

**BALDOR • RELIANCE**

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# Customer information packet

## VEM3120T

1.5HP, 3490RPM, 3PH, 60HZ, 143TC, 3518M, OPEN

Class - None

Division - Not Applicable

## Specifications

Enclosure	OPEN
Frame	143TC
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	1.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ 230.0 V @ 60 HZ 208.0 V @ 60 HZ
Agency Approvals	CSA EEV NEMA PREMIUM NEMA_PREMIUM UR
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	4.000 A @ 230.0 V 4.200 A @ 208.0 V 2.000 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	84.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK

## Part detail

Revision	W
Type	AC
Mech. spec.	35Z413
Base	
Status	PRD/A
Elec. spec.	35WGM761
Layout	35LYZ413
Eff. date	09-19-2024
CD Diagram	CD0005
Poles	02
Leads	9#18
Proprietary	False
Created date	04-27-2015

Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	2.0 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	L
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3518M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	12.25 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
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3490 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None

<b>Thermal Device - Winding</b>	None
<b>Vibration Sensor Indicator</b>	No Vibration Sensor
<b>Winding Thermal 1</b>	None
<b>Winding Thermal 2</b>	None

**Nameplate**

<b>NP3553LUA</b>									
<b>CAT.NO.</b>	VEM3120T								
<b>SPEC.</b>	35Z413M761G1								
<b>HP</b>	1.5								
<b>VOLTS</b>	208-230/460								
<b>AMPS</b>	4.2-4/2								
<b>RPM</b>	3490								
<b>FRAME</b>	143TC		<b>HZ</b>	60		<b>PH</b>	3		
<b>SF</b>	1.15	<b>CODE</b>	L	<b>DES</b>	B	<b>CLASS</b>	F		
<b>NEMA NOM. EFF</b>	84	<b>PF</b>	83						
<b>RATING</b>	40C AMB-CONT								
<b>CC</b>	010A								
<b>ENCL</b>	OPEN	<b>SN</b>							
<b>DE</b>	6205	<b>ODE</b>	6203						
<b>VPWM INVERTER READY</b>									
<b>CT30-60(2:1) VT3-60(20:1)</b>									
<b>USABLE AT</b>	50HZ 1.5HP 190/380V 4.6/2.3A							SF1.0	

## Parts list

Part number	Description	Quantity
SA300021	SA 35Z413M761G1	1.000 ea
RA287067	RA 35Z413M761G1	1.000 ea
NS2512A01	INSULATOR, CONDUIT BOX X	1.000 ea
35CB3009	35 CB W/1.09 DIA. LEAD HOLE @ 6:	1.000 ea
51XB1016A07	10-16 X 7/16 HXWSSLD SERTYB	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
35EP3209A02	A00 W/DRIP COVER	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP3402B00	MASTER DE,205 BRG,OPEN,W/GREASER	1.000 ea
35AD2000	AIR BAFFLE - GALVANNEAL	1.000 ea
60XW0632A06	6-32 X 3/8 TORX HEAD SCREW TAPTITE II	4.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
35FH4006A09	DRIP COVER W/FLAT, W/ PRIMER	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	2.000 ea
35CB4521	35 LIPPED CB LID (GALV & PHOSPH)	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
MG1050Y01	CELEROL BALDOR GOLD *** NLA IN 5 GALLON	0.017 ga
HA3100A12	THRUBOLT 10-32 X 7.375	4.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500bx)4/22	1.000 ea
LC0005E01	CONN.DIA./WARNING LABEL (LC0005/LB1119N)	1.000 ea
NP3553LUA	ALUM SUPER-E VPWM INV READY UL CC NEMA P	1.000 ea
36PA1000	PKG GRP, PRINT PK1016A06	1.000 ea
PK3083	STYROFOAM PACKING CRADLE	1.000 ea
PK3088	MICROFOAM, 8"X"8 PERF. SHEETS	1.000 ea
FE-0000001	ZRTG FE ASSEMBLY	1.000 ea

