

ABB BALDOR RELIANCE III

Customer information packet

ZDVSCP2334T

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

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
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	230.0 V @ 60 HZ 460.0 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	52.000 A @ 208.0 V 48.000 A @ 230.0 V 24.000 A @ 460.0 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	TACHOMETER
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	M
Type	AC
Mech. spec.	09K342
Base	
Status	PRD/A
Elec. spec.	09WGT459
Layout	09LYK342
Eff. date	08-28-2025
CD Diagram	CD0180
Poles	04
Leads	9#10
Proprietary	False
Created date	11-27-2017

High Voltage Full Load Amps	24.0 a
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 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	28.14 IN
Power Factor	83
Product Family	Chemical Processing (Not DC)
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

NP3303L																
CAT NO	ZDVSCP2334T															
SPEC.	09K342T459Z1															
FRAME	256TC			HP	20 TE											
VOLTS	230/460															
MAG CUR	20.8/10.4				FLA	48/24										
RPM	1770			RPM MAX	2700											
HZ	60		PH	3		CLASS	F									
SER.F.	1.00			SL HZ	1											
NEMA-NOM-EFF	93		WK2	2.62												
RATING	40C AMB-CONT															
DE BRG	6309		ODE BRG	6309												
CC	010A	SN														
	1.5:1 CHP PWM															
	1000:1 CT, 1000:1 VT															

NP0090L	
FRONT	6309
PULLEY	6309
LUBRICATE WITH	
GREASE	POLYREX EM

Parts List

Part number	Description	Quantity
SA348221	SA 09K342T459Z1	1.000 ea
RA336773	RA 09K342T459Z1	1.000 ea
09FN3001D01SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 ea
09CB1002A12P	KOBX W/1.25 NPT LEAD HOLE & 2.38 MTG HOL	1.000 ea
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
10XN2520K08	1/4-20 X .50 GRADE #5, STL, ZINC PLATE	1.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 ea
HW4600B67	V-RING SLINGER 1.770 X 2.170 X .28 VITON	1.000 ea
HA3400A39	STUD- 3/8-16 X 6.44 OAL HEX	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HA4017A08	.125 X 3.50 LGTH GREASER EXTEN.	1.000 ea
HA4017A02	.125X2.50 GREASER EXTENS.F/S	1.000 ea
HW4019A01	PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING	1.000 ea
HW5100A11	W3917-042 WVY WSHR (WB)	1.000 ea
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 ea
09EP1318A02P	ENDPLATE, MACH EPOXY PRIMER	1.000 ea
10XN3816K24	3/8-16 X 1.50 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 ea
611712073A	TACH 210	1.000 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
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
09FH1000A38P	FAN COVER, MACH W/EPOXY PRIMER	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
12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 ea
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 ea
10XN3118K16	5/16-18 X 1' GRADE #5, STL, ZINC PLATE	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 qt
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.023 ea
LB1002N	LABEL,MARINE DUTY (ON ROLLS)	1.000 ea
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.025 ea
09EP1118A37LP5	FREP MACH, 309 BRG. EPOXY PRIMER	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	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	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3303L	SS VEC UL CSA CC (W/OUT DESIGN FIELD)	1.000 ea
NP0090L	NP BRG INFO LASER ETCHED	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/460 RELIANCE III		CUSTOMER INFORMATION PACKET		MAX SAFE RPM 2700	WYE CONNECTION OHMS PER PHASE (BASE RATING, 20C)	
HP 20 HP	40/24	Base Volt 460	NL AMPS 10.40	Slips(HZ) 0.94	R1 0.167	X1 0.876
BASE SPEED 1772		WK2 () 0.000			R2 0.159	X2 1.160
PHASE/HZ 3/60						XM 30.000

Rated Full Load Data

	RPM	HP	Torque	Volts	Freq-Hz	Amps
Base Speed	1771.9	20.0	59.3	460	60	24.0
Max Speed	2657	20.0	39.5	460	90	23.1
Min Speed	0	0.0	59.3	17.91	0.94	24.0

