

ABB BALDOR RELIANCE III

Customer information packet

IDVSM2334T-5

20HP, 1770RPM, 3PH, 60HZ, 256TC, 0960M, TENV, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TENV
Frame	256TC
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	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CSA 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	19.200 A @ 575.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	19.2 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J

Part Detail

Revision	F
Type	AC
Mech. spec.	09K146
Base	
Status	PRD/A
Elec. spec.	09WGT507
Layout	09LYK146
Eff. date	11-13-2023
CD Diagram	CD0006
Poles	04
Leads	3#10
Proprietary	False
Created date	11-11-2020

Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Quantity/Wire Size	3 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	26.84 IN
Power Factor	83
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 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

NP3302L									
CAT NO	IDVSM2334T-5								
SPEC.	09K146T507G1								
FRAME	256TC			HP	20 TE				
VOLTS	575								
MAG CUR	8.3			FLA			19.2		
RPM	1770		RPM MAX			2700			
HZ	60		PH	3		CLASS		F	
SER.F.	1.00			SL HZ			0.83		
NEMA-NOM-EFF	93		WK2		2.62				
RATING	40C AMB-CONT								
DE BRG	6309		ODE BRG			6208			
CC	010A		SN						
	1.5:1 CHP PWM								

Parts List

Part number	Description	Quantity
SA387678	SA 09K146T507G1	1.000 ea
RA378018	RA 09K146T507G1	1.000 ea
09FN3001D01SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	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
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 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
09EP1100A14	FREP ASSM, (FOR INTRL ROUTING PURPOSE)	1.000 ea
HA3400A33	STUD- 3/8-16 X 4.96 HEX	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
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
09FH1000A38	FAN HSG, W/1.75 BORE & ENCODER CVR MTG	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
10XN1032K12	10-32 X .75 HD, GRADE 5	2.000 ea
HW1001A10	WASHER, #10 SPLT LK, ZN X	2.000 ea
HW1000A10	#10 FLAT WASHER (SAE)	2.000 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

HW4500A05	1669B ALEM/UNIV860 GR FTG X	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	0.080 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
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 ea
MG1025N19	WILKOFEST, 778.50, RELIANCE BLUE-GREEN 8	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0006	CONNECTION LABEL	1.000 ea
NP3302L	ALUM INV UL CSA CC (W/OUT DESIGN FIELD)	1.000 ea
40PA1005	PACKAGING GROUP, 09 STD	1.000 ea
LD7020E09	LEAD SET, 10AWG, 9 LEAD, 20" LONG LEADS	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea

ABB BALDOR RELIANCE III		CUSTOMER INFORMATION PACKET		MAX SAFE RPM 2700		WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)	
HP	20 HP	Base Volt		575	R1	0.264	X1 1.370
BASE SPEED	1772	NL AMPS		8.28	R2	0.249	X2 1.820
PHASE/HZ	3/60	Slips(HZ)		0.93			XM 47.200
		WK2 (lb-ft ²)		2.650			

Rated Full Load Data

	RPM	HP	Torque	Volts	Freq-Hz	Amps
Base Speed	1772	20.0	59.3	575	60	19.2
Max Speed	2657	20.0	39.6	575	90	18.5
Min Speed	0	0.0	59.3	22.51	0.93	19.2

Load Performance at Base Speed

	RPM	HP	Torque	Volts	Freq-Hz	Amps
No Load	1799	0.0	0.0	575	60	8.3
1/4	1793	5.0	14.7	575	60	9.4
1/2	1786	10.0	29.5	575	60	12.0
3/4	1779	15.0	44.3	575	60	15.3
Full Load	1772	20.0	59.3	575	60	19.2
O/L	1741	40.1	121.0	575	60	39.1

