

ABB BALDOR RELIANCE III

Customer information packet CEM2543T

50HP, 1775RPM, 3PH, 60HZ, 326TC, 4256M, OPSB, F

Specifications

Enclosure	OPSB
Frame	326TC
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	CURUSEEV NEMA PREMIUM NEMA PREMIUM (OLD LOGO)
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	121.000 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	W
Type	AC
Mech. spec.	42D102
Base	
Status	PRD/A
Elec. spec.	42WGW387
Layout	42LYD102
Eff. date	06-27-2024
CD Diagram	CD0180
Poles	04
Leads	9#8
Proprietary	False
Created date	08-03-2010

Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	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	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	2.125 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No 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.	CEM2543T				P/N				ENCL				OPSB
SPEC.	42D102W387G1		CC	010A		FRAME		326TC		SER.NO.			
HP	50			CLASS		F	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					SF 1.0							
HTR-VOLTS	HTR-AMPS		MAX. SPACE HEATER TEMP.										

Parts List

Part number	Description	Quantity
SA200900	SA 42D102W387G1	1.000 ea
RA188210	RA 42D102W387G1	1.000 ea
HA6360	LIFTING LUG FOR 42 FRAME MOTORS.	2.000 ea
HA6017	CAST ADAPTER, 40,42 KOBX	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
WD1000B25	GND LUG, BURNDY L125HP OR T&B L125HP-BB	1.000 ea
19XW3118G08	.31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN	1.000 ea
10CB3001	CONDUIT BOX CAST W/2.500 LEAD HOLE	1.000 ea
19XW3118A12	.31-18 X .75 HEX WASHER HEAD TAPTITE II	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
42EP3200A01	FR ENDPLATE, MACH	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW5100A13	W4627-047 WVY WSHR	1.000 ea
42EP1300A20	PU ENDPLATE, MACH	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
10XN3118K40	5/16-18 X 2.50" HEX HD, GRADE 5	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
XY5013A12	NUT,1/2-13,HEX,STEEL,ZINCPLATED	8.000 ea
10CB3500SP	CONDUIT BOX LID, CAST	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW2501H33	KEY, 1/2 SQ X 3.875	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.030 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.080 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
HA3151A03	THRUBOLT STUD 1/2-13 X 20.5	4.000 ea
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea

LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
42AD2001A01	BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3554LUA	SS SUPER-E VPWM INV READY,CURUS-EEV,PREM	1.000 ea
40PA1000	PACKAGING GROUP	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

AC Induction Motor Performance Data

Record # 53755

Typical performance - not guaranteed values

Winding: 42WGW387-R001			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. @ 25°C		0.12266 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	88
Efficiency	92	94.5	94.9	94.7	94.2	93.4	94.4
Speed	1791	1786.1	1781.1	1775.2	1769.2	1762.1	1772
Line amperes	24.4	33.4	44.7	57.4	71	85.6	65.6