Load Performance at Base Speed

	RPM	HP	Torque	Volts	Freq-Hz	Amps
No Load	1798.9	0.0	0.0	460	60	10.4
1/4	1793.2	5.0	14.7	460	60	11.8
1/2	1786.4	10.0	29.4	460	60	15.0
3/4	1779.1	15.0	44.3	460	60	19.2
Full Load	1771.9	20.0	59.3	460	60	24.0
O/L	1741	40.1	121.0	460	60	48.7

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 11/27/2017

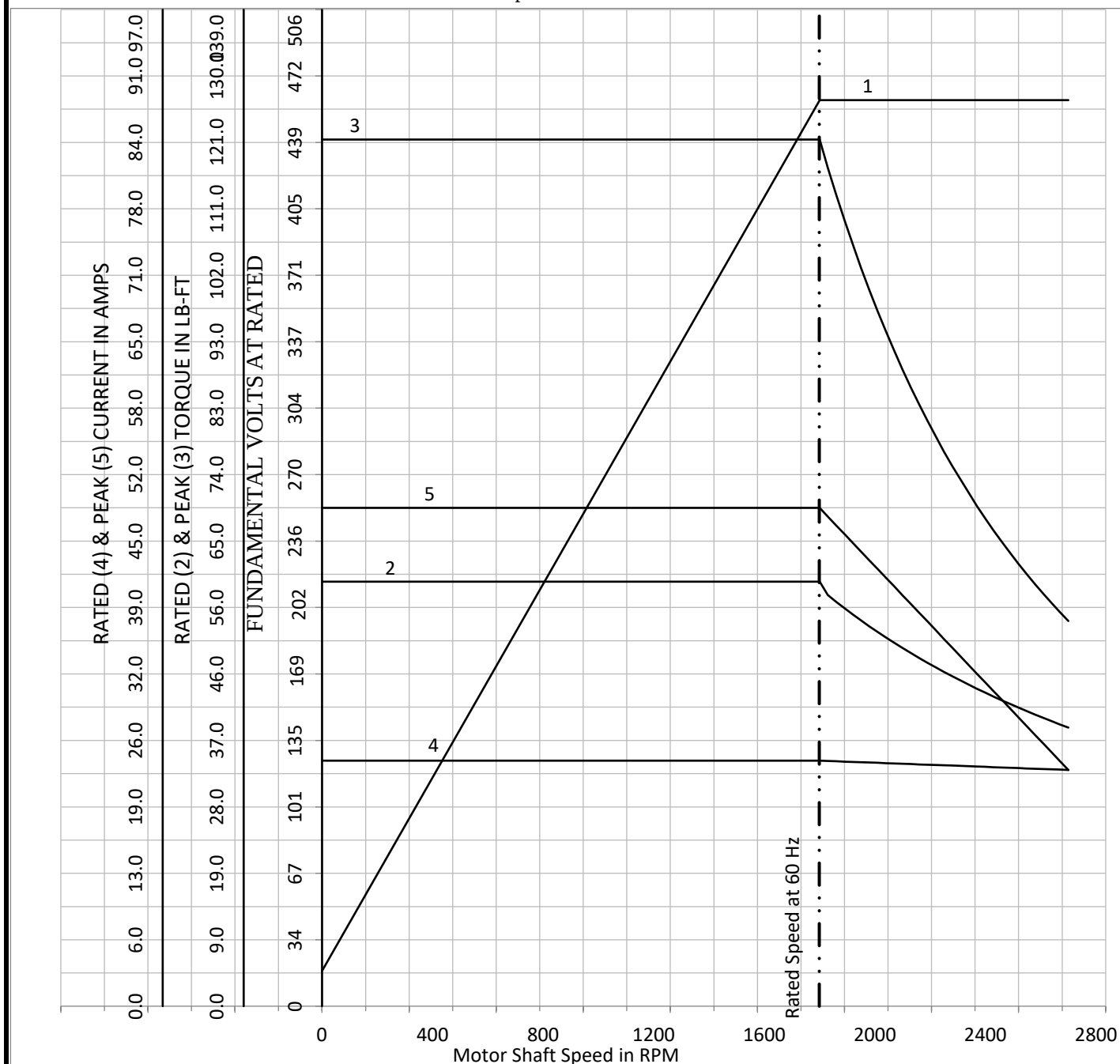
**A-C MOTOR
PERFORMANCE
CURVES**
09WGT459
Record: 67965

