

ABB BALDOR RELIANCE III

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	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								
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Parts List

Part number	Description	Quantity
SA408947	SA 05E124X545G1	1.000 ea
RA400494	RA 05E124X545G1	1.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
06CB1000A03	CONDUIT BOX, MACH	1.000 ea
06GS1000	GASKET, CONDUIT BOX	1.000 ea
51XW2520A12	SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B01	BRASS CUP WASHER, FOR #10 SCREW	1.000 ea
35EP1100A14	FRONT ENDPLATE TENV 35 FRAME W/GREASER	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP1300A35	PU ENDPLATE, MACH	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
HA3100A47	THRUBOLT 10-32 X 7.625	4.000 ea
06CB1500A01	CONDUIT BOX LID, MACH	1.000 ea
06GS1001	BALDOR CONDUIT BOX GASKET	1.000 ea
10XN2520A12	1/4-20 X 3/4 HEX HEAD CAP	2.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	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 *5 GALLON BUCKET*	0.022 ga
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
NP3441LUA	AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM	1.000 ea
36PA1000	PKG GRP, PRINT PK1016A08	1.000 ea
PK3082	STYROFOAM CRADLE	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

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. @ 25°C	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

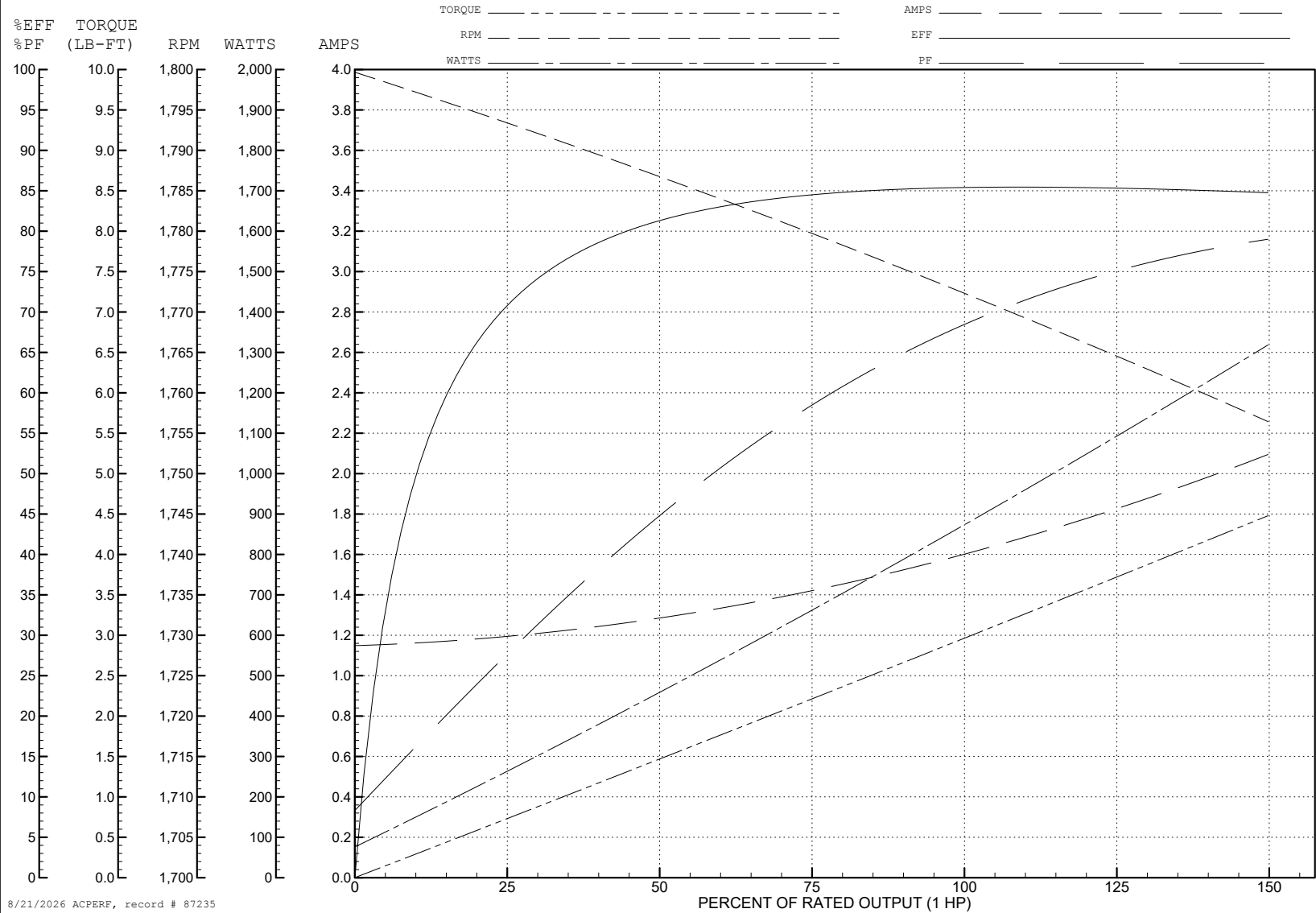
ABB Motors and Mechanical Inc.

WINDING # 05WGX545

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



8/21/2026 ACPERF, record # 87235

