

ABB BALDOR RELIANCE III

Customer information packet

ZDVSCP4104T

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	TACHOMETER
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	38.0 a

Part Detail

Revision	K
Type	AC
Mech. spec.	10H956
Base	
Status	PRD/A
Elec. spec.	10WGY538
Layout	10LYH956
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
IP Rating	NONE
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	30.79 IN
Power Factor	80
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	1.875 IN
Shaft Extension Location	Pulley End
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
Thermal Device - Winding	Normally Closed Thermostat
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None

Winding Thermal 2

None

Nameplate

NP3303L									
CAT NO	ZDVSCP4104T								
SPEC.	10H956Y538Z1								
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			6311			
CC	010A	SN							
	1.5:1 CHP PWM								
	1000:1 CT, 1000:1 VT								

NP0090L	
FRONT	6311
PULLEY	6311
LUBRICATE WITH	
GREASE	POLYREX EM

Parts List

Part number	Description	Quantity
SA343823	SA 10H956Y538Z1	1.000 ea
RA332293	RA 10H956Y538Z1	1.000 ea
10CB1000A09P	KOBX, MACH W/1.50 NPT & PRIMER	1.000 ea
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 ea
10XN3118K16	5/16-18 X 1' GRADE #5, STL, ZINC PLATE	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
10XN2520K06	1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P	1.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 ea
HA4017A03	.125 X 1.75 GREASE EXT (F/S)	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
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HW5100A13	W4627-047 WVY WSHER	1.000 ea
10XN3118K40	5/16-18 X 2.25" HEX HD, GRADE 5	2.000 ea
10EP1305A117P	PU ENDPLATE, MACH W/EPOXY	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW4500A20	1/8NPT SL PIPE PLUG	1.000 ea
HW4600B40	V-RING SLINGER 2.000 X 2.680 X .28 VITON	1.000 ea
HW4600B40	V-RING SLINGER 2.000 X 2.680 X .28 VITON	1.000 ea
10XN3118K40	5/16-18 X 2.50" HEX HD, GRADE 5	4.000 ea
10FH1007A59P	FAN COVER, MACH FOR DBL SHF MTRS	1.000 ea
10XN3118K24	5/16-18 X 1.50" HEX HD, GRADE 5	3.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	3.000 ea
611712073A	TACH 210	1.000 ea
10XN2520K12	1/4-20 X.75 GRD 5	2.000 ea
HW1000A25	1/4 SAE FLAT WASHER (FS)	2.000 ea
10CB1503P	CONDUIT BOX LIPPED, CAST W/EPOXY PRIMER	1.000 ea
14GS1003	GASKET CONDUIT BOX LID, NEOP	1.000 ea
10XN2520K16	1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P	4.000 ea

HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
HW2501H28	KEY, 1/2 SQ X 3.250	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 qt
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.033 ea
MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.025 ea
LB1002N	LABEL,MARINE DUTY (ON ROLLS)	1.000 ea
10EP1110A44GP6	FREP, MACH W/PRIMER & GREEN PAINT	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	0.130 lb
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	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	WILKOFAST, 778.50, RELIANCE BLUE-GREEN 8	0.070 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
10PA1010	PACKAGING GROUP, PRINT PK1151A06	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 CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)		
HP	30 HP	Base Volt	460	Base Volt	R1	0.107	X1 0.492
BASE SPEED	1777	NL AMPS	17.90	Base Volt	R2	0.515	X2 0.443
PHASE/HZ	3/60	Slips(HZ)	0.78	Base Volt	R2B	0.075	X2B 0.692
		WK2 (LB-FT2)	4.470	Base Volt	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