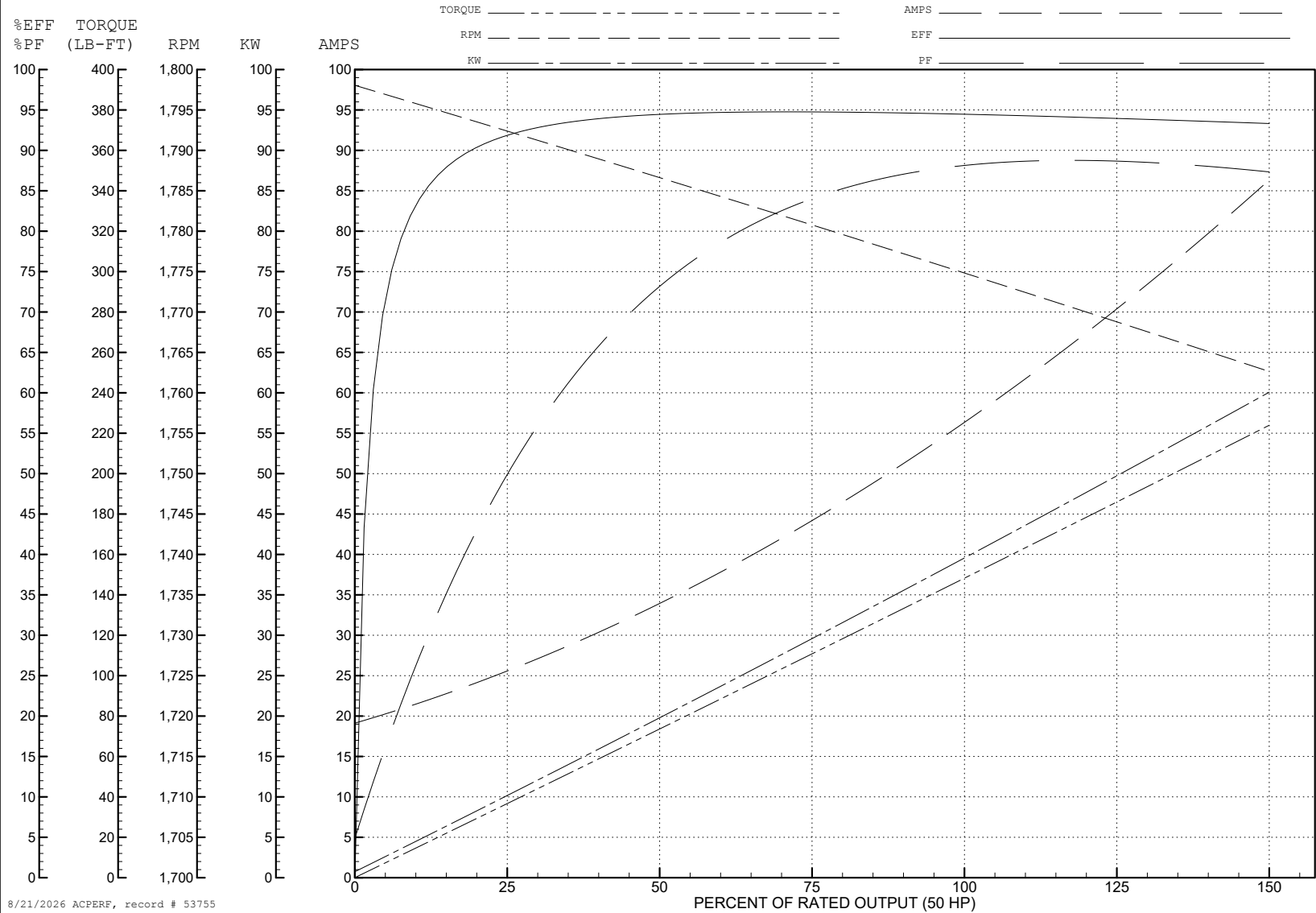
ABB Motors and Mechanical Inc.

