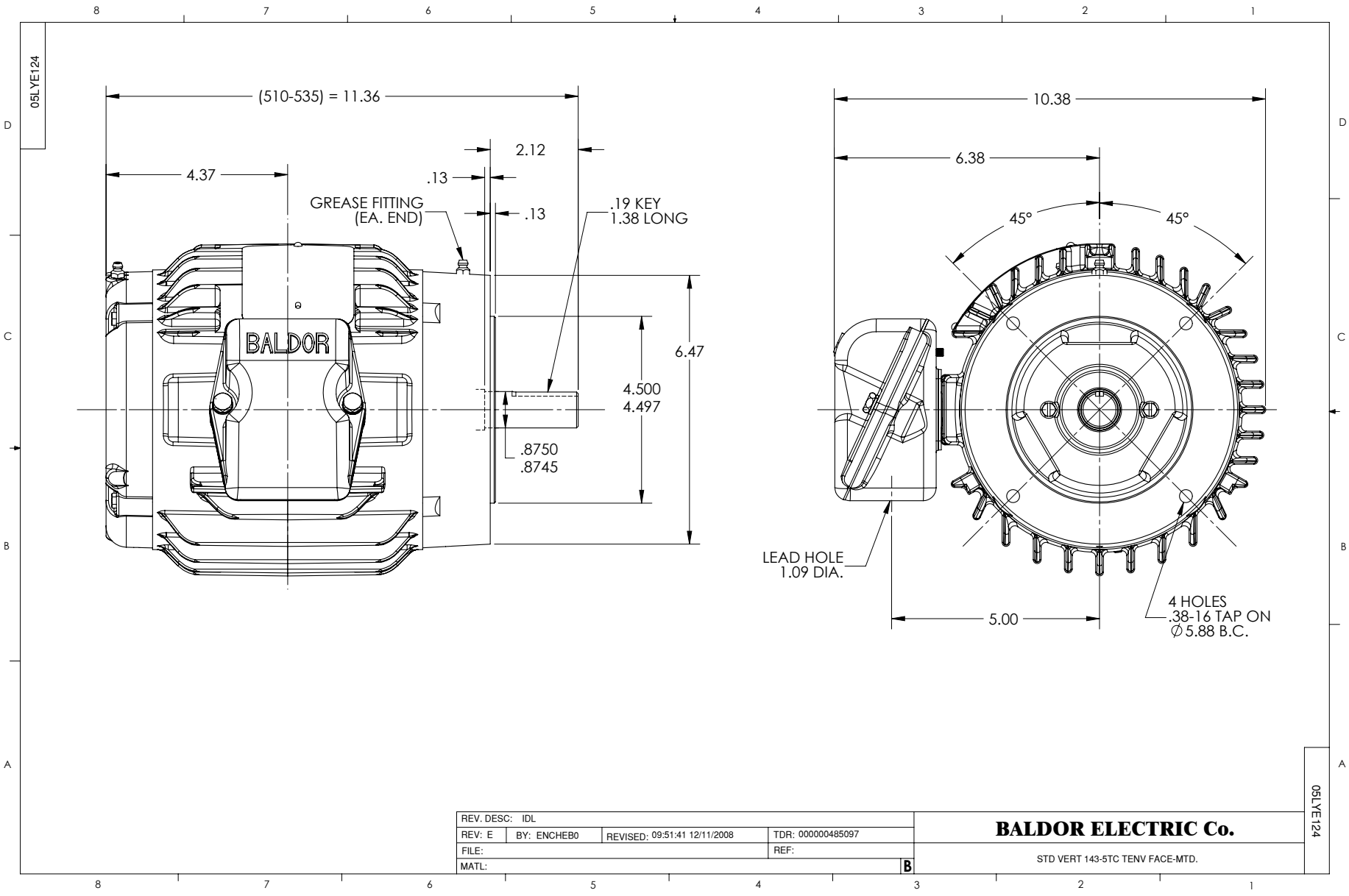
Winding: 05WGX545-R004	**Type:** 0522M	**Enclosure:** TENV

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			1	**Full Load Torque**	3 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			3.2/1.6	**Breakdown Torque**	15.27 LB-FT
R.P.M.			1770	**Pull-up Torque**	6.77 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	9.41 LB-FT
NEMA Design Code	B	**KVA Code**	N	**Starting Current**	15.07 A
Service Factor (S.F.)			1.15	**No-load Current**	1.16 A
NEMA Nom. Eff.	85.5	**Power Factor**	68	**Line-line Res. @ 25ºC**	16.4 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	65°C
S.F. Amps				**Temp. Rise @ S.F. Load**	75°C
				Locked-rotor Power Factor	61.4
				Rotor inertia	0.159 lb-ft²

