

ABB BALDOR RELIANCE III

Customer information packet

ZDVSNM2238T

10HP, 1770RPM, 3PH, 60HZ, 254TC, 0948M, TENV, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TENV
Frame	254TC
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	10.000 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	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	13.000 A @ 460.0 V 26.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.7 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	ENCODER
Front Face Code	Encoder/Feedback Device
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	13.0 a

Part Detail

Revision	AA
Type	AC
Mech. spec.	09K345
Base	
Status	PRD/A
Elec. spec.	09WGY402
Layout	09LYK345
Eff. date	11-14-2023
CD Diagram	CD0005
Poles	04
Leads	9#12
Proprietary	False
Created date	07-16-2012

Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	K
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 12 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0948M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	24.05 IN
Power Factor	78
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	1.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1770 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP3304L					
CAT NO	ZDVSNM2238T				
SPEC.	09K345Y402Z1				
FRAME	254TC	HP	10 TE		
VOLTS	230/460				
MAG CUR	11.2/5.6		FLA	26/13	
RPM	1770	RPM MAX		2700	
HZ	60	PH	3	CLASS	F
SER.F.	1.00		SL HZ	0.9	
NEMA-NOM-EFF	91.7	WK2	2.1		
RATING	40C AMB-CONT				
DE BRG	6309	ODE BRG		6208	
CC	010A	SER.NO			
	1.5:1 CHP PWM				

Parts List

Part number	Description	Quantity
SA247791	SA 09K345Y402Z1	1.000 ea
RA234660	RA 09K345Y402Z1	1.000 ea
HW1002A63	WASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 ea
09CB3003	CB W/1.75" DIA LD HL - 37, 39, 307 & 309	1.000 ea
09GS1000	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 ea
09EP1100A119	FREP TEBC/TENV W/THRU SHAFT ENCODER DESI	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
10XN2520K12	1/4-20 X.75 GRD 5	1.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 ea
10XN2520K28	1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P	2.000 ea
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
09EP1300A12	ENDPLATE, MACH	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HA6881	BEI HS35 THRU SHAFT ENCODER PROTECTIVE C	1.000 ea
10XN3816K12	3/8-16 X 3/4 HEX HD CAP GRADE 5	3.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	3.000 ea
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 ea
09GS1013SP	GS FOR 09CB3501, 12CB1500 & 12CB1503 LID	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea

HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.050 ga
MJ1000A02	GREASE, POLYREX EM EXXON	0.080 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0145B01	CONNECTION LABEL	1.000 ea
NP3304L	ALUM VEC UL CSA CC (W/OUT DESIGN FIELD)	1.000 ea
40PA1005	PACKAGING GROUP, 09 STD	1.000 ea
OE5001A80SP	ENCDR KIT TENV W/OEHS35A10 W/BLIND SHAFT	1.000 ea
LD7020D09	LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS	1.000 ea

REL S.O.	ZDVSNM2238T	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE			
FRAME	254TC	AMPS	13	MAX SAFE RPM	5400	(AT BASE RATING, 25°C)			
HP	10	DUTY	CONT	In (AMPS)	5.6	R1	0.3390	X1	0.1364
BASE SPEED	1770	S.F.	1.00	P.F. @NL/FL	6/78	R2	0.2730	X2	1.6460
PHASE/HZ	3/60	AMB°C/INSUL	40/F	WK ² (lb-ft ²)	2.1			XM	45.2050

Rated Full Load Data

	RPM	HP	Torque	Volts	Freq-Hz	Amps
Base Speed	1773	10.1	29.8	460	60	13.0
Max Speed	2659	10.0	19.8	460	90	11.6
Min Speed	0	0.0	29.7	18.46	0.90	13.0

Load Performance at Base Speed

	RPM	HP	Torque	Volts	Freq-Hz	Amps
No Load	1799	0.0	0.0	460	60	5.6
1/4	1793	2.5	7.5	460	60	6.6
1/2	1787	5.1	14.9	460	60	8.1
3/4	1780	7.6	22.4	460	60	10.4
Full Load	1773	10.1	29.8	460	60	13.0
O/L	1707	27.5	84.6	460	60	34.2

