

**BALDOR • RELIANCE**

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# Customer information packet

## VEM3709T

7.5HP, 3495RPM, 3PH, 60HZ, 213TC, 3646M, TEFC

MDS OF MICHIGAN INC

Class - None

Division - Not Applicable

## Specifications

Enclosure	TEFC
Frame	213TC
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	7.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 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	8.800 A @ 460.0 V 18.600 A @ 208.0 V 17.600 A @ 230.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	90.2 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None

## Part detail

Revision	C
Type	AC
Mech. spec.	36G843
Base	
Status	PRD/A
Elec. spec.	36WGQ046
Layout	36LYG843
Eff. date	05-01-2024
CD Diagram	CD0005
Poles	02
Leads	9#14
Proprietary	False
Created date	01-04-2021

Heater Indicator	No Heater
High Voltage Full Load Amps	8.8 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	M
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	9 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3646M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	18.56 IN
Power Factor	89
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	1.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	3495 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

**Nameplate**

**NP3441LUA**

<b>CAT.NO.</b>	VEM3709T						
<b>SPEC</b>	36G843Q046G1						
<b>HP</b>	7.5						
<b>VOLTS</b>	230/460						
<b>AMPS</b>	17.6/8.8						
<b>RPM</b>	3495						
<b>FRAME</b>	213TC	<b>HZ</b>	60	<b>PH</b>	3		
<b>SF</b>	1.15	<b>CODE</b>	M	<b>DES</b>	A	<b>CLASS</b>	F
<b>NEMA NOM. EFF</b>	90.2	<b>PF</b>	89				
<b>RATING</b>	40C AMB-CONT						
<b>CC</b>	010A						
<b>ENCL</b>	TEFC	<b>SER</b>					
<b>DE</b>	6207	<b>ODE</b>	6205				
<b>VPWM INVERTER READY</b>							
<b>CT6-60H(10:1)VT3-60H(20:1</b>	50HZ 7.5HP 190/380V 20/10.0A						SF1.0

## Parts list

Part number	Description	Quantity
SA389215	SA 36G843Q046G1	1.000 ea
RA379586	RA 36G843Q046G1	1.000 ea
36CB3000SP	CONDUIT BOX, CAST	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
HW3001B01	BRASS CUP WASHER, FOR #10 SCREW	1.000 ea
36EP3104A01	FREP MACH ASSEMBLY FOR ROUTING	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A05	WVY WSHR F/205 & 304 BRGS	1.000 ea
36EP1307A01	PU ENDPLATE, MACH	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
10XN2520A26	1/4-20X 1 5/8 HEX HD	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 ea
36FH4009A102	IEC FH GREASER PRIMED	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
35CB4514GX	CONDUIT BOX LID KIT	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 ea
HW2501F21	KEY, 5/16 SQ X 2.375	1.000 ea
HA7000A02	KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
HW3200A01	3/8-16X3/4 EYEBOLT WELDED F/S	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
35FN3002A04SP	EXFN, PLASTIC, 6.376 OD, .906 ID W/KEY	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *** NLA IN 5 GALLON	0.022 ga
HA3101A28	THRUBOLT 1/4-20 X 12.500 OHIO ROD	4.000 ea
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP3441LUA	AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM	1.000 ea
G7PA1000	PKG GRP, PRINT PK1034A06	1.000 ea
PK3082	STYROFOAM CRADLE	1.000 ea

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MN416A01	TAG-INSTAL-MAINT no wire (2500bx)4/22	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea

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**AC Induction Motor Performance Data**

Record # 85922

Preliminary Data Sheet

<b>Winding: 36WGQ046-R001</b>		<b>Type: 3646M</b>		<b>Enclosure: TEFC</b>	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	7.5	<b>Full Load Torque</b>	11.3 LB-FT		
<b>Volts</b>	230/460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	17.6/8.8	<b>Breakdown Torque</b>	73 LB-FT		
<b>R.P.M.</b>	3495	<b>Pull-up Torque</b>	49.1 LB-FT		
<b>Hz</b>	60 <b>Phase</b>	3	<b>Locked-rotor Torque</b>	62.3 LB-FT	
<b>NEMA Design Code</b>	A <b>KVA Code</b>	N	<b>Starting Current</b>	112 A	
<b>Service Factor (S.F.)</b>	1.15	<b>No-load Current</b>	3.47 A		
<b>NEMA Nom. Eff.</b>	90.2 <b>Power Factor</b>	89	<b>Line-line Res. @ 25°C</b>	1.24 Ω	
<b>Rating - Duty</b>	40C AMB-CONT	<b>Temp. Rise @ Rated Load</b>	73°C		
<b>S.F. Amps</b>	20/10	<b>Temp. Rise @ S.F. Load</b>	95°C		
		<b>Locked-rotor Power Factor</b>	68.2		
		<b>Rotor inertia</b>	0.206 lb-ft <sup>2</sup>		