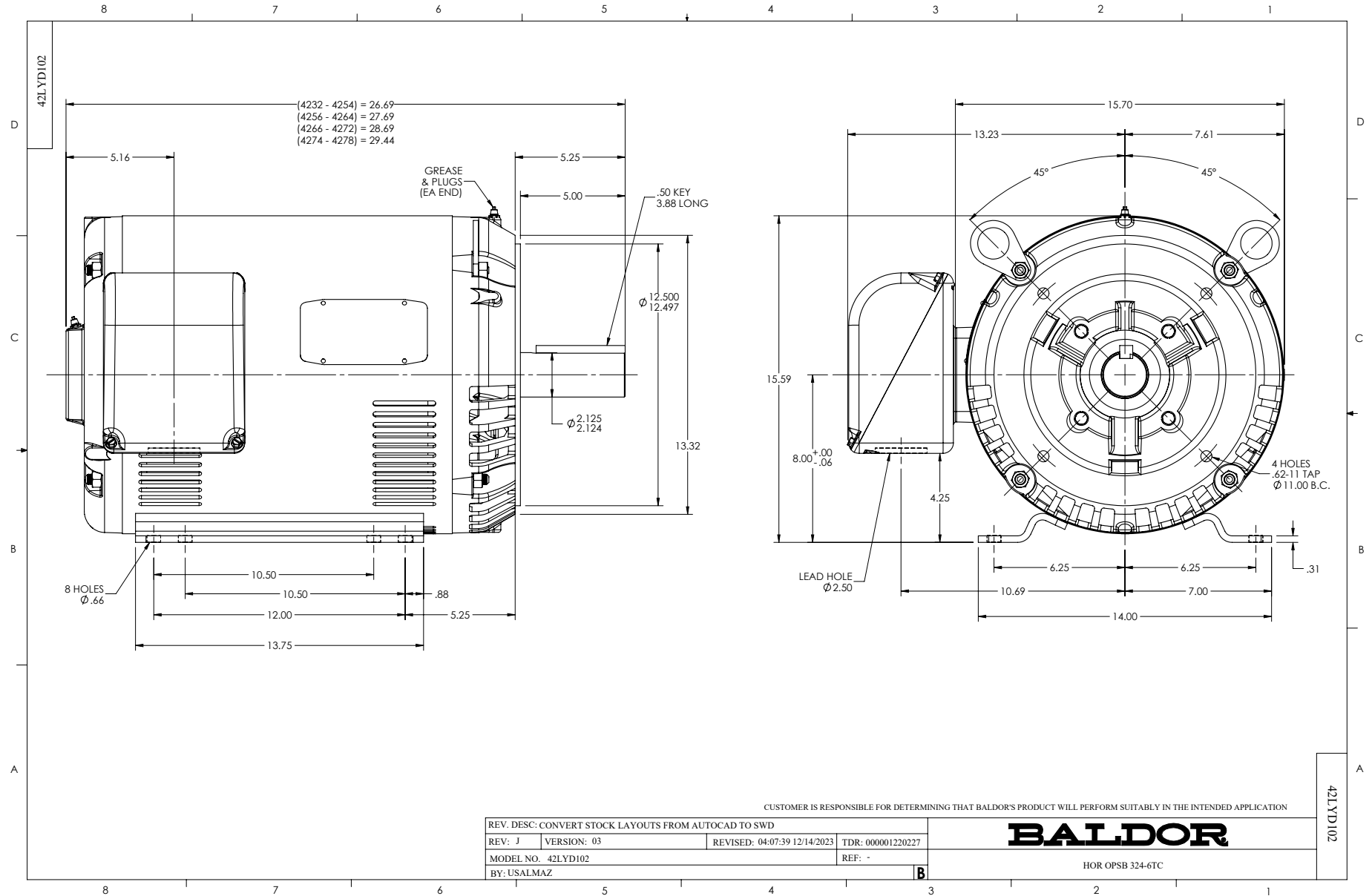
WINDING # 42GW387

Typical performance - not guaranteed values.

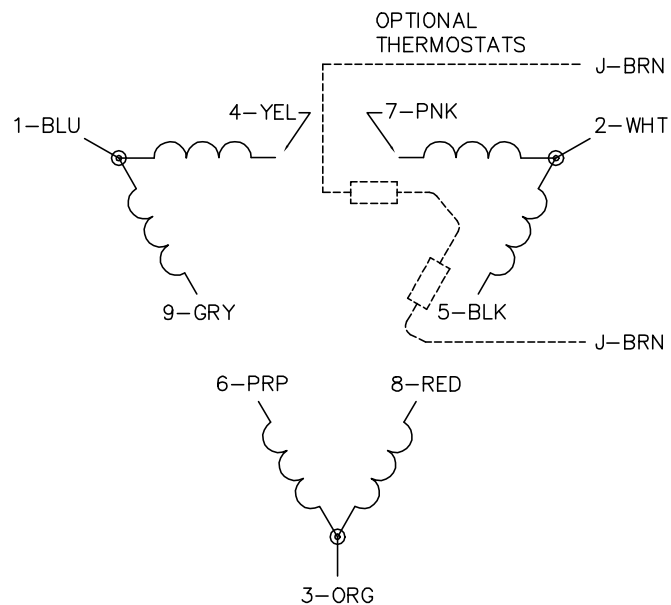
50 HP 3 PH 60 HZ 1775 RPM 460 V 4256M

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

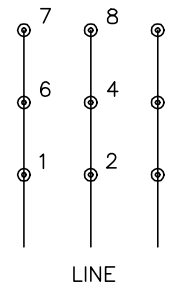




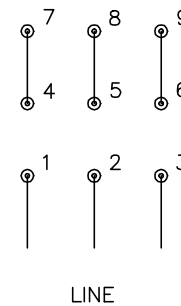
CD0180



LOW VOLTAGE
(2D)



HIGH VOLTAGE
(1D)



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

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: —



BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

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