

ABB BALDOR RELIANCE III

Customer information packet

IDVSM4104T

30HP, 1760RPM, 3PH, 60HZ, 286TC, 1056M, TEFC, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	286TC
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	30.000 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	38.000 A @ 460.0 V 76.000 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.6 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	Standard
Heater Indicator	No Heater
High Voltage Full Load Amps	38.0 a

Part Detail

Revision	K
Type	AC
Mech. spec.	10H810
Base	
Status	PRD/A
Elec. spec.	10WGY538
Layout	10LYH810
Eff. date	06-05-2026
CD Diagram	CD0180
Poles	04
Leads	9#8
Proprietary	False
Created date	08-24-2017

Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
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 @ 8 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	1056M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	30.42 IN
Power Factor	80
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	1.875 IN
Shaft Extension Location	Double Shaft
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1760 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	NONE (OLD)
Thermal Device - Winding	Normally Closed Thermostat
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP3302L										R
CAT NO	IDVSM4104T									
SPEC.	10H810Y538G1									
FRAME	286TC				HP	30 TE				
VOLTS	230/460									
MAG CUR	36/18				FLA	76/38				
RPM	1760			RPM MAX	2700					
HZ	60	PH	3	CLASS	F					
SER.F.	1.00			SL HZ	1.33					
NEMA-NOM-EFF	93.6			WK2	4.46					
RATING	40C AMB-CONT									
DE BRG	6311	ODE BRG				6309				
CC	010A	SN								
	1.5:1 CHP PWM									
	1000:1 CT, 1000:1 VT									

Parts List

Part number	Description	Quantity
SA343826	SA 10H810Y538G1	1.000 ea
RA332296	RA 10H810Y538G1	1.000 ea
10CB3000SP	KOBX, CAST W/2.00 LEAD HOLE	1.000 ea
09GS1000	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 ea
10XN3118K12	5/16-18 X .75 GRADE 5, ZINC PLATED	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 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
10EP1104A01	FR ENDPLATE	1.000 ea
HA4017A11	1/8 X 2.75 GREASE EXT (F/S)	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW5100A11	W3917-042 WVY WSHR (WB)	1.000 ea
10XN2520K36	1/4-20 X 2.00 HX HD SCRW GRADE 5, ZINC P	2.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
10EP1305A01	PU ENDPLATE, MACH	1.000 ea
HW4600B40	V-RING SLINGER 2.000 X 2.680 X .28 VITON	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 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
10FH1007A21	FAN COVER, MACH FOR DBL SHF MTRS	1.000 ea
10XN3118K20	5/16-18 X 1 1/4 GRADE 5 STEEL ZC PLATED	3.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	3.000 ea
HA6881	BEI HS35 THRU SHAFT ENCODER PROTECTIVE C	1.000 ea
10XN2520K12	1/4-20 X.75 GRD 5	2.000 ea
HW1000A25	1/4 SAE FLAT WASHER (FS)	2.000 ea
10CB3500SP	CONDUIT BOX LID, CAST	1.000 ea
10GS1000	GASKET, CONDUIT BOX LID	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW2501H28	KEY, 1/2 SQ X 3.250	1.000 ea

HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.130 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
09FN3001C02	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 ea
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 ea
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.070 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3302L	ALUM INV UL CSA CC (W/OUT DESIGN FIELD)	1.000 ea
12PA1000	PACKAGING GROUP PRINT PK1024A07	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
FE-0000022	ZRTG FE ASSEMBLY	1.000 ea
PE-0000013	ZRTG PE ASSEMBLY	1.000 ea

