

BALDOR® • RELIANCE 

Product Information Packet

VL3509A

1HP,3450RPM,1PH,60HZ,56C,3524L,TEFC,F1

Part Detail							
Revision:	BL	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	35WG0498	CD Diagram:	CD0008	Mfg Plant:	
Mech. Spec:	35C013	Layout:	35LYC013	Poles:	02	Created Date:	06-21-2007
Base:	N	Eff. Date:	05-30-2018	Leads:	4#16 A&J,2#18 B PH,1#14 #4TH		

Specs			
Catalog Number:	VL3509A	Inverter Code:	Not Inverter
Enclosure:	TEFC	KVA Code:	K
Frame:	56C	Lifting Lugs:	No Lifting Lugs
Frame Material:	Steel	Locked Bearing Indicator:	Locked Bearing
Output @ Frequency:	1.000 HP @ 60 HZ	Motor Lead Quantity/Wire Size:	4 @ 16 AWG, A&J
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Motor Lead Exit:	Ko Box
Voltage @ Frequency:	115.0 V @ 60 HZ	Motor Lead Termination:	Flying Leads
	230.0 V @ 60 HZ	Motor Type:	3524L
XP Class and Group:	None	Mounting Arrangement:	F1
XP Division:	Not Applicable	Power Factor:	81
Agency Approvals:	UR	Product Family:	General Purpose
	CSA	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	C-Face
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	No Mounting	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	RoHS Status:	ROHS COMPLIANT
Blower:	None	Shaft Extension Location:	Pulley End
Current @ Voltage:	12.000 A @ 115.0 V	Shaft Ground Indicator:	No Shaft Grounding

	6.000 A @ 230.0 V	Shaft Rotation:	Reversible
Design Code:	N	Shaft Slinger Indicator:	No Slinger
Drip Cover:	No Drip Cover	Speed Code:	Single Speed
Duty Rating:	CONT	Motor Standards:	NEMA
Electrically Isolated Bearing:	Not Electrically Isolated	Starting Method:	Direct on line
Feedback Device:	NO FEEDBACK	Thermal Device - Bearing:	NONE (OLD)
Front Face Code:	Standard	Thermal Device - Winding:	None
Front Shaft Indicator:	None	Vibration Sensor Indicator:	No Vibration Sensor
Heater Indicator:	No Heater	Winding Thermal 1:	Automatic Thermal Overload
Insulation Class:	B	Winding Thermal 1 Location:	SB
		Winding Thermal 2:	None

Nameplate NP1257L	
CAT.NO.	VL3509A
SPEC.	35C13-498
HP	1
VOLTS	115/230
AMP	12/6
RPM	3450
FRAME	56C
HZ	60
PH	1
SER.F.	1.25
CODE	K
DES	N
CL	B
NEMA-NOM-EFF	66
PF	81
RATING	40C AMB-CONT
CC	USABLE AT 208V
DE	6205
ODE	6203
ENCL	TEFC
SN	
	SFA 14.4/7.2

Parts List		
Part Number	Description	Quantity
SA022568	SA 35C13-498	1.000 EA
RA018618	RA 35C13-498	1.000 EA
EC1645A06SP	ELEC CAP, 645-774 MFD, 125V, 2.06D X 4.	1.000 EA
TP5059	GENERIC THERMAL KIT	1.000 EA
WD1000A16	2-520128-2 AMP FLAG TERMINAL(4M/RL)	2.000 EA
NS2512A01	INSULATOR, CONDUIT BOX X	1.000 EA
35CB3007	35 CB CASTING W/.88 DIA. LEAD HOLE	1.000 EA
36GS1000SP	GASKET-CONDUIT BOX, .06 THICK #SV-330 LE	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
35EP3122K00	MASTER ODE,203 BRG,.683SH,#26 DRN,FH MTG	1.000 EA
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	2.000 EA
51XB1016A05	10-16X5/16HX WA SL SR TYB (F/S)	2.000 EA
HW5100A03	WAVY WASHER (W1543-017)	1.000 EA
35EP3307F00	MASTER DE,205 BRG,.998SH,#26 DRN	1.000 EA
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 EA
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 EA
35FH4005A32SP	IEC FH NO GRSR W/3 HOLES - PRIMED	1.000 EA
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 EA
35CB4521GX	CONDUIT BOX LID KIT **ORDER INDIV PARTS	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
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	1.000 EA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA

Parts List (continued)		
Part Number	Description	Quantity
MJ1000A02	GREASE, POLYREX EM EXXON (USe 4824-15A)	0.050 LB
34FN3002A01SP	EXTERNAL FAN, PLASTIC, .637/.639 HUB W/	1.000 EA
MG1000G27	MED CHARCOAL METALLIC GREY 400-0096	0.017 GA
SP5051A24	MODEL 35 TORQ STATIONARY SWITCH FOR "L"	1.000 EA
HA3100A15	THRUBOLT 10-32 X 8.375	4.000 EA
LB1118	LABEL,WARNING (ROLL LABEL)	1.000 EA
35CB4802A02SP	CAPACITOR COVER, STAMPED X	1.000 EA
35GS3001A02	GASKET, CA.COVER, 5.38 LONG .06 CS301	1.000 EA
LC0008	CONNECTION LABEL	1.000 EA
NP1257L	ALUM UL CSA CC THERMAL REV MTG	1.000 EA
36PA1000	PKG GRP, PRINT PK1016A06	1.000 EA
PK3083T	STYROFOAM PACKING CRADLE	1.000 EA
PK3088	MICROFOAM, 8"X"8 PERF. SHEETS 5,400/RL	1.000 EA
FE-0000001	ZRTG FE ASSEMBLY	1.000 EA
PE-0000001	ZRTG PE ASSEMBLY	1.000 EA

AC Induction Motor Performance Data
Record # 8070 - Typical performance - not guaranteed values