PE-0000003

ZRTG PE ASSEMBLY

1.000 ea

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**AC Induction Motor Performance Data**

Record # 62662

Typical performance - not guaranteed values

<b>Winding:</b> 35WGM761-R011		<b>Type:</b> 3518M		<b>Enclosure:</b> OPEN	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	1.5	<b>Full Load Torque</b>	2.26 LB-FT		
<b>Volts</b>	208-230/460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	4.2-4/2	<b>Breakdown Torque</b>	9.32 LB-FT		
<b>R.P.M.</b>	3490	<b>Pull-up Torque</b>	4.18 LB-FT		
<b>Hz</b>	60 <b>Phase</b>	3	<b>Locked-rotor Torque</b>	6.79 LB-FT	
<b>NEMA Design Code</b>	<b>B KVA Code</b>	L	<b>Starting Current</b>	17.2 A	
<b>Service Factor (S.F.)</b>		1.15	<b>No-load Current</b>	1.05 A	
<b>NEMA Nom. Eff.</b>	84 <b>Power Factor</b>	83	<b>Line-line Res. @ 25°C</b>	12.897 Ω	
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	24°C	
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>	29°C	
			<b>Locked-rotor Power Factor</b>	64	
			<b>Rotor inertia</b>	0.0493 LB-FT <sup>2</sup>	

**Load Characteristics 460 V, 60 Hz, 1.5 HP**

<b>% of Rated Load</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>S.F.</b>
<b>Power Factor</b>	43	64	76	83	87	90	85
<b>Efficiency</b>	73.6	82.2	84.7	85	84.3	83	84.6
<b>Speed</b>	3574.4	3550.4	3524.4	3496.4	3465.2	3430	3478
<b>Line amperes</b>	1.14	1.35	1.63	1.99	2.41	2.84	2.24



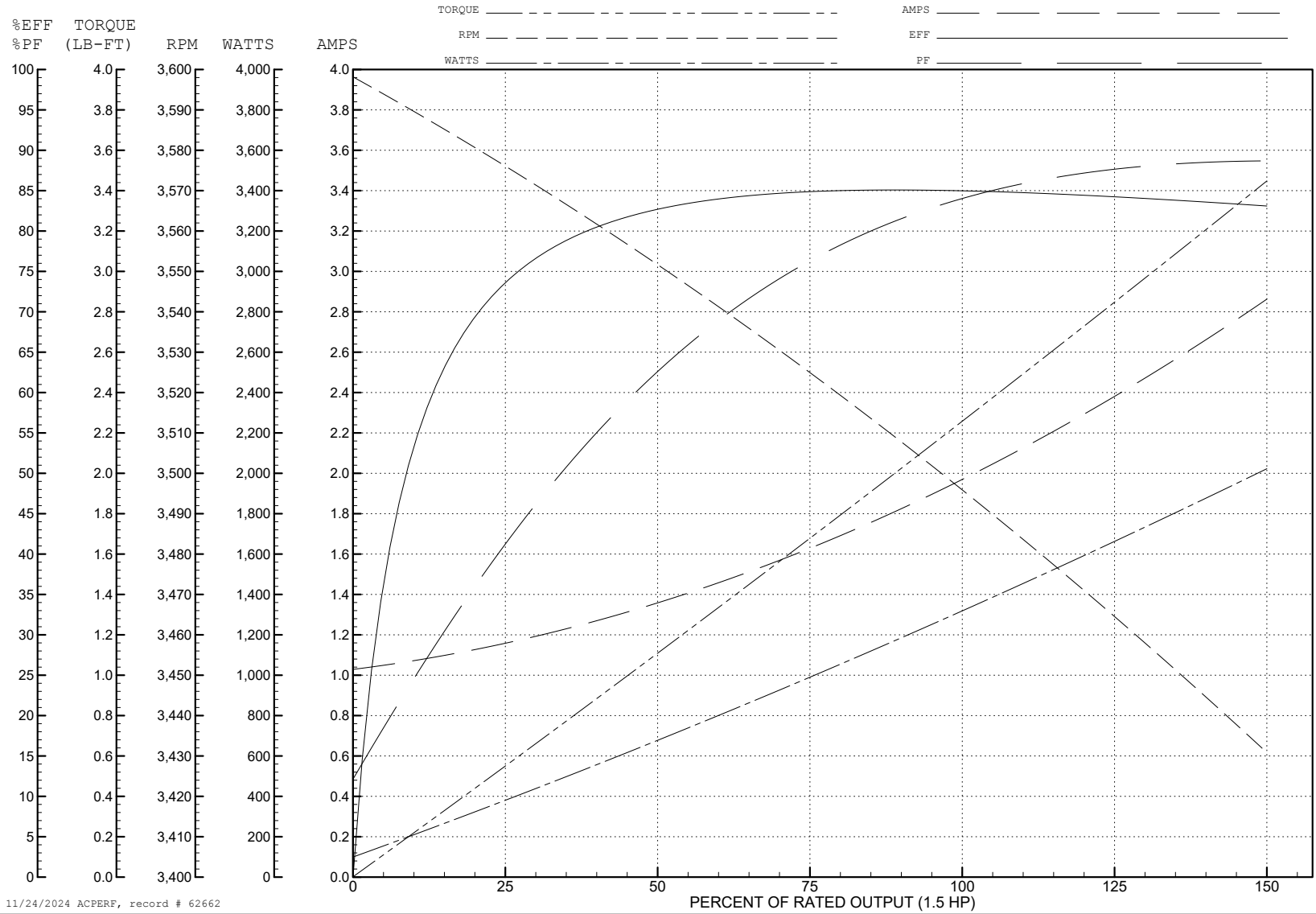
ABB Motors and Mechanical Inc.