ABB BALDOR/460		CUSTOMER INFORMATION PACKET		MAX SAFE RPM 2700		WYE CONN. EQ. CKT. OHMS PER PHASE (BASE RATING, 20C)			
RELIANCE III		ID VSM41041 - 30HP, 1760RPM,		PH, 60HZ, 286TC, 1056M, TEFC, F					
HP AMP S 70/38		Base Volt 460		R1 0.107		X1 0.492			
HP 30 HP		NL AMPS 17.90		R2 0.515		X2 0.443			
BASE SPEED 1777		Slips(HZ) 0.78		R2B 0.075		X2B 0.692			
PHASE/HZ 3/60		WK2 (LB-FT2) 4.470		R2E 0.022		XM 12.800			

Rated Full Load Data

	RPM	HP	Torque	Volts	Freq-Hz	Amps
Base Speed	1776.5	30.0	88.7	460	60	37.6
Max Speed	2664	30.0	59.1	460	90	33.4
Min Speed	0	0.0	88.7	16.78	0.78	37.6

Load Performance at Base Speed

	RPM	HP	Torque	Volts	Freq-Hz	Amps
No Load	1798.9	0.0	0.0	460	60	17.9
1/4	1792.2	7.5	22.1	460	60	19.8
1/2	1787.6	15.0	44.1	460	60	24.3
3/4	1782.4	22.5	66.2	460	60	30.7
Full Load	1776.5	30.0	88.7	460	60	37.6
O/L	1749	60.0	180.0	460	60	73.0

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

Remarks: Calculated Data
Vector PWM Inverter Duty

BALDOR
A MEMBER OF THE ABB GROUP

DR BY USBRRAN1
CK BY
APP BY USBRRAN1
DATE 8/24/2017

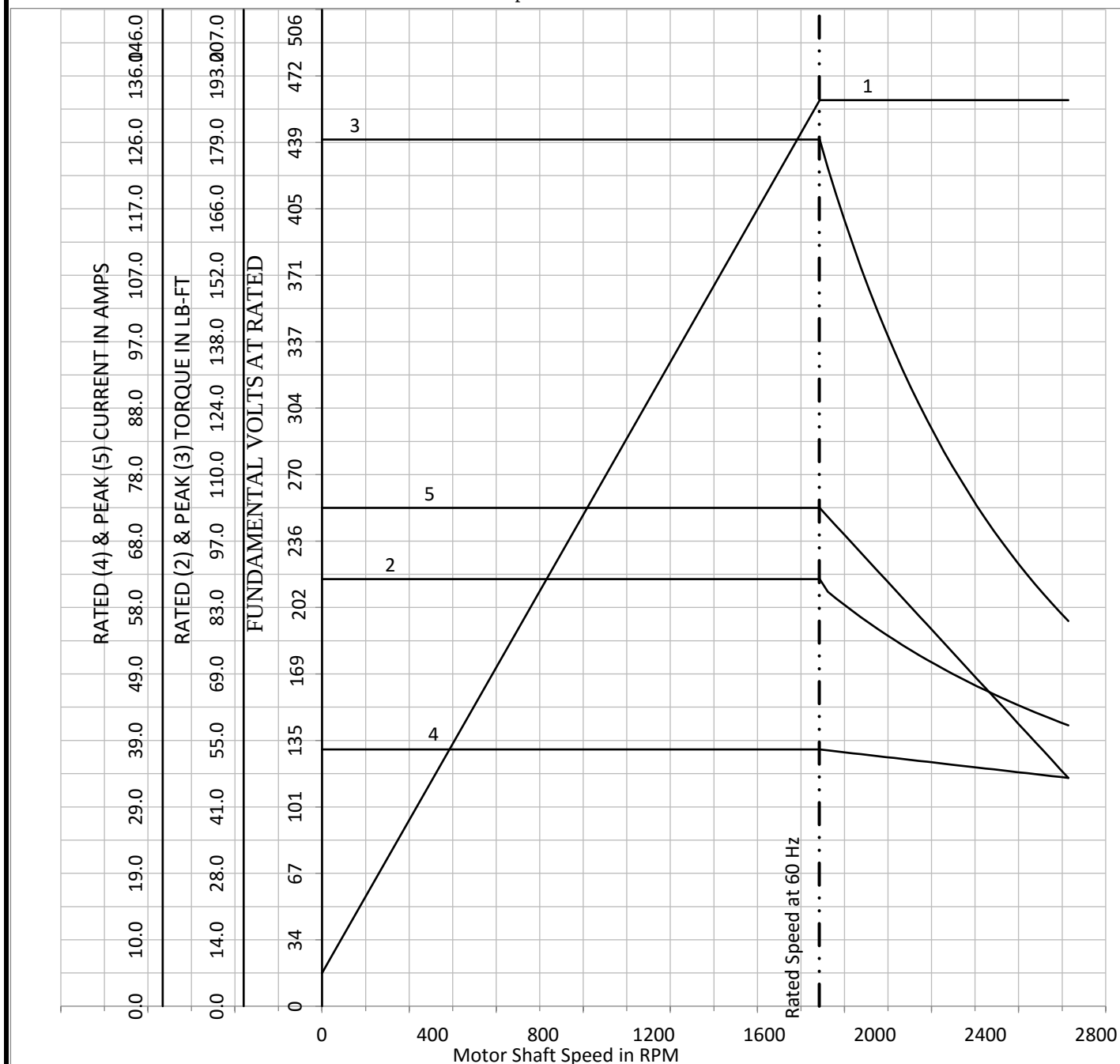
**A-C MOTOR
PERFORMANCE
CURVES**
10WGY538
Record: 52925

