

ABB BALDOR RELIANCE III

Customer information packet

ZDNM2238T

10HP, 1770RPM, 3PH, 60HZ, 256TC, 0948M, TENV

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	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	AJ
Type	AC
Mech. spec.	09F277
Base	
Status	PRD/A
Elec. spec.	09WGY402
Layout	09LYF277
Eff. date	11-14-2023
CD Diagram	CD0005
Poles	04
Leads	9#12
Proprietary	False
Created date	01-01-0001

Insulation Class	H
Inverter Code	Inverter Duty
KVA Code	K
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5000 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

NP1168L									
CAT NO	ZDNM2238T								
SPEC.	09F277Y402Z1								
FRAME	256TC			HP	10 TE				
VOLTS	230/460								
MAG CUR	11.2/5.6				FLA	26/13			
RPM	1770		RPM MAX			5000			
HZ	60	PH	3	CLASS			H		
SER.F.	1.00	DES	A	SL HZ			0.9		
NEMA-NOM-EFF	91.7	WK2	2.1						
BLWR V		PH		HZ		A			
RATING	40C AMB-CONT								
DE BRG	6309	ODE BRG			6208				
CC	010A	SER.NO							

Parts List

Part number	Description	Quantity
SA077918	SA 09F277Y402Z1	1.000 ea
RA071435	RA 09F277Y402Z1	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
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 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
HA1005A12	SLINGER, OD 2.50, ID 1.433, 208 BRG	1.000 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
HA4051A00	PLASTIC CAP FOR GREASE FITTING	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
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
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
OE5001A80SP	ENCDR KIT TENV W/OEHS35A10 W/BLIND SHAFT	1.000 ea
MG1050G01	CELEROL MEDIUM CHARCOAL METALLIC GRAY	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LC0005E01	SPL CONN.DIA./WARN.LABEL(LC0005/LB1119)	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
NP1168L	ALUM VEC UL CSA CC	1.000 ea
40PA1005	PACKAGING GROUP, 09 STD	1.000 ea
LD7020D09	LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS	1.000 ea

NP VOLTS	230/460	MAX SAFE RPM	5000	WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)			
NP AMPS	26/13	Base Volt	460	R1	0.355	X1	1.360
HP	10HP	NL AMPS	5.6	R2	0.289	X2	1.650
BASE SPEED	1770	Slips (Hz)	0.90			XM	45.200
PHASE/HZ	3/60	WK ² (lb-ft ²)	2.1				

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	12.2
Min Speed	0	0.0	29.8	21.51	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	1748	20.1	60.3	460	60	24.6

Blower Data

Volts	Ph/HZ	FL Amps	LR Amps	Frame	CFM

Remarks: Calculated Data
Vector PWM Inverter Duty



DR BY BR
CK BY
APP BY BR
DATE 3/28/2017

A-C MOTOR
PERFORMANCE
CURVES
09WGY402

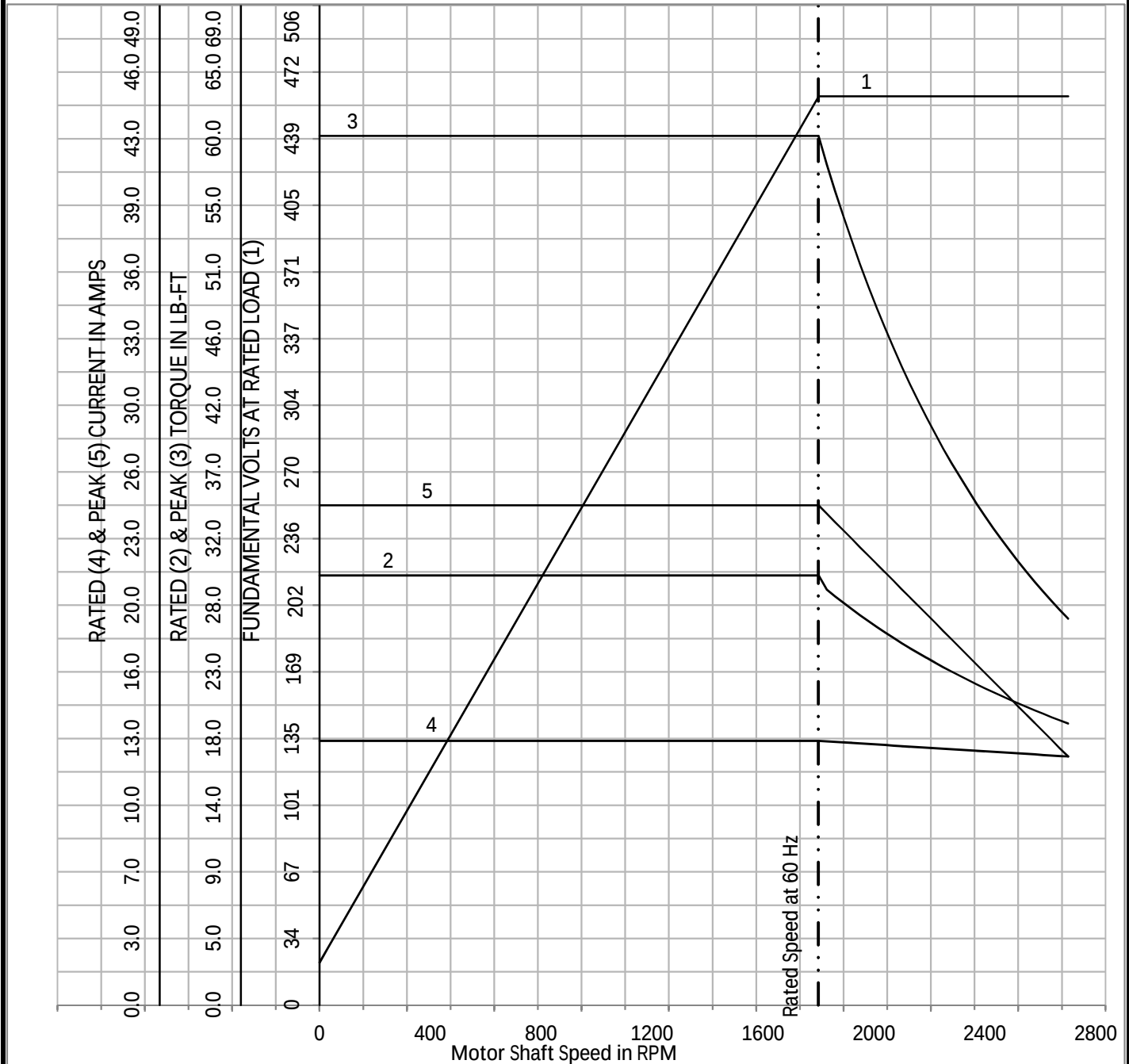
NP VOLTS 230/460
NP AMPS 26/13
HP 10HP
BASE SPEED 1770
PHASE/HZ 3/60

MAX SAFE RPM 5000
Base Volt 460
NL AMPS 5.6
Slips (Hz) 0.90
WK2 (lb-ft²) 2.1

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)

R1	0.355	X1	1.360
R2	0.289	X2	1.650
		XM	45.200

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

09WGY402

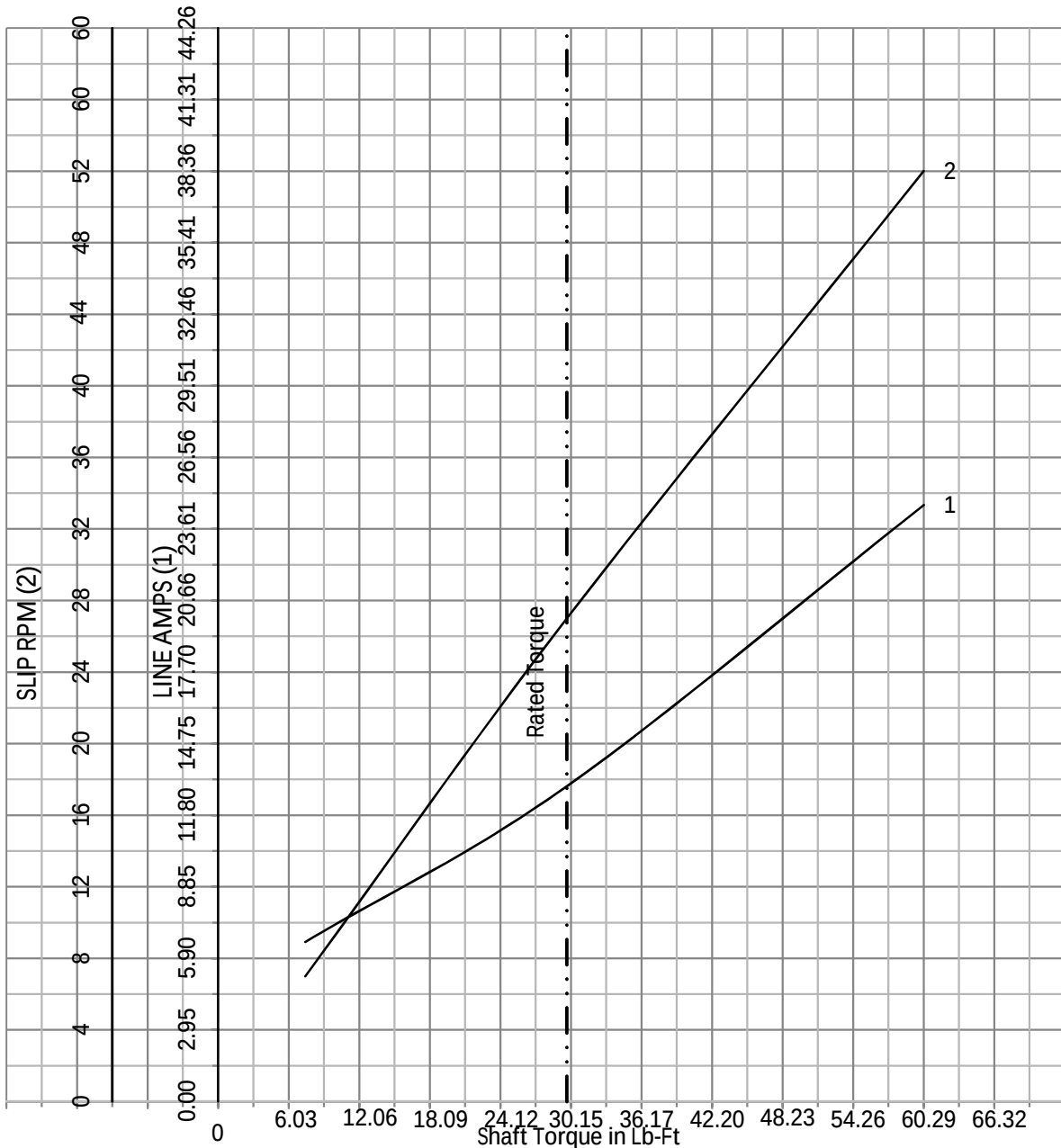
NP VOLTS 230/460
NP AMPS 26/13
HP 10HP
BASE SPEED 1770
PHASE/HZ 3/60

MAX SAFE RPM 5000
Base Volt 460
NL AMPS 5.6
Slips (Hz) 0.90
WK2 (lb-ft2) 2.1

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)

R1	0.355	X1	1.360
R2	0.289	X2	1.650
		XM	45.200

Vector PWM Inverter Duty
Variable Speed AC Motor Curves



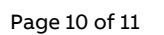
Calculated Data

Data Valid For Nameplate Speed Range only

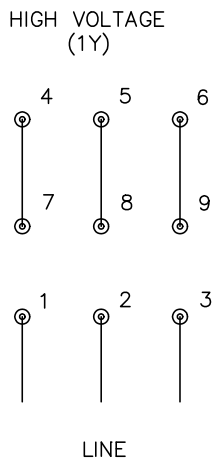
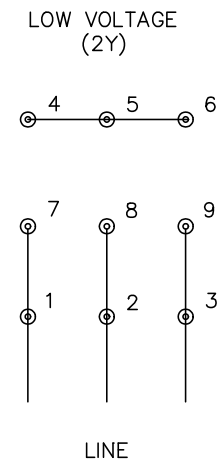
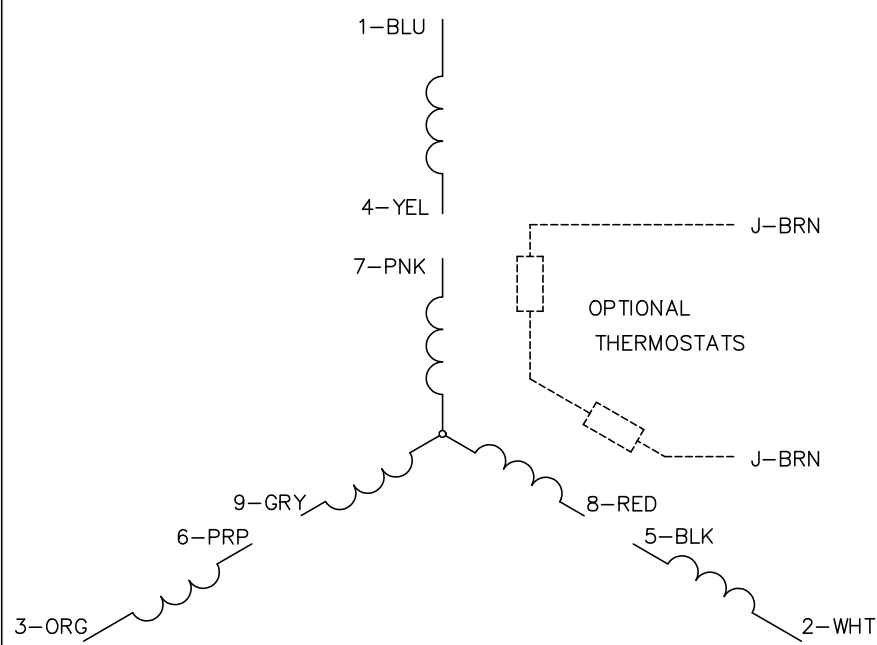
BALDOR
A MEMBER OF THE ABB GROUP

DR BY BR
CK BY
APP BY BR
DATE 3/28/2017

A-C MOTOR
PERFORMANCE
CURVES
09WGY402



CD0005



- 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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
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BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005