WINDING # 35WGM761

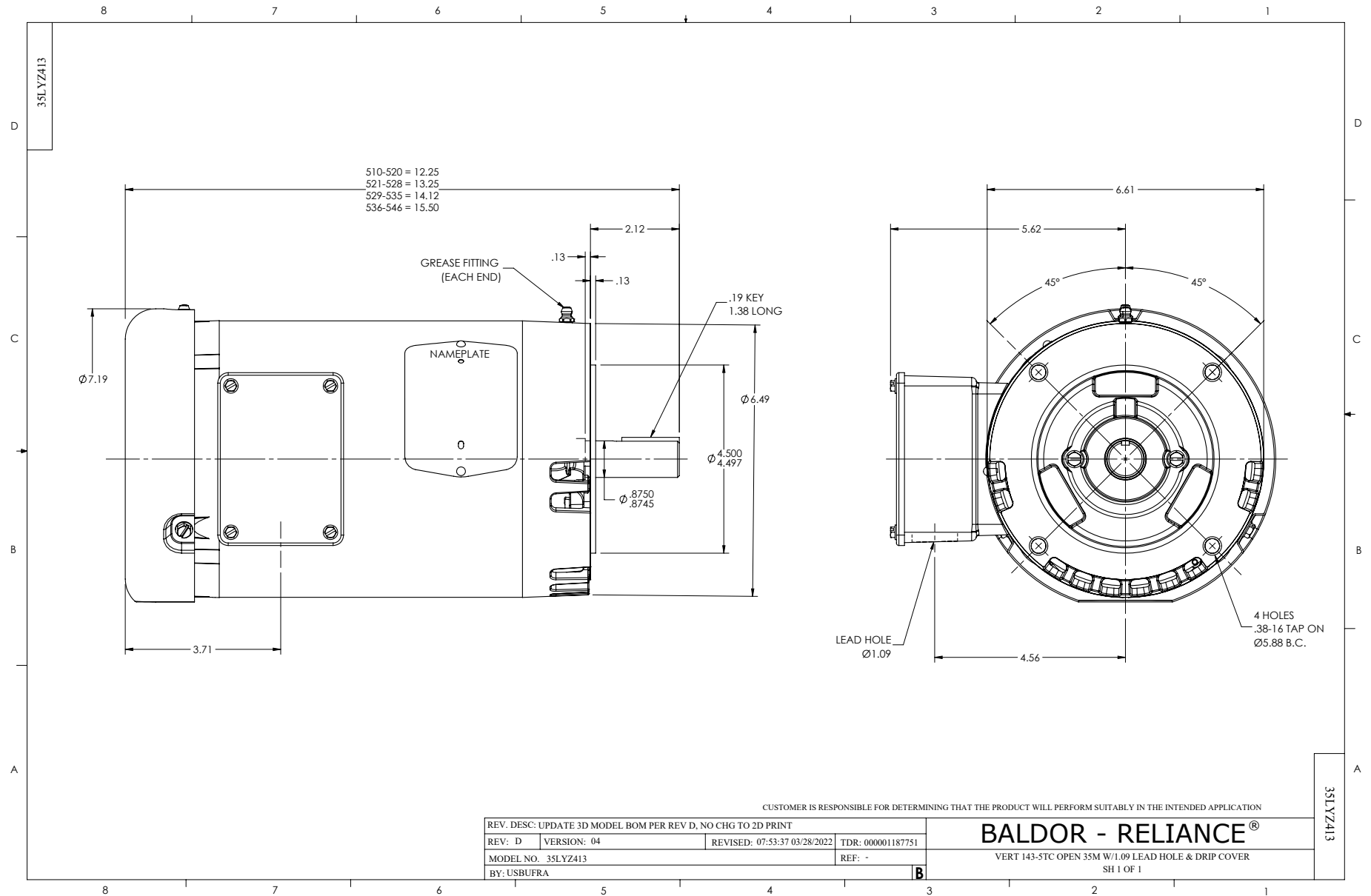
Typical performance - not guaranteed values.

