ABB BALDOR RELIANCE

Customer information packet

EM2543T-G

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

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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	230.0 V @ 60 HZ
	460.0 V @ 60 HZ
Agency Approvals	CSA
	CSA EEV
	UR
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	120.000 A @ 208.0 V
	57.000 A @ 460.0 V
	114.000 A @ 230.0 V
Design Code	A
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	57.0 a

Part Detail

Revision	AA
Type	AC
Mech. spec.	42E245
Base	
Status	PRD/A
Elec. spec.	42WGW387
Layout	42LYE245
Eff. date	09-04-2026
CD Diagram	CD0180
Poles	04
Leads	9#8
Proprietary	False
Created date	08-24-2010

Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 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

NP3554LUA												
CAT.NO.	EM2543T-G			**P/N**						**ENCL**	OPSB	
SPEC.	42E245W387G1	**CC**	010A	**FRAME**	326T			**SER.NO.**				
HP	50		**CLASS**	H	**HZ**	60						
RPM	1775		**PH**	3	**DES**	A						
VOLTS	230/460			**CODE**	G		**ODE BRG**	6311	**DE BRG**	6312		
AMPS	114/57											
RATING	40C AMB-CONT			**NEMA-NOM-EFF**	94.5			**GREASE**	POLYREX EM			
PF	87	**SER.F.**	1.15				**CT30-60(2:1) VT3-60(20:1)**					
USABLE AT	50HZ 50HP 190/380V 136/68A			SF1.0								
HTR-VOLTS	**HTR-AMPS**			**MAX. SPACE HEATER TEMP.**								

AC Induction Motor Performance Data
Record # 35575
Typical performance - not guaranteed values

Winding: 42WGW387-R005	**Type:** 4256M	**Enclosure:** OPSB

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			50	**Full Load Torque**	149 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			114/57	**Breakdown Torque**	420 LB-FT
R.P.M.			1775	**Pull-up Torque**	217 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	311 LB-FT
NEMA Design Code	A	**KVA Code**	G	**Starting Current**	373 A
Service Factor (S.F.)			1.15	**No-load Current**	20.2 A
NEMA Nom. Eff.	94.5	**Power Factor**	87	**Line-line Res. @ 25ºC**	0.127 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	39°C
S.F. Amps				**Temp. Rise @ S.F. Load**	47°C
				Locked-rotor Power Factor	27
				Rotor inertia	7.46 LB-FT2

Load Characteristics 460 V, 60 Hz, 50 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	54	75	83	87	88	88	87
Efficiency	92	94.5	94.5	94.7	93.9	93.3	94.4
Speed	1791	1786	1781	1775	1769	1762	1771
Line amperes	24.4	33.4	44.7	57.4	71	85.6	65.2

