

ABB BALDOR RELIANCE III

Customer information packet

EM2543T-5BG

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F1

Specifications

Enclosure	OPSB
Frame	326T
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	50.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CSA EEV
	UR
	CSA
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	46.000 A @ 575.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	46.0 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	G

Part Detail

Revision	M
Type	AC
Mech. spec.	42E307
Base	
Status	PRD/A
Elec. spec.	42WGW476
Layout	42LYE307
Eff. date	02-12-2024
CD Diagram	CD0006
Poles	04
Leads	3#8
Proprietary	False
Created date	09-22-2014

Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	3 @ 8 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	4256M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	27.69 IN
Power Factor	87
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	2.125 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1775 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
NP2138L

CAT.NO.	EM2543T-5BG				P/N						ENCLOSURE		OPSB				
SPEC.	42E307W476G1			CC	010A		FRAME		326T		S/N						
HP	50				CLASS		H		HZ		60						
RPM	1775				PH		3		DES		A						
VOLT	575								KVA-CODE		G		ODE BRG		6311	DE BRG	6312
AMP	46																
RATING	40C AMB-CONT								GREASE		POLYREX EM						
NEMA-NOM-EFF	94.5	PF	87	SER.F.		1.15											
HTR-VOLTS	HTR-AMPS																

AC Induction Motor Performance Data

Record # 50233

Typical performance - not guaranteed values

Winding: 42WGW476-R003				Type: 4256M		Enclosure: OPSB	
Nameplate Data				575 V, 60 Hz: Single Voltage Motor			
Rated Output (HP)		50		Full Load Torque		148 LB-FT	
Volts		575		Start Configuration		direct on line	
Full Load Amps		46		Breakdown Torque		423 LB-FT	
R.P.M.		1775		Pull-up Torque		234 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		282 LB-FT	
NEMA Design Code		A	KVA Code	G	Starting Current		305 A
Service Factor (S.F.)		1.15		No-load Current		16.5 A	
NEMA Nom. Eff.		94.5	Power Factor	87	Line-line Res. @ 25°C		0.194 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		36°C	
S.F. Amps				Temp. Rise @ S.F. Load		42°C	
				Locked-rotor Power Factor		27.1	
				Rotor inertia		7.46 LB-FT2	

Load Characteristics 575 V, 60 Hz, 50 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	47	69	79	86	86	85	86
Efficiency	90	93.5	94.4	94.5	94.3	94	94.4
Speed	1795	1790	1785	1780	1774	1768	1776
Line amperes	22.5	29.2	37.7	46	58	70	53.2

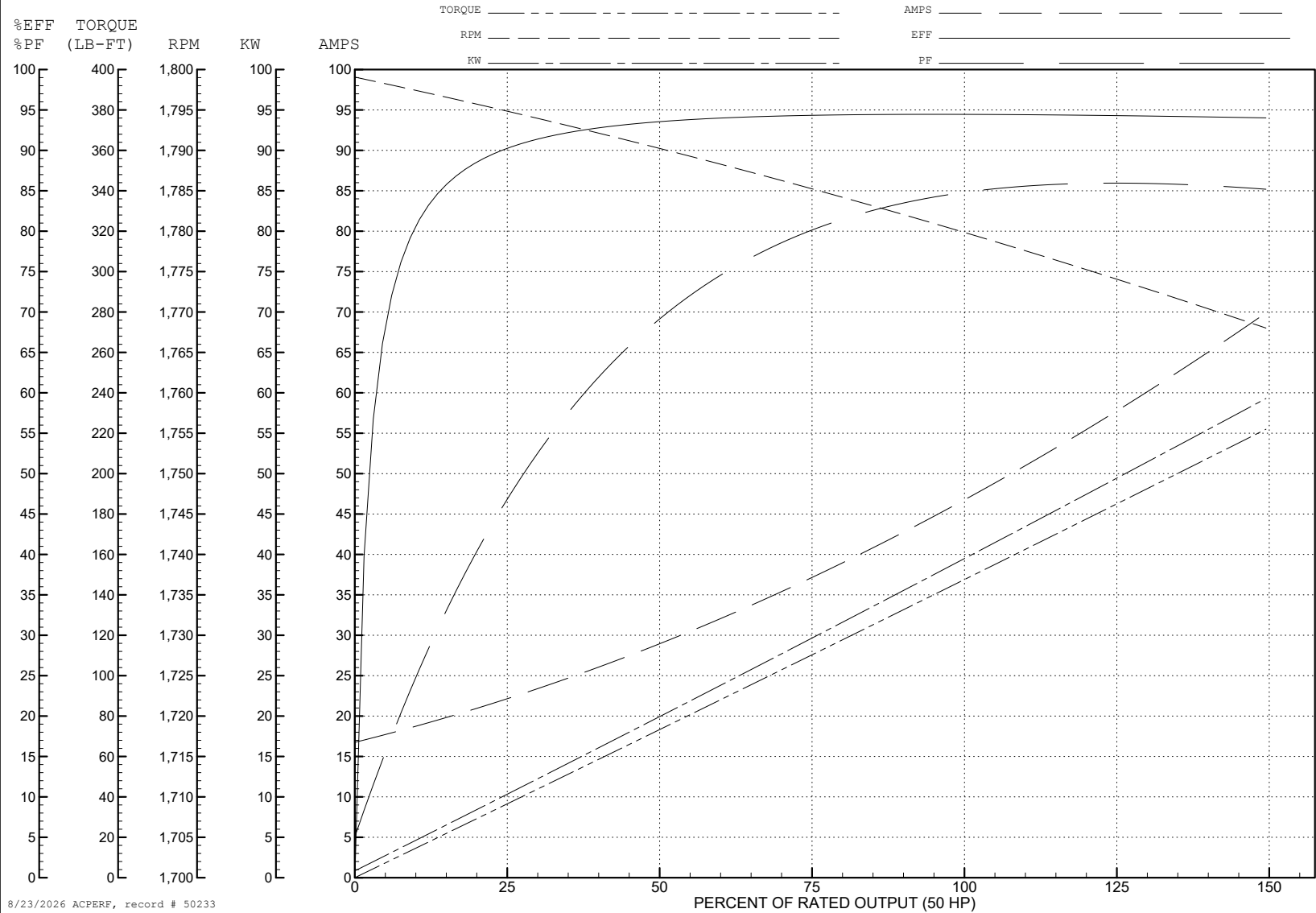
ABB Motors and Mechanical Inc.

WINDING # 42GW476

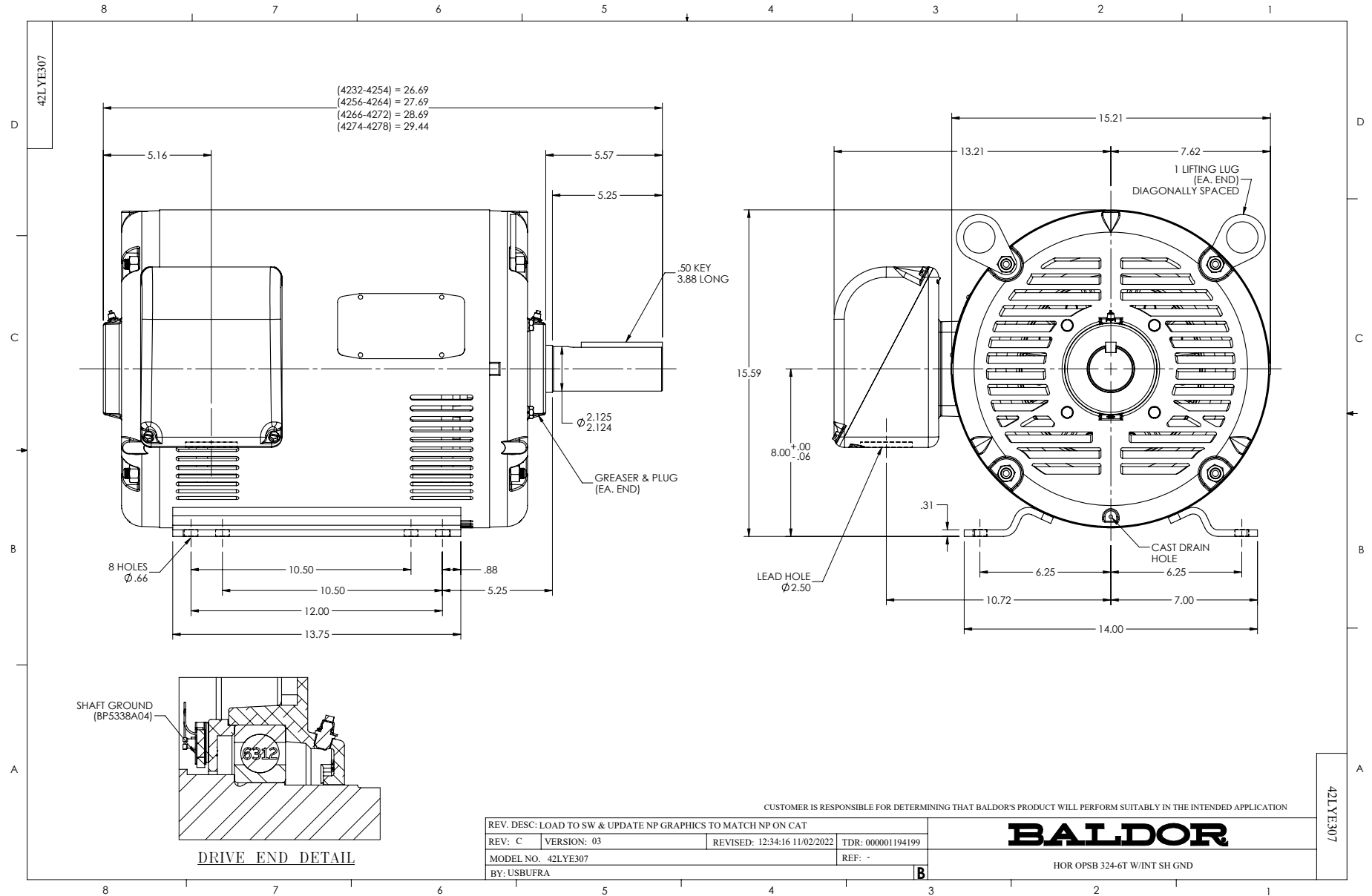
Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1775 RPM 575 V 4256M

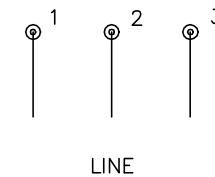
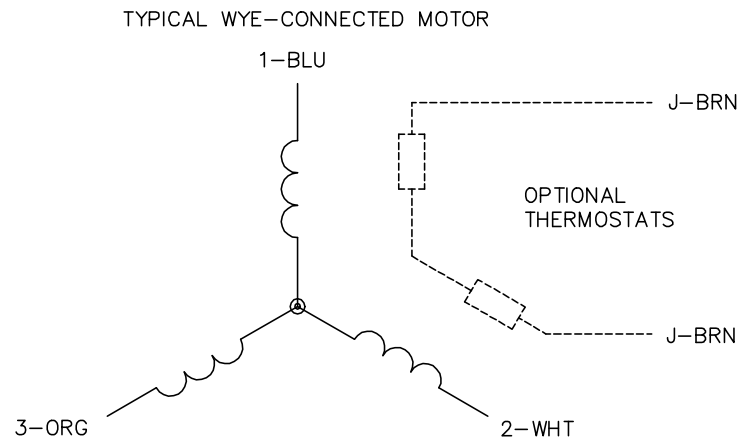
TORQUES (LB-FT): PO=423 PU=234 LR=282 LRA=305



8/23/2026 ACPERF, record # 50233



CD0006


NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

REV. DESC: ADD CLASS CONN00000007

REV. LTR: E

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\141

REVISED: 10:24:49 02/19/2019

BY: ENBRIRO

MTL: -


BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

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