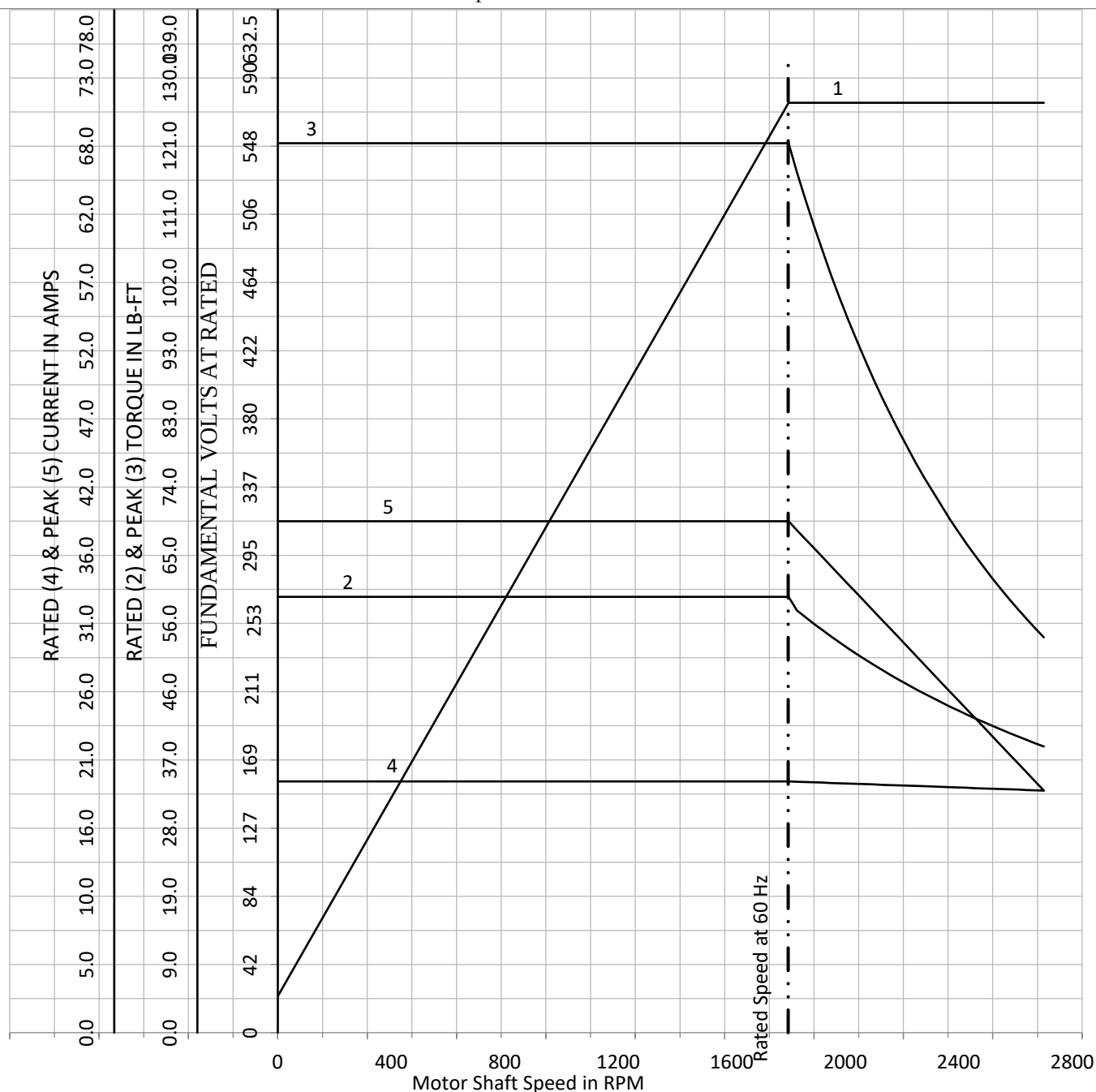
Blower Data	Volts	Ph/Hz	FL Amps	LR Amps	Frame	CFM

Remarks: Calculated Data
Vector PWM Inverter Duty

BALDOR • RELIANCE		DR BY <u>USBRRAN1</u>	A-C MOTOR PERFORMANCE CURVES	09WGT507 Record: 85523
		CK BY		
		APP BY <u>USBRRAN1</u>		
		DATE <u>11/19/2020</u>		

Vector PWM Inverter Duty

Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

BALDOR • RELIANCEDR BY USBRRAN1

CK BY

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DATE 11/19/2020

A-C MOTOR PERFORMANCE CURVES

09WGT507

Record: 85523



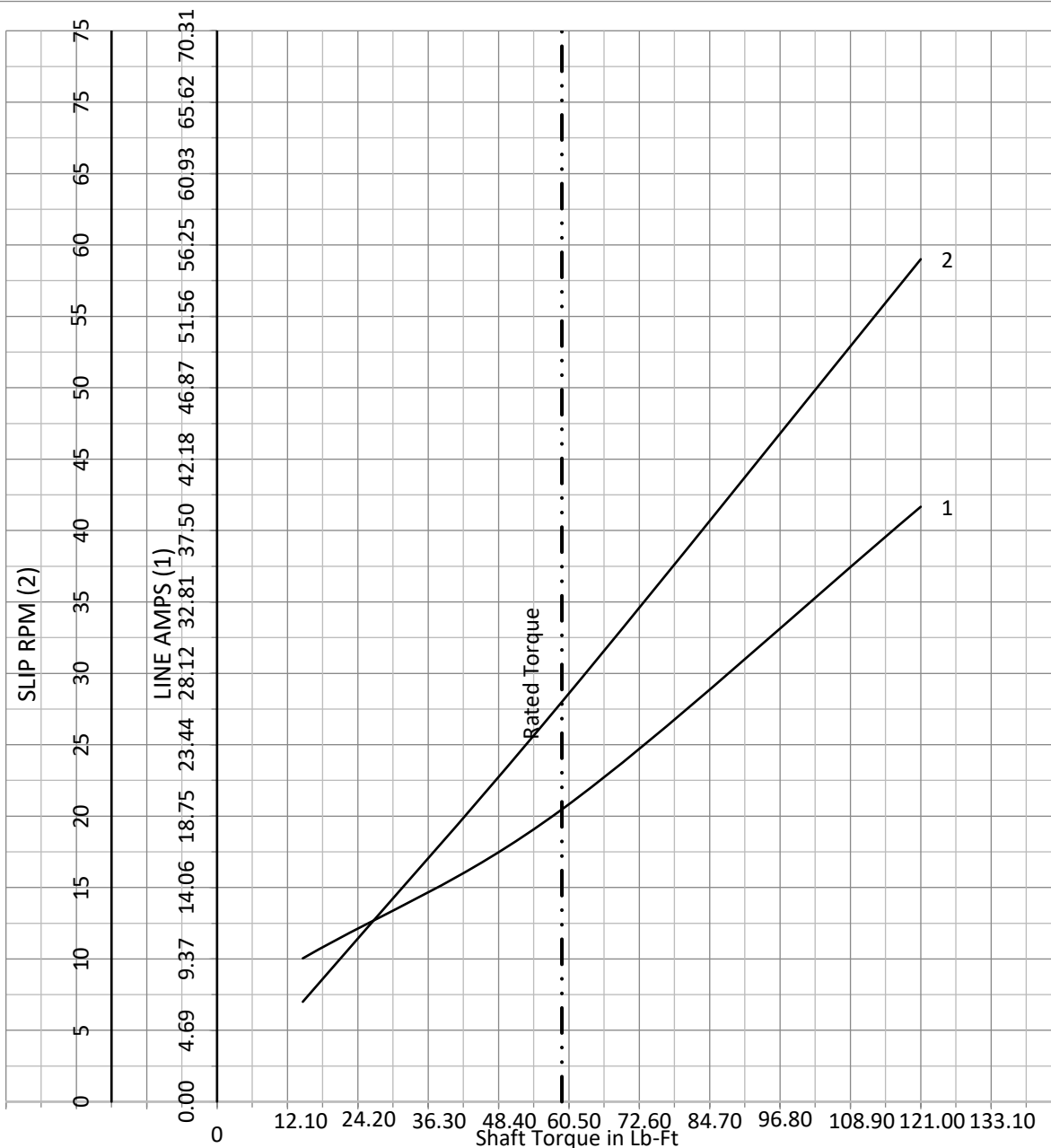
CUSTOMER INFORMATION PACKET

HP 20 HP
BASE SPEED 1772
PHASE/HZ 3/60

MAX SAFE RPM 2700
Base Volt 575
NL AMPS 8.28
Slips(HZ) 0.93
WK2 (lb-ft²) 2.650

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)
R1 0.264 X1 1.370
R2 0.249 X2 1.820
XM 47.200

Vector PWM Inverter Duty Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

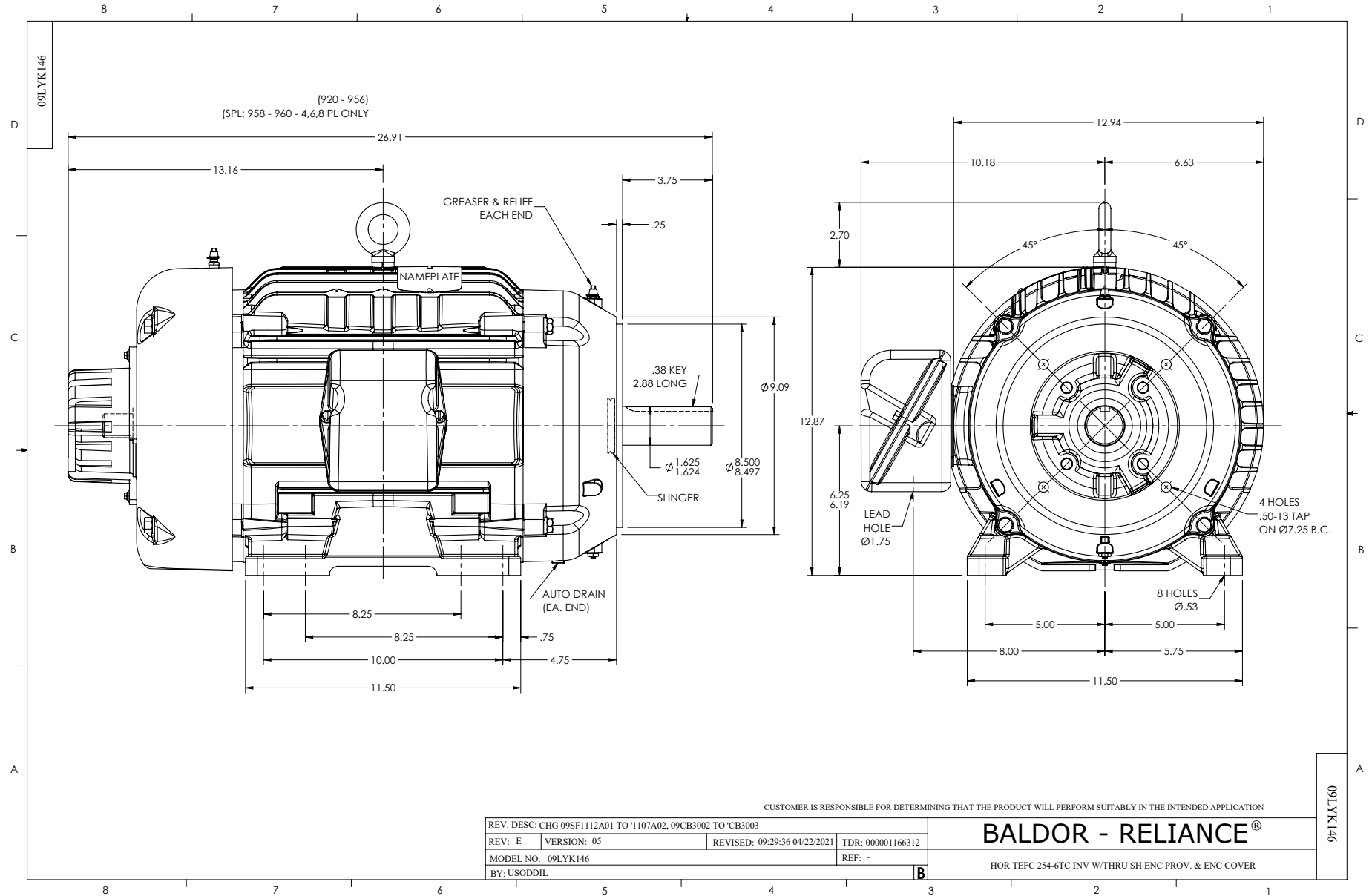
BALDOR • RELIANCE

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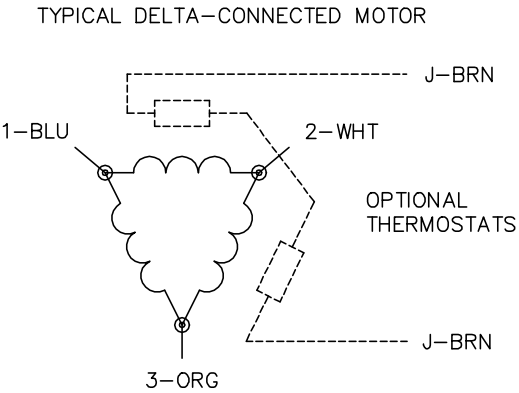
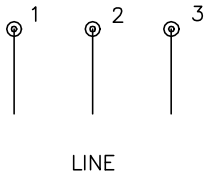
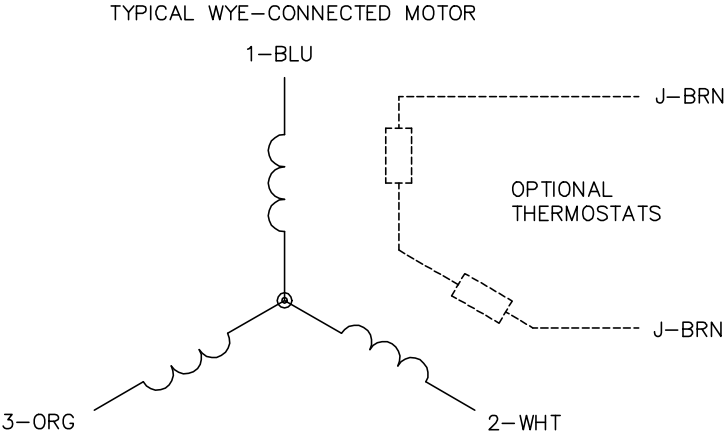
**A-C MOTOR
PERFORMANCE
CURVES**

09WGT507

Record: 85523



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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