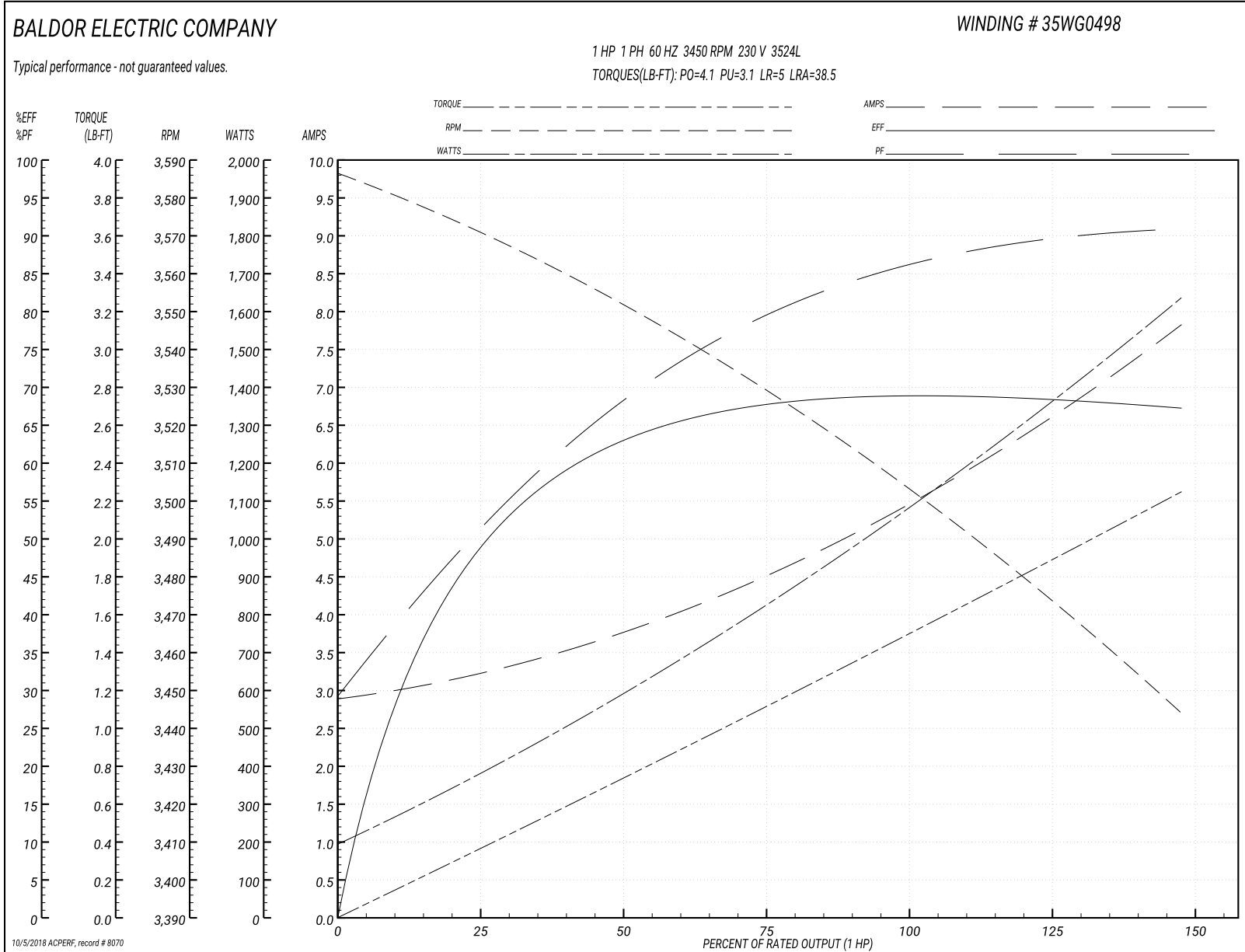
Winding: 35WG0498-R001	Type: 3524L	Enclosure: TEFC
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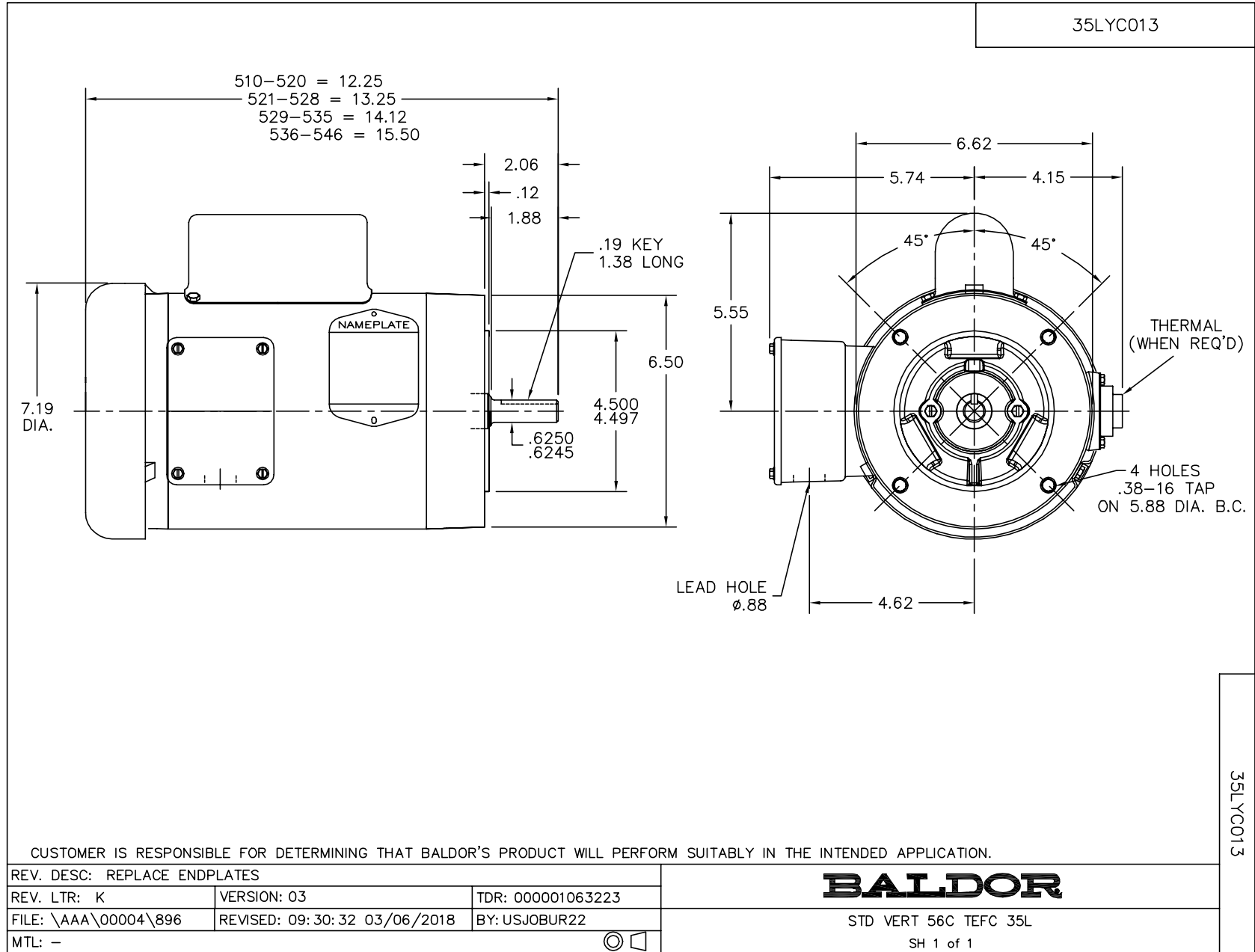
Nameplate Data				230 V, 60 Hz: High Voltage Connection	
Rated Output (HP)	1			Full Load Torque	1.5 LB-FT
Volts	115/230			Start Configuration	direct on line
Full Load Amps	12/6			Breakdown Torque	4.1 LB-FT
R.P.M.	3450			Pull-up Torque	3.1 LB-FT
Hz	60	Phase	1	Locked-rotor Torque	5 LB-FT
NEMA Design Code	N	KVA Code	K	Starting Current	38.5 A
Service Factor (S.F.)	1.25			No-load Current	2.95 A
NEMA Nom. Eff.	66	Power Factor	81	Line-line Res. @ 25°C	2.46 Ω A Ph 1.75 Ω B Ph
Rating - Duty	40C AMB-CONT			Temp. Rise @ Rated Load	
S.F. Amps	14.4/7.2			Temp. Rise @ S.F. Load	

Load Characteristics 230 V, 60 Hz, 1 HP

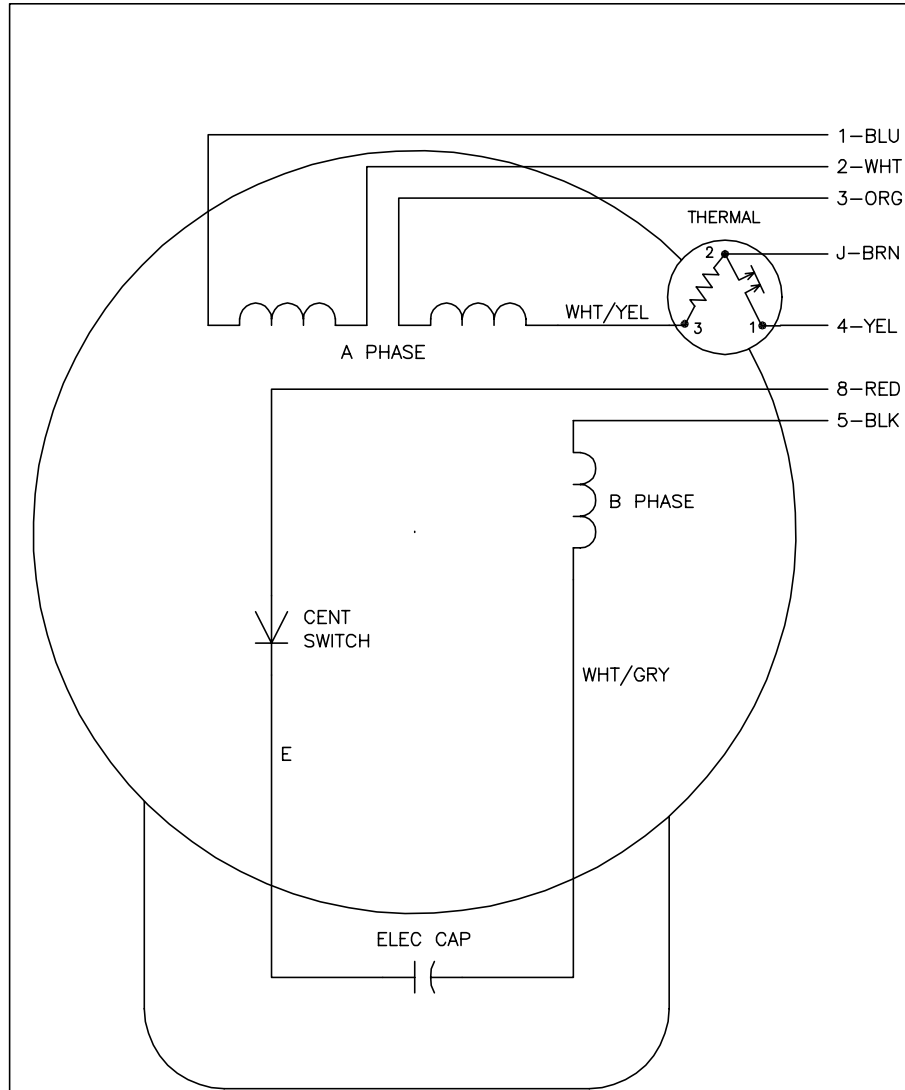
% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	50	64	75	81	84	86	84
Efficiency	49	65	67	69	68	67.5	68
Speed	3570	3550	3530	3505	3472	3445	3472
Line amperes	3.2	3.7	4.5	5.5	6.75	7.7	6.75

Performance Graph at 230V, 60Hz, 1.0HP Typical performance - Not guaranteed values





CD0008



	LINE A	LINE B	JOIN	JOIN
HIGH STD	1	4	2,3,8	J,5
HIGH OPP	1	4	2,3,5	J,8
LOW STD	1,3,8	4	-	2,J,5
LOW OPP	1,3,5	4	-	2,J,8

NOTES:

1. STANDARD ROTATION IS CCW FACING END OPPOSITE SHAFT EXTENSION.
2. MULTIPLE CAPACITORS ARE CONNECTED IN PARALLEL UNLESS OTHERWISE SPECIFIED.
3. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REMOVE 2-TERMINAL THERMAL DETAIL, SEE CD0008A02		
REV. LTR: F	VERSION: 01	TDR: 000000360649
80000	FILE: \AAA\00007\408	REVISED: 10:56:54 04/18/2005
	MTL: -	BY: ENJOEPO

BALDOR ELECTRIC Co.

TYPE L, DV, REV, THERMAL, 7 LEADS

CD0008