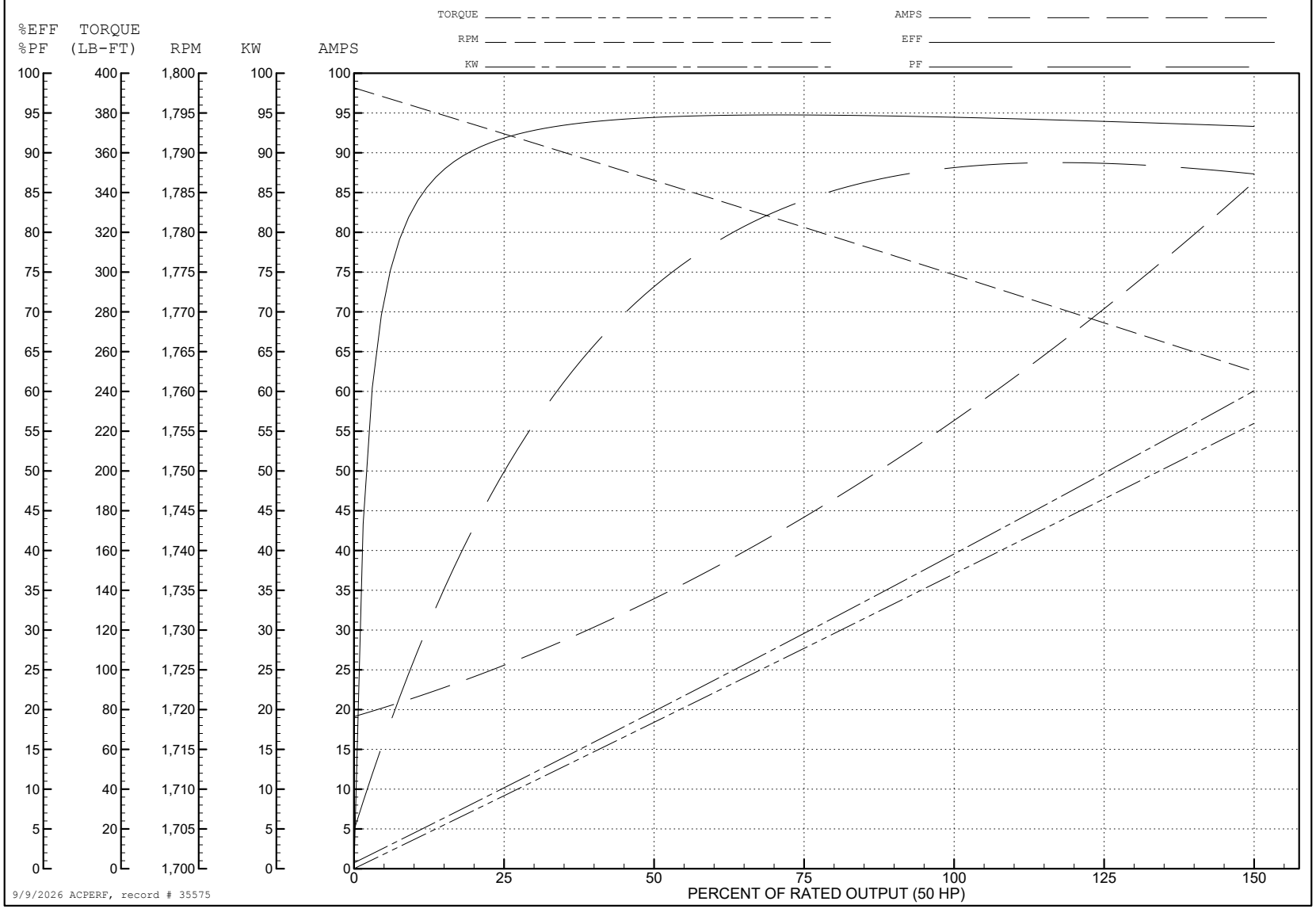
ABB Motors and Mechanical Inc.

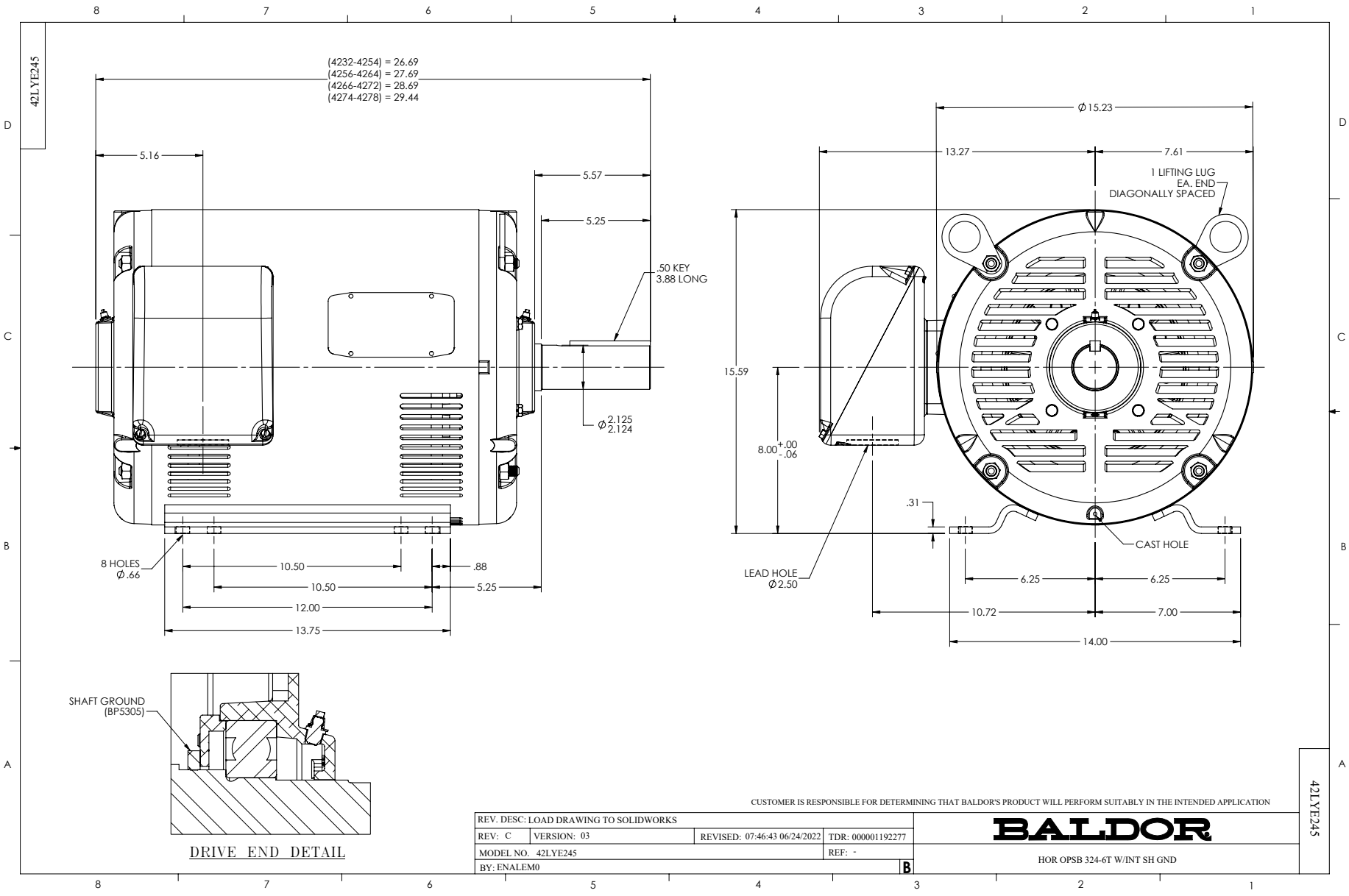
WINDING # 42WGW387

50 HP 3 PH 60 HZ 1775 RPM 460 V 4256M

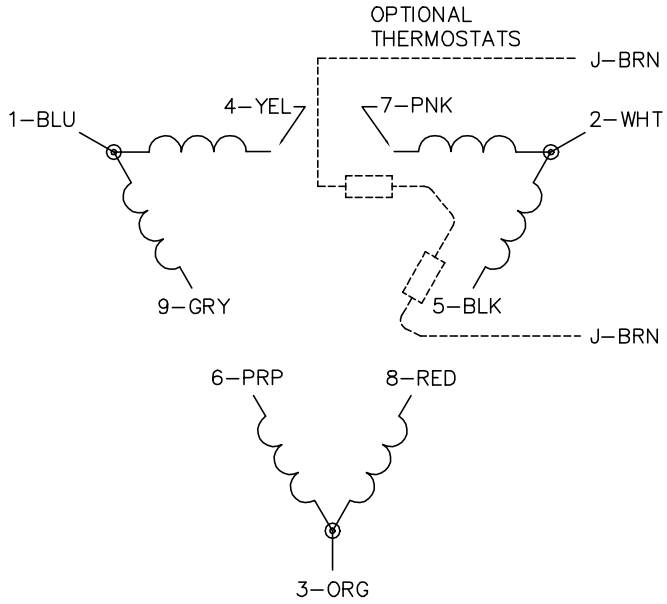
Typical performance - not guaranteed values.

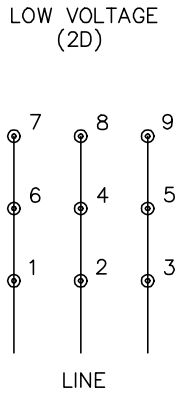
TORQUES(LB-FT): PO=420 PU=217 LR=311 LRA=373

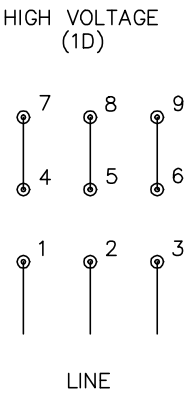



42LYE245
(4232-4254) = 26.69
(4256-4264) = 27.69
(4266-4272) = 28.69
(4274-4278) = 29.44
5.16
5.57
5.25
.50 KEY
3.88 LONG
Ø2.125
2.124
8 HOLES
Ø.66
10.50
10.50
12.00
13.75
.88
5.25
Ø15.23
13.27
7.61
1 LIFTING LUG
EA. END
DIAGONALLY SPACED
15.59
8.00 +.00 -.06
.31
CAST HOLE
LEAD HOLE
Ø2.50
6.25
6.25
10.72
7.00
14.00
SHAFT GROUND
(BP5305)
DRIVE END DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: C
VERSION: 03
REVISED: 07:46:43 06/24/2022
TDR: 000001192277
MODEL NO. 42LYE245
REF: -
BY: ENALEM0
B
BALDOR
HOR OPSB 324-6T W/INT SH GND
42LYE245

CD0180







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.

CD0180

REV. DESC: ADD CLASS CONN00000007		
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FILE: \AAA\00005\148	REVISED: 10:25:29 02/19/2019	BY: ENBRIR0
MTL: –		

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

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