**Load Characteristics 460 V, 60 Hz, 7.5 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>	52	75	84	89	92	93	91
<b>Efficiency</b>	84.5	89.6	90.5	90.2	89.3	88	89.7
<b>Speed</b>	3574	3549	3522	3494	3463	3431	3476
<b>Line amperes</b>	4.06	5.28	6.94	8.75	10.7	12.9	9.91

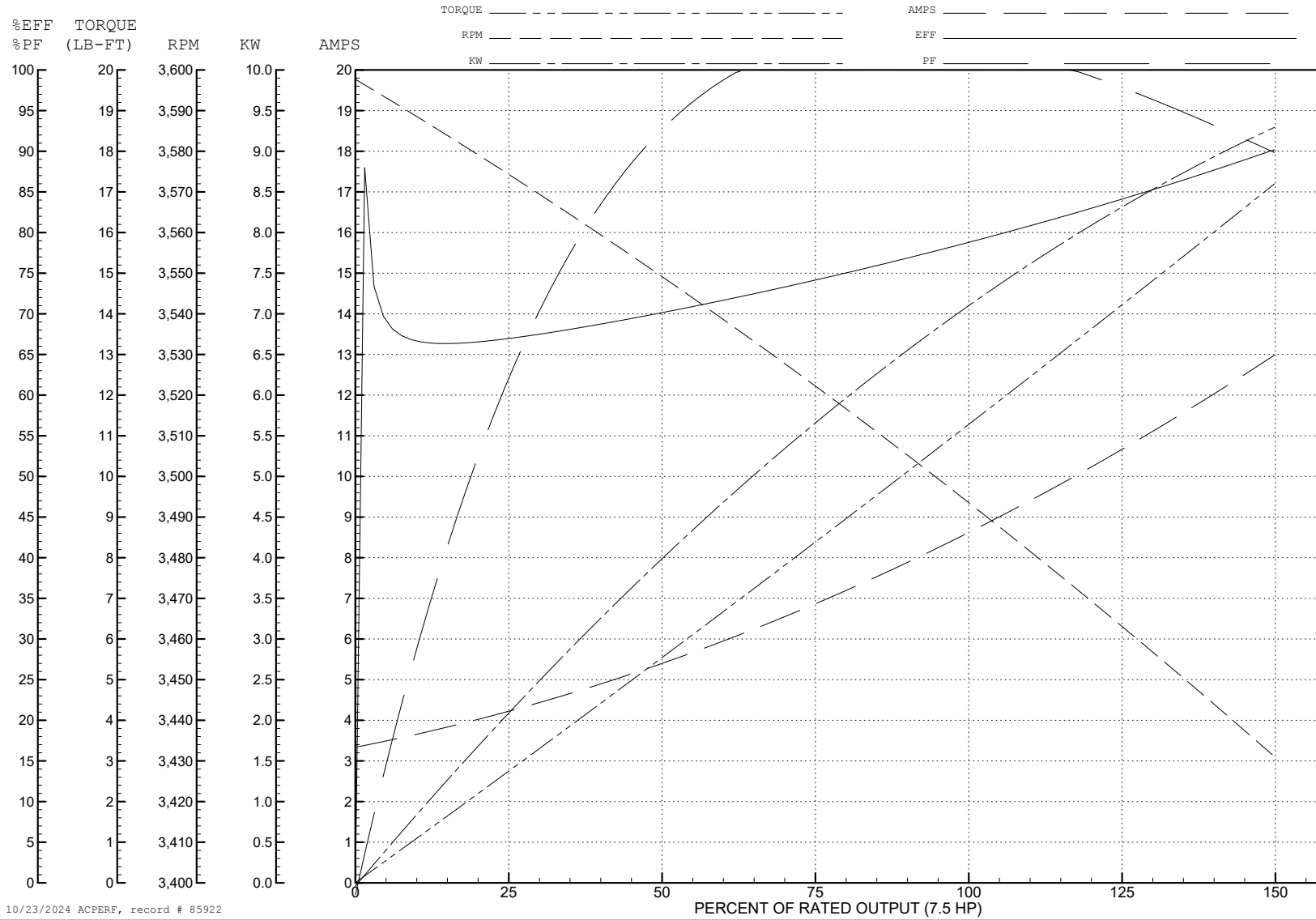
ABB Motors and Mechanical Inc.

WINDING # 36WGQ046

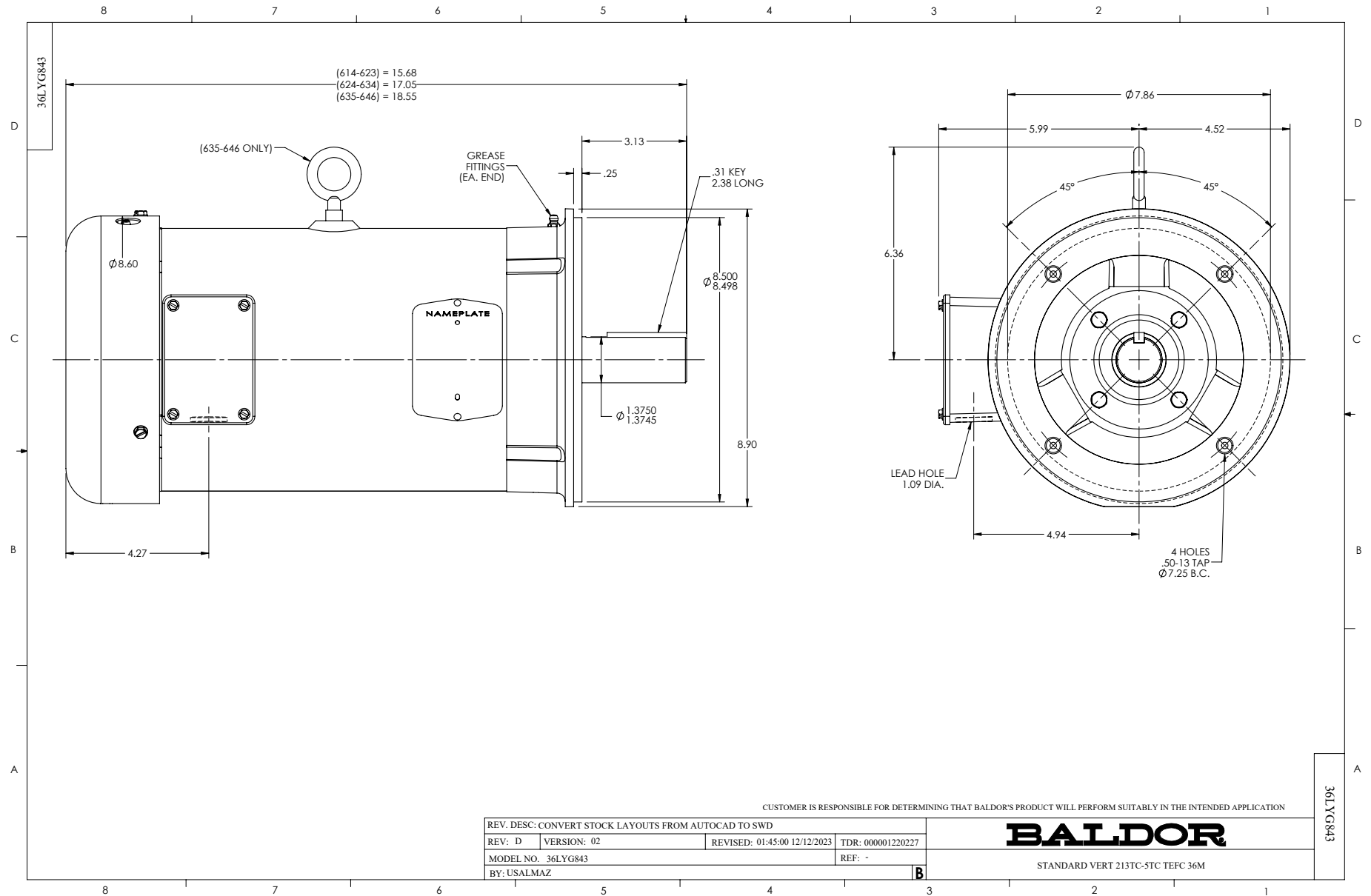
Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3495 RPM 460 V 3646M