HP 30 HP
 BASE SPEED 1776.5
 PHASE/HZ 3/60

MAX SAFE RPM 2700
 IDVSM4104T - 30HP, 1760RPM, 3PH, 60HZ, 286TC, 1056M, TEFC, F
 Base Volt 460
 NL AMPS 17.90
 Slips(HZ) 0.78
 WK2 (LB-FT2) 4.470

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)
 R1 0.107 X1 0.492
 R2 0.515 X2 0.443
 R2B 0.075 X2B 0.692
 R2E 0.022 XM 12.800

Vector PWM Inverter Duty
 Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only



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 DATE 8/24/2017

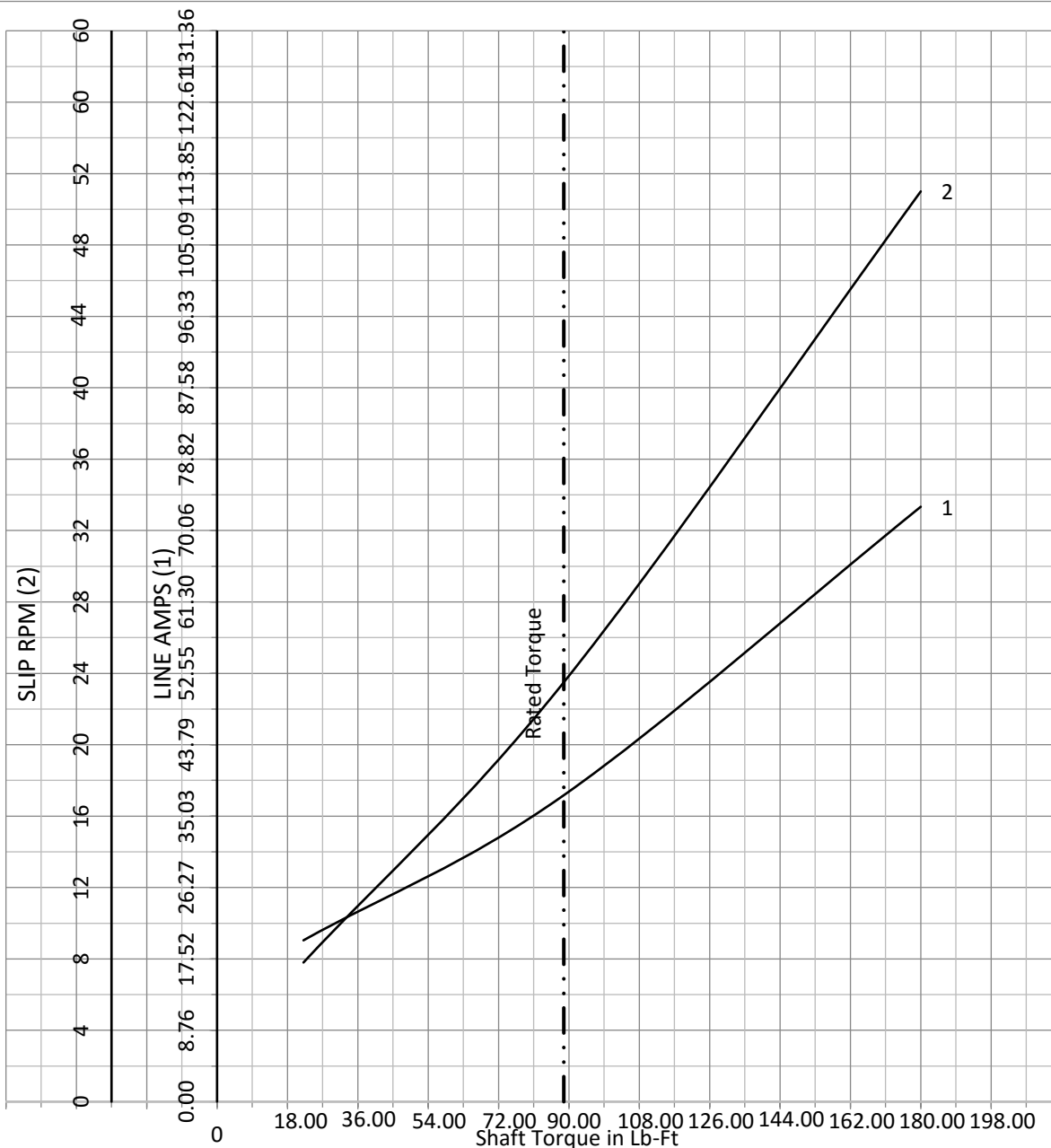
**A-C MOTOR
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Vector PWM Inverter Duty
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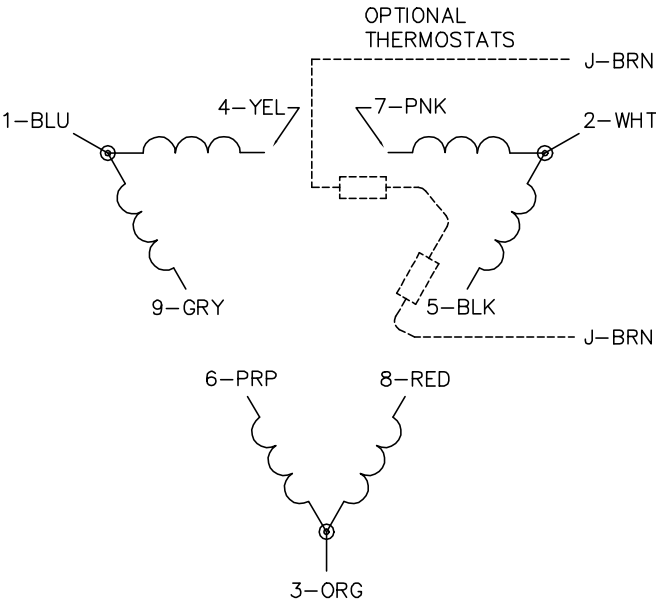
**A-C MOTOR
 PERFORMANCE
 CURVES**

10WGY538

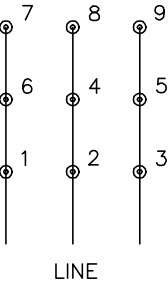
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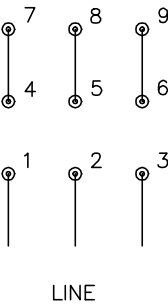
CD0180



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
SH 1 of 1