

BALDOR • RELIANCE

Customer information packet

HBEM3581T

20M 4P TEFC HOR 143T

Class - None

Division - Not Applicable

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8/10/2024 3:25:47 AM

Specifications

Enclosure	TEFC
Frame	143T
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	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM WEEE
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	3.200 A @ 208.0 V 3.260 A @ 230.0 V 1.630 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	85.5 %
Electrically Isolated Bearing	Electrically Isolated Bearings
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

Part detail

Revision	D
Type	AC
Mech. spec.	05H396
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYH396
Eff. date	08-02-2023
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	01-04-2022

High Voltage Full Load Amps	1.6 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Max Speed	2700 rpm
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	12.54 IN
Power Factor	67
Product Family	General Purpose
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1760 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

NP4312A01A01L

CAT #	HBEM3581T		SER			CC	010A	WGT		LBS				
SPEC	05H396X508G1		RATING	40C AMB-CONT										
HZ	VOLTS		AMPS	RPM	HP	SF	NEMA NOM. EFF							
60	230/460		3.26/1.63			1760	1HP	1.15	85.5					
PH	3	CL	H	CODE	N	DES	B	ENCL	TEFC	IP	54	PF	67	%
DE BRG	6205		ODE BRG	6203		FRAME	143T							
INV TYPE:	VPWM	SL HZ	1.3	CHP	60	TO	90	1.5:1						
WK2	0.144	LB FT2	MAX RPM	2700	CT	6	TO	60	10:1					
	2.4/1.2		VT	3	TO	60	20:1							
SFA 3.52/1.76														

YR

AC Induction Motor Performance Data

Record # 90512

Typical performance - not guaranteed values

Winding: 35WGG184-R018		Type: 3522M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection		
Rated Output (HP)		1	Full Load Torque		2.99 LB-FT
Volts		230/460	Start Configuration		direct on line
Full Load Amps		3.34/1.67	Breakdown Torque		16.6 LB-FT
R.P.M.		1770	Pull-up Torque		7.42 LB-FT
Hz	60 Phase	3	Locked-rotor Torque		10.32 LB-FT
NEMA Design Code	B KVA Code	N	Starting Current		16.1 A
Service Factor (S.F.)		1.15	No-load Current		1.23 A
NEMA Nom. Eff.	85.5 Power Factor	66	Line-line Res. @ 25°C		14.4 Ω
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load		32°C
S.F. Amps			Temp. Rise @ S.F. Load		37°C
			Locked-rotor Power Factor		59.3666
			Rotor inertia		0.159 lb-ft ²

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	27	43	56	66	73	78	70
Efficiency	70.8	81.2	84.5	85.9	85.8	85.2	85.8
Speed	1793	1786	1781	1773	1766	1758	1769
Line amperes	1.25	1.34	1.49	1.67	1.87	2.12	1.79

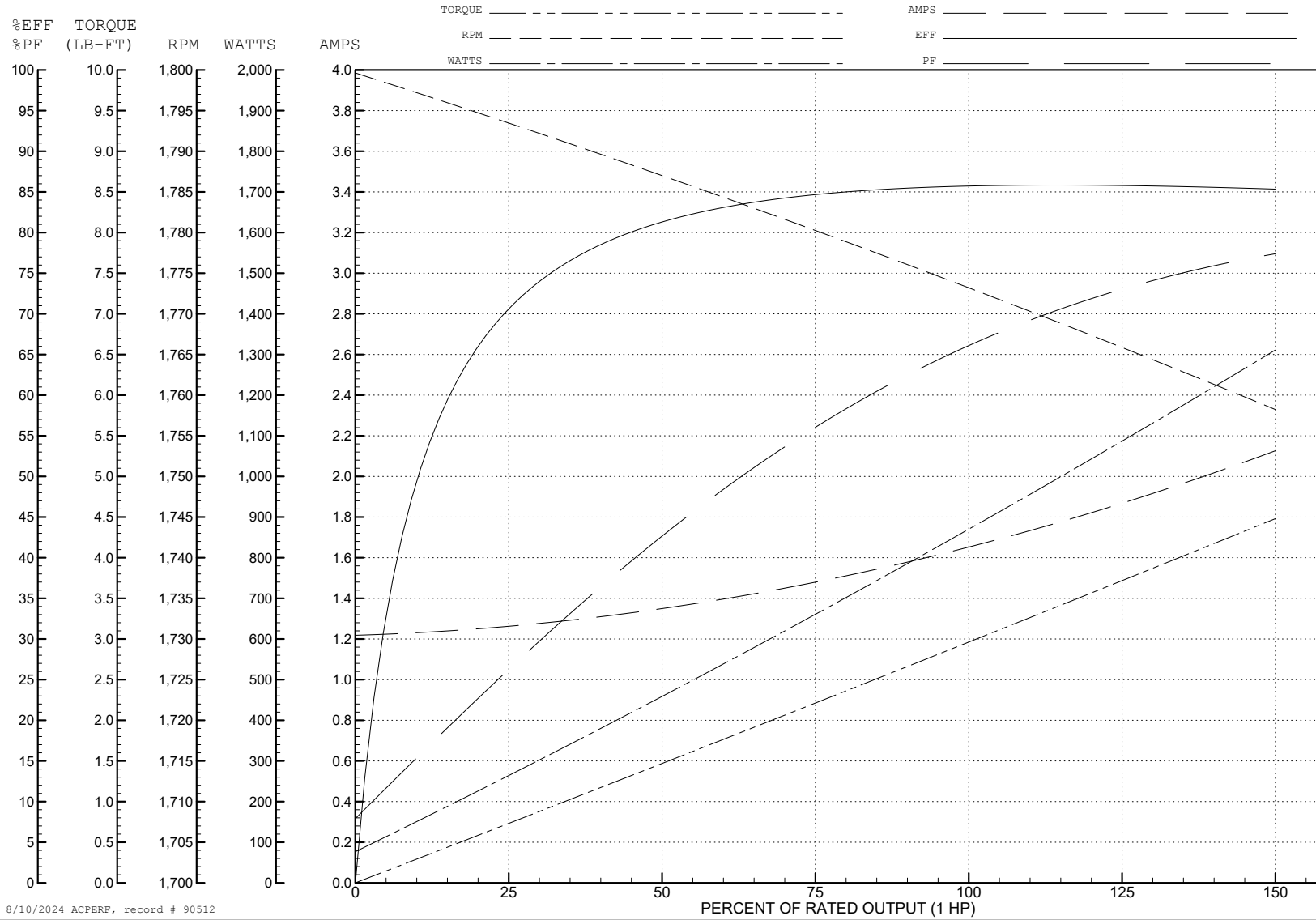
ABB Motors and Mechanical Inc.

WINDING # 35WGG184

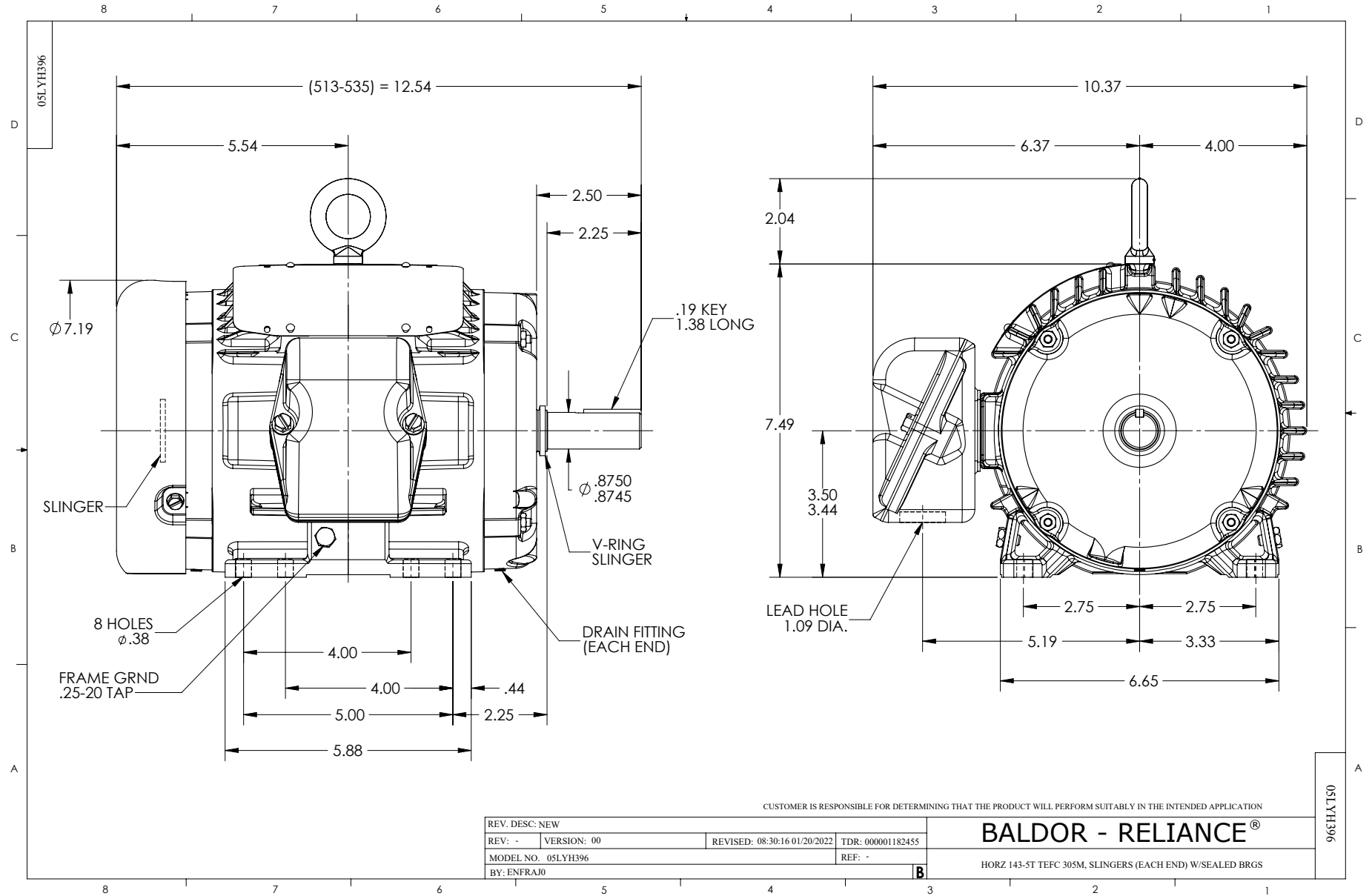
1 HP 3 PH 60 HZ 1770 RPM 460 V 3522M

Typical performance - not guaranteed values.

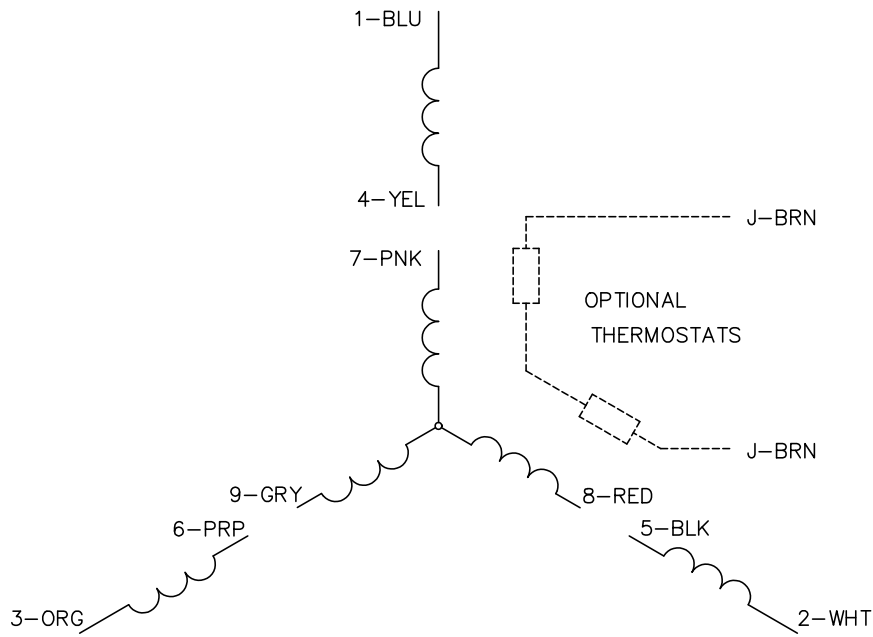
TORQUES (LB-FT): PO=16.6 PU=7.42 LR=10.32 LRA=16.1



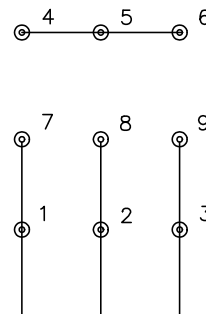
8/10/2024 ACPERF, record # 90512



CD0005

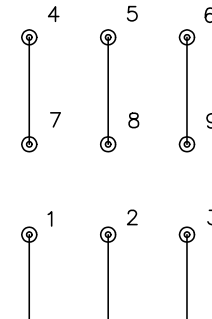


LOW VOLTAGE (2Y)



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