HP 20 HP
 BASE SPEED 1771.90002
 PHASE/HZ 3/60

MAX SAFE RPM 2700
 ZDVSCP2334T - 20HP, 1770RPM
 Base Volt 460
 NL AMPS 10.40
 Slips(HZ) 0.94
 WK2 () 0.000

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)
 3PH, 60HZ, 256TC, 0960M, TEFC, F
 R1 0.167 X1 0.876
 R2 0.159 X2 1.160
 XM 30.000

Vector PWM Inverter Duty
 Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only



DR BY USBRRAN1
 CK BY
 APP BY USBRRAN1
 DATE 11/27/2017

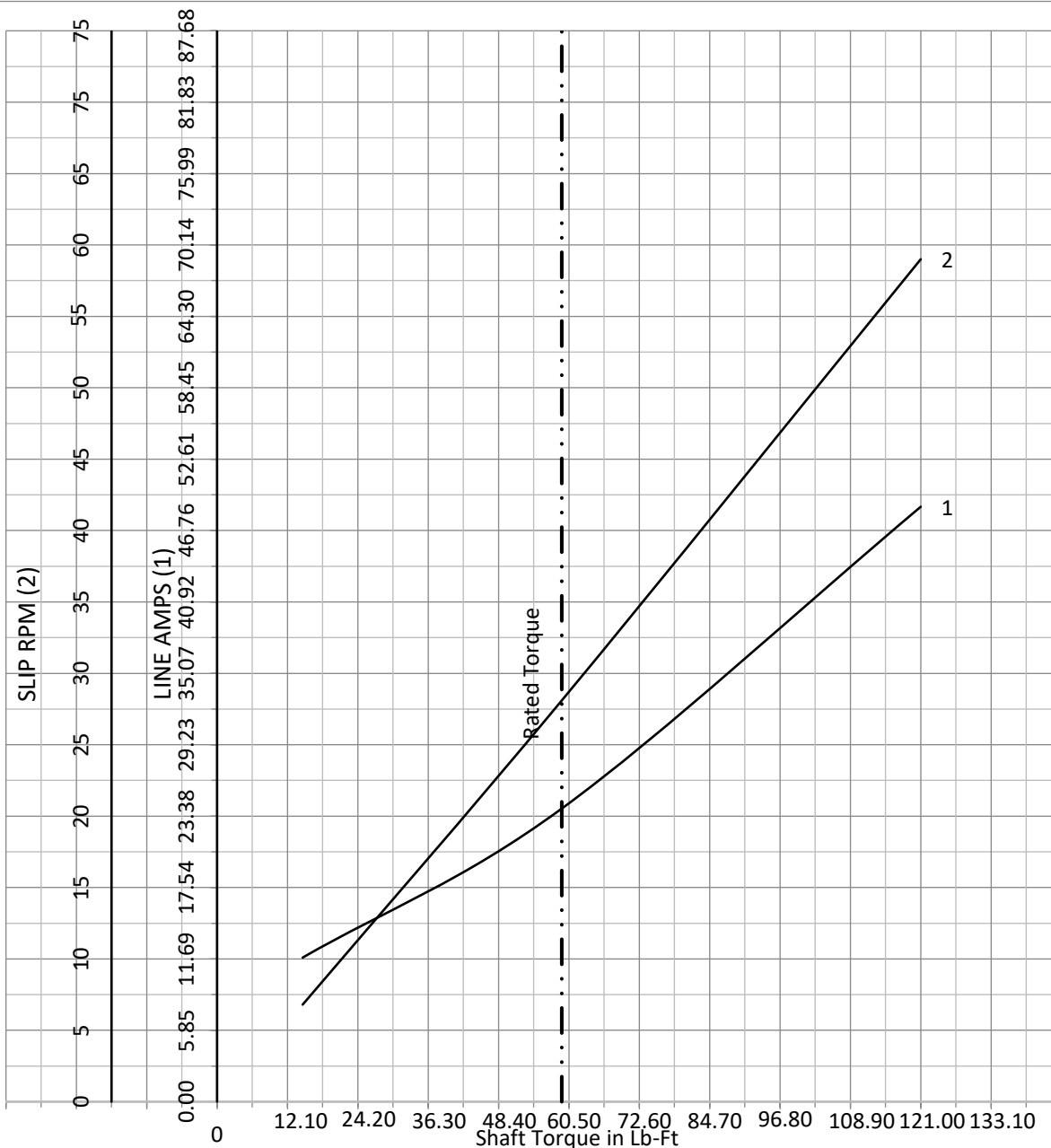
**A-C MOTOR
 PERFORMANCE
 CURVES**
09WGT459
 Record: 67965

HP 20 HP
 BASE SPEED 1771.900024
 PHASE/HZ 3/60

MAX SAFE RPM 2700
 ZDVSCP2334T - 20HP, 1770RPM
 Base Volt 460
 NL AMPS 10.40
 Slips(HZ) 0.94
 WK2 () 0.000

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)
 3PH, 60HZ, 256TC, 0960M, TEFC, F
 R1 0.167 X1 0.876
 R2 0.159 X2 1.160
 XM 30.000

Vector PWM Inverter Duty
 Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

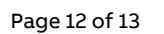


DR BY USBRRAN1
 CK BY
 APP BY USBRRAN1
 DATE 11/27/2017

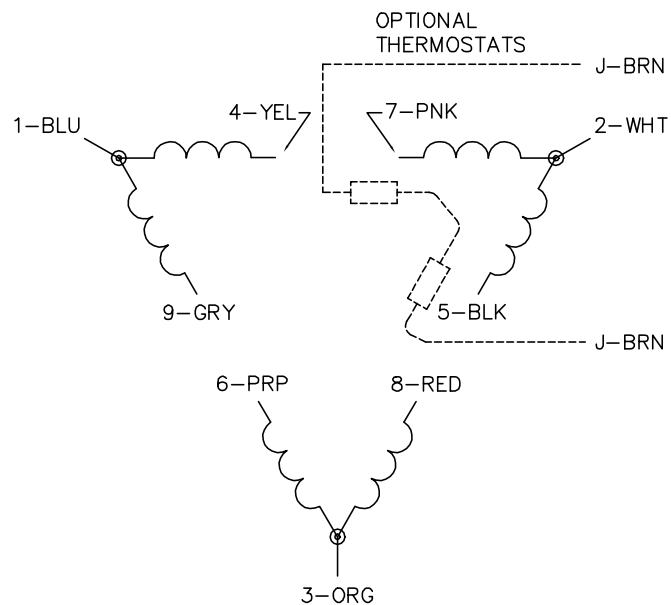
**A-C MOTOR
 PERFORMANCE
 CURVES**

09WGT459

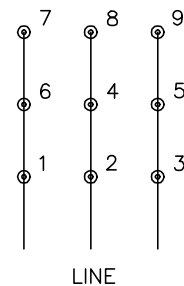
Record: 67965



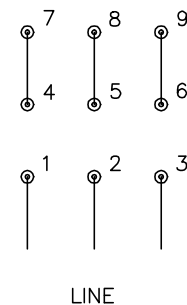
CD0180



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