Blower Data	Volts	Ph/Hz	FL Amps	LR Amps	Frame	CFM

Remarks: Calculated Data
Vector PWM Inverter Duty



DR BY E Rowan
CK BY E Rowan
APP BY E Rowan
DATE 1/24/2013

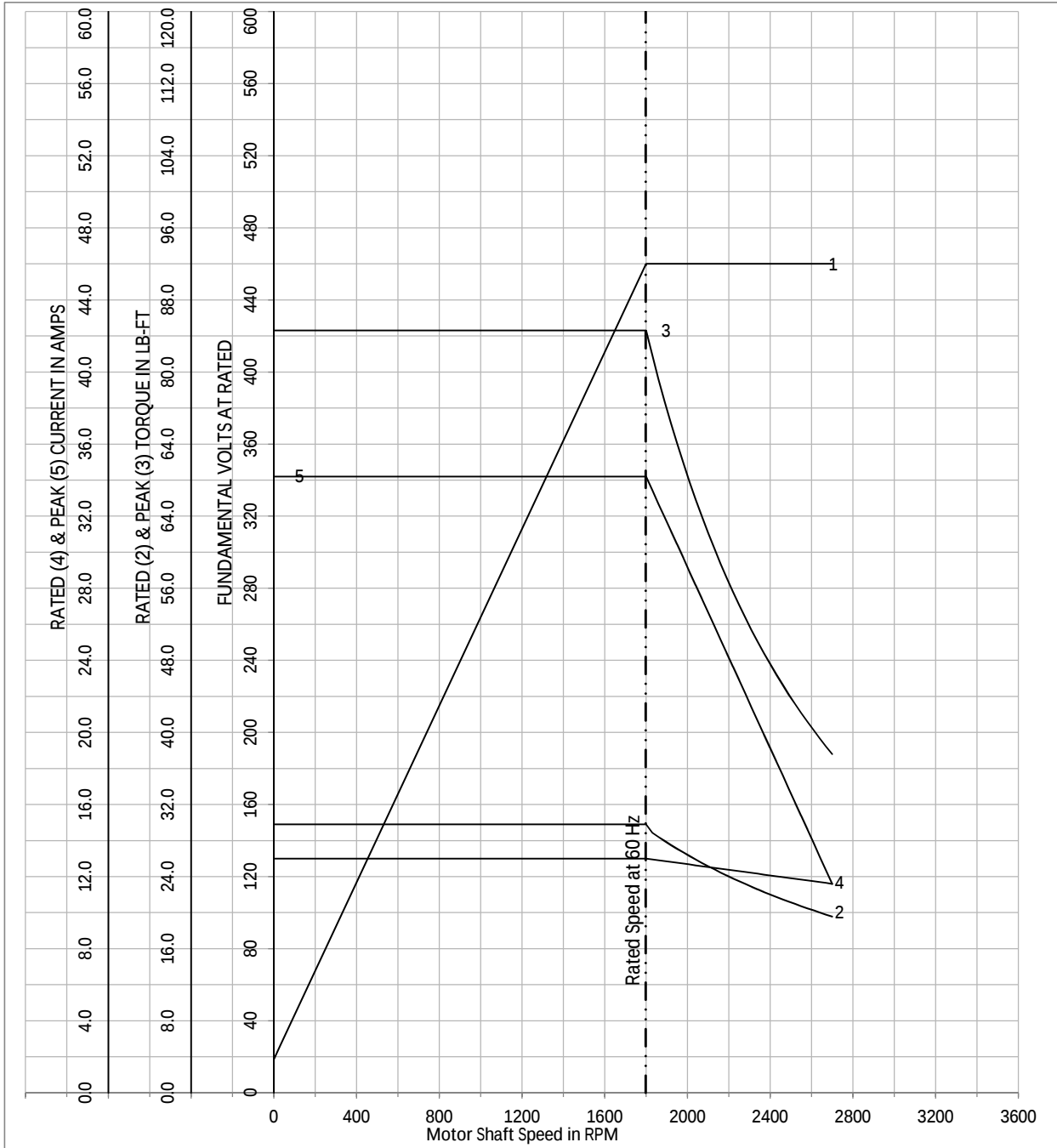
A-C MOTOR
PERFORMANCE CURVES

09K345Y402Z1

ISSUE DATE 1/24/2013

REL S.O.	ZDVSNM2238T	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE			
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BASE SPEED	1770	S.F.	1.00	P.F. @NL/FL	6/78	R2	0.2730	X2	1.6460
PHASE/HZ	3/60	AMB°C/INSUL	40/F	WK ² (lb-ft ²)	2.1			XM	45.2050

Vector PWM Inverter Duty
Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

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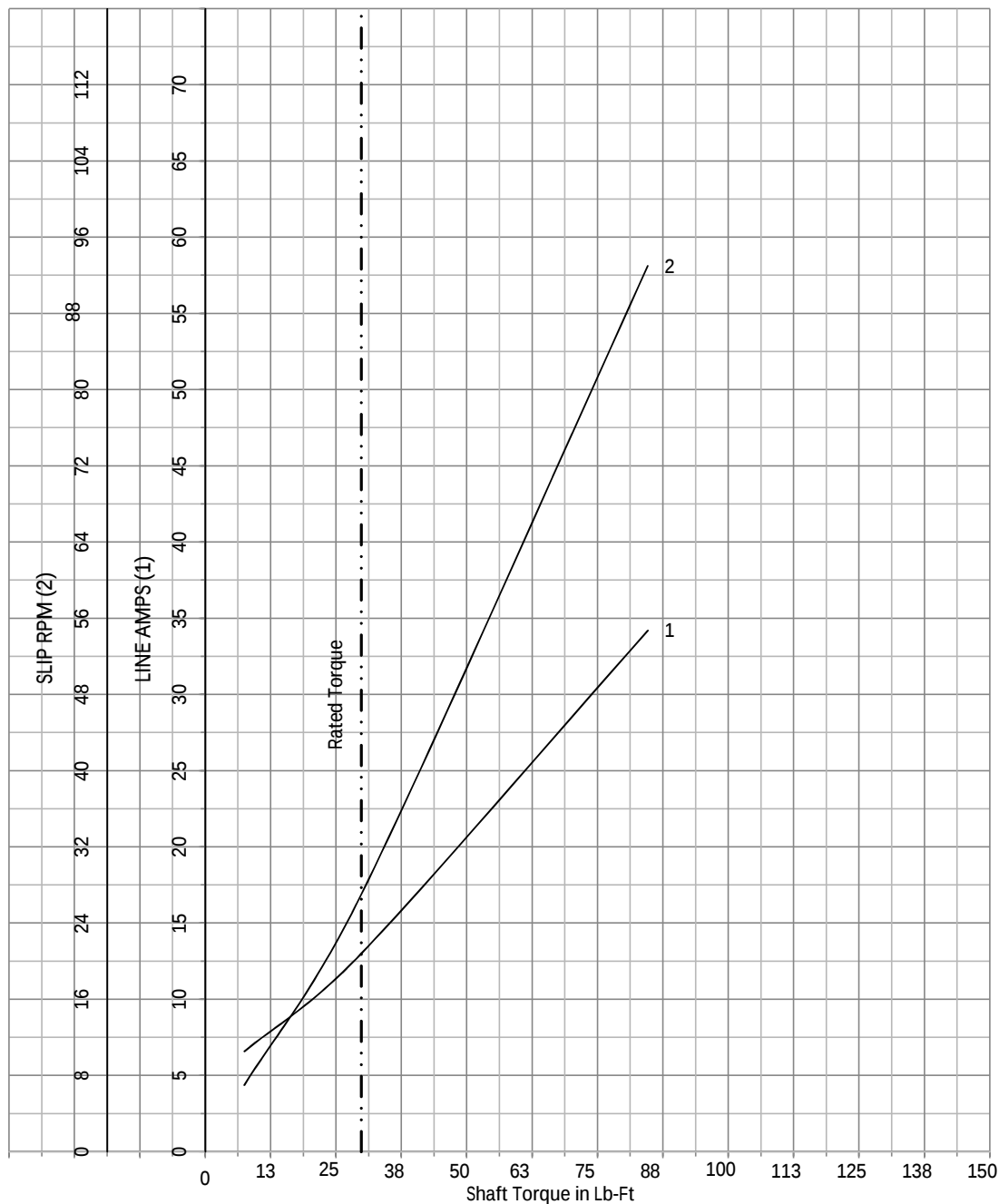
A-C MOTOR PERFORMANCE
CURVES

09K345Y402Z1

SH 1 of 2
ISSUE DATE 1/24/2013

REL S.O.	ZDVSNM2238T	VOLTS	460	ENCLOSURE	TEFC	WYE CONN EQ CKT OHMS PER PHASE			
FRAME	254TC	AMPS	13	MAX SAFE RPM	5400	(AT BASE RATING, 25 ⁰ C)			
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Vector PWM Inverter Duty
Variable Speed AC Motor Curves



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