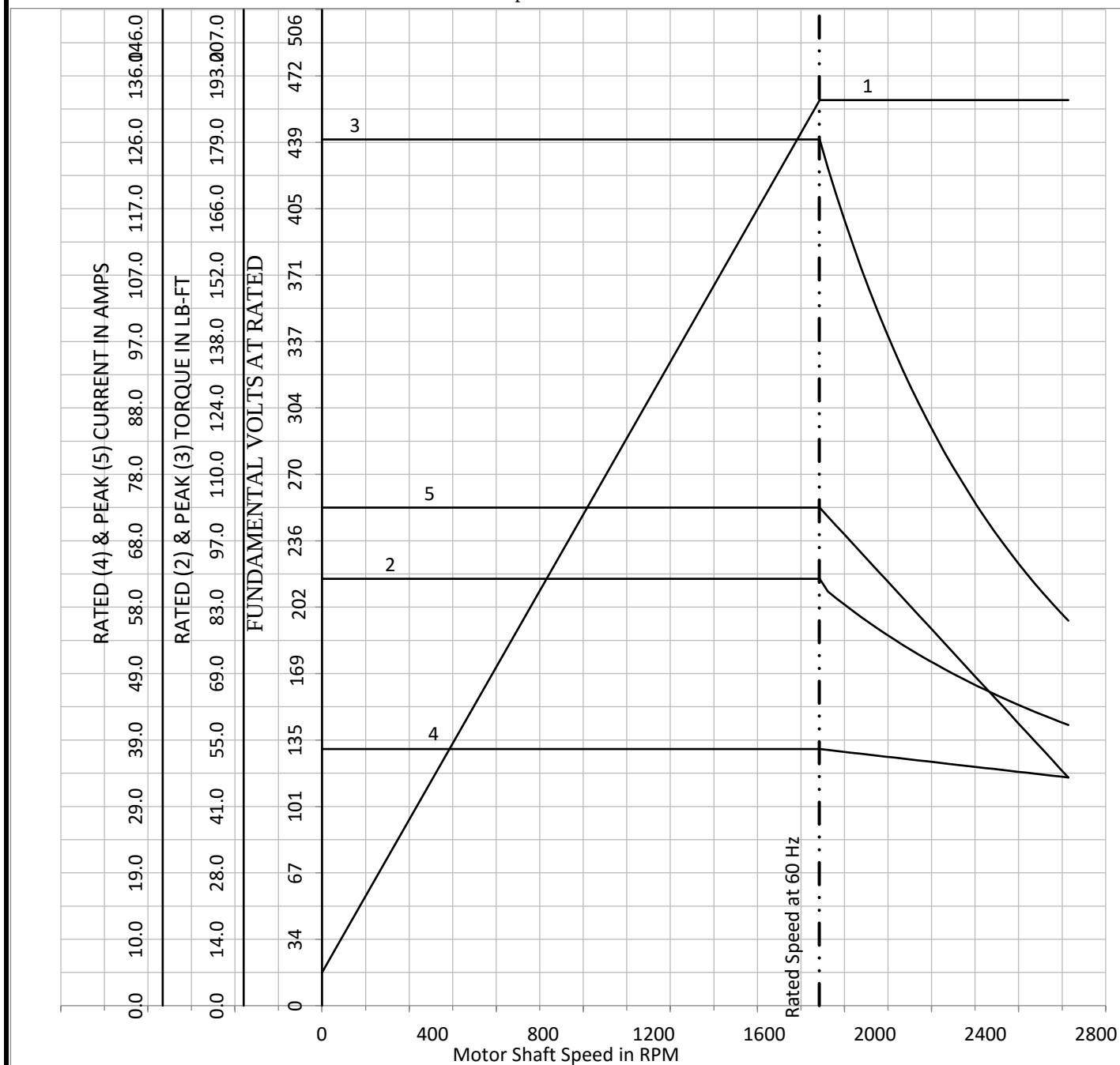
**A-C MOTOR
PERFORMANCE
CURVES**
10WGY538
Record: 52925

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

MAX SAFE RPM 2700
 VSC4104T - 30HP, 1760RPM
 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)
 3PH, 60HZ, 286TC, 1056M, TEFC, F
 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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**A-C MOTOR
 PERFORMANCE
 CURVES**
10WGY538
 Record: 52925

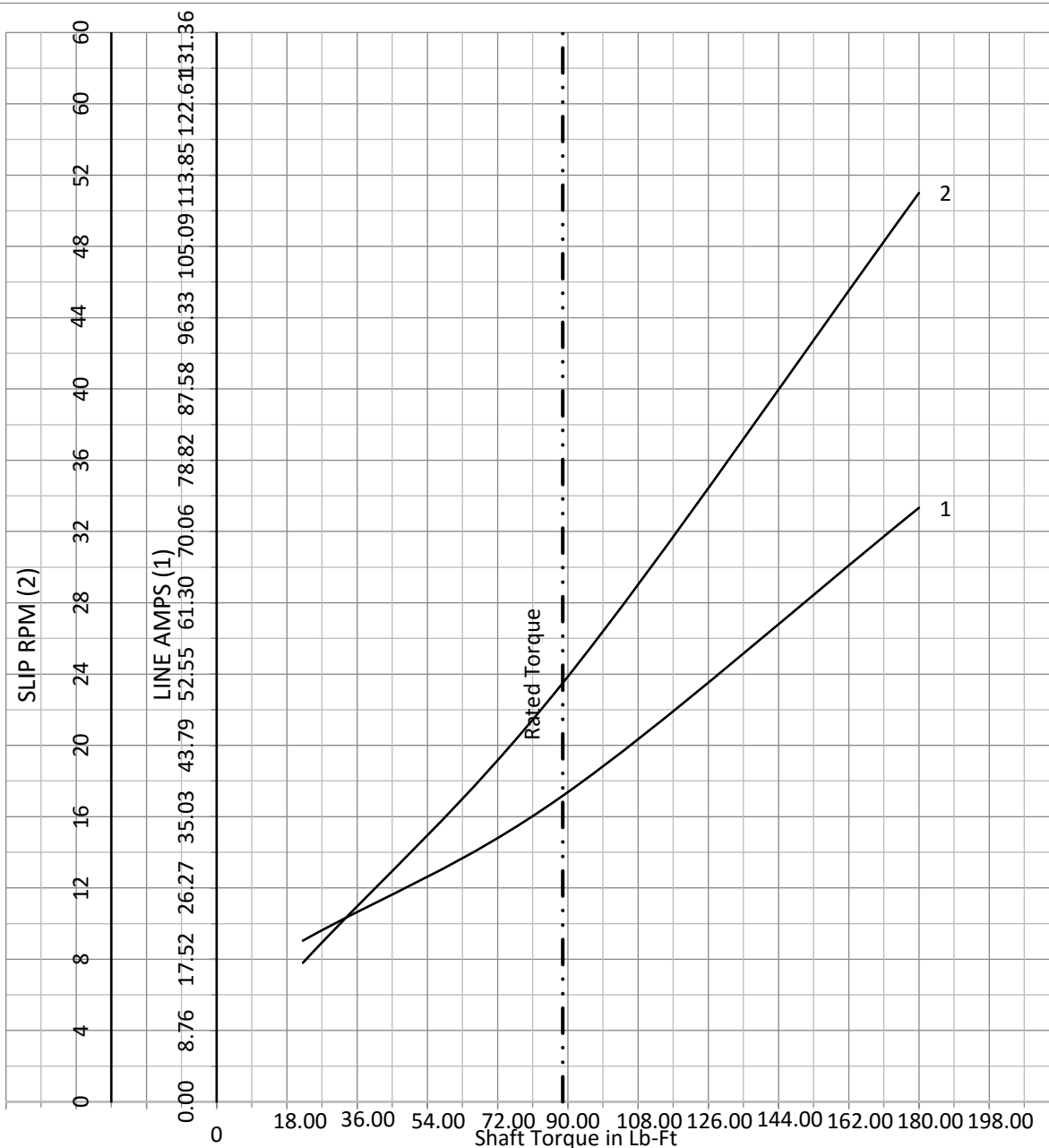
HP 30 HP
 BASE SPEED 1776.5
 PHASE/HZ 3/60

MAX SAFE RPM 2700
 ZDVSCP4104T - 30HP, 1760RPM
 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)
 3PH, 60HZ, 286TC, 1056M, TEFC, F

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
 Vaible Speed AC Motor Curves



Calculated Data

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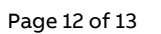


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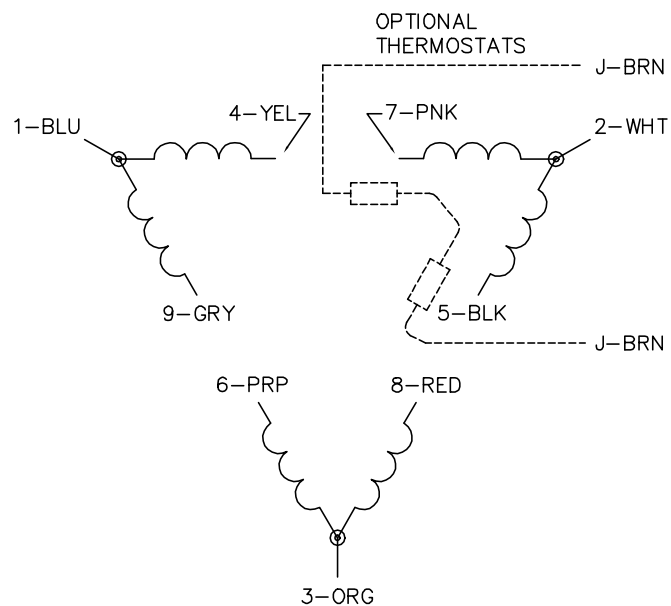
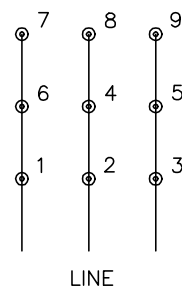
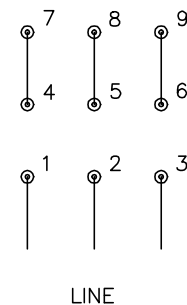
**A-C MOTOR
 PERFORMANCE
 CURVES**

10WGY538

Record: 52925



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