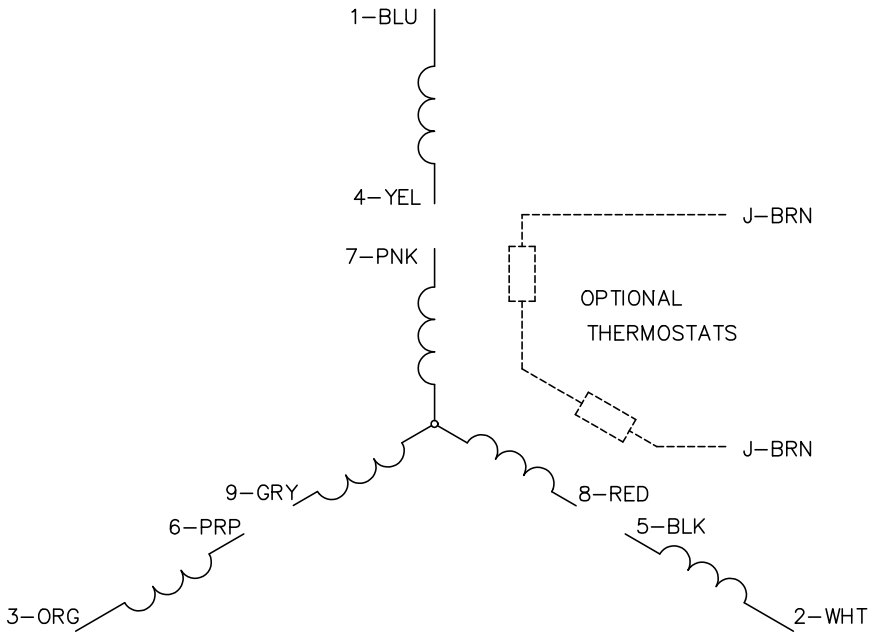
Load Characteristics 460 V, 60 Hz, 1 HP

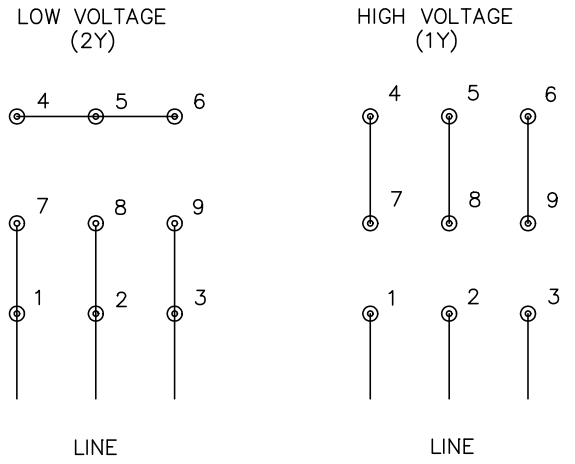
% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	29	45	58	68	75	79	72
Efficiency	70.9	81.1	84.4	85.7	85.4	84.6	85.5
Speed	1793	1786	1780	1772	1765	1756	1768
Line amperes	1.18	1.28	1.43	1.62	1.83	2.09	1.75


ABB Motors and Mechanical Inc.
WINDING # 05WGX545
1 HP 3 PH 60 HZ 1770 RPM 460 V 0522M
Typical performance - not guaranteed values.
TORQUES(LB-FT): PO=15.27 PU=6.77 LR=9.41 LRA=15.07
TORQUE
RPM
WATTS
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
WATTS
AMPS
PERCENT OF RATED OUTPUT (1 HP)
11/5/2026 ACPERF, record # 87235


05LYE124
(510-535) = 11.36
4.37
2.12
.13
.13
GREASE FITTING
(EA. END)
.19 KEY
1.38 LONG
BALDOR
6.47
4.500
4.497
.8750
.8745
10.38
6.38
45°
45°
LEAD HOLE
1.09 DIA.
5.00
4 HOLES
.38-16 TAP ON
∅5.88 B.C.
REV. DESC: IDL
REV: E
BY: ENCHEB0
REVISED: 09:51:41 12/11/2008
TDR: 000000485097
FILE:
REF:
MATL:
B
BALDOR ELECTRIC Co.
STD VERT 143-5TC TENV FACE-MTD.
05LYE124

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