1.5 HP 3 PH 60 HZ 3490 RPM 460 V 3518M

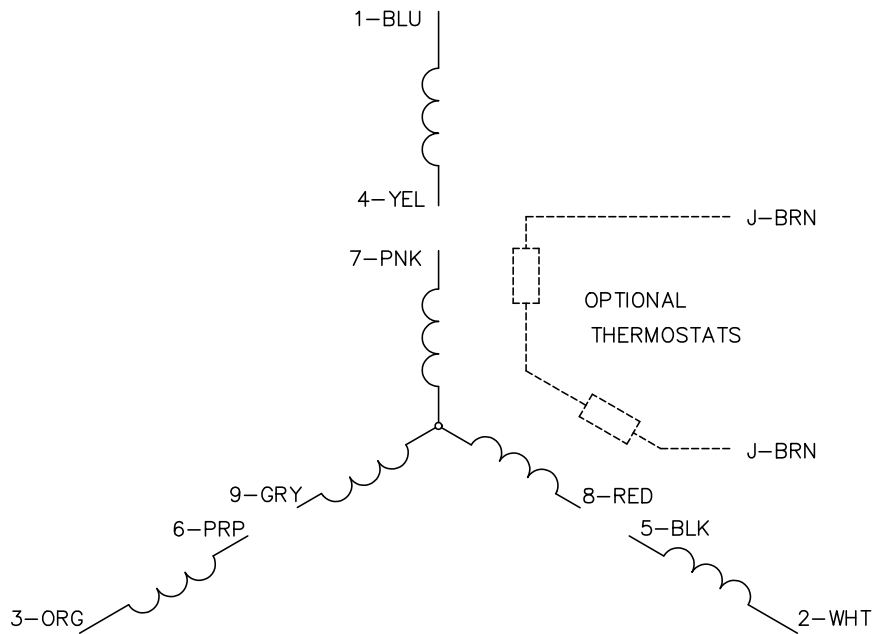
TORQUES (LB-FT): PO=9.32 PU=4.18 LR=6.79 LRA=17.2



11/24/2024 ACPERF, record # 62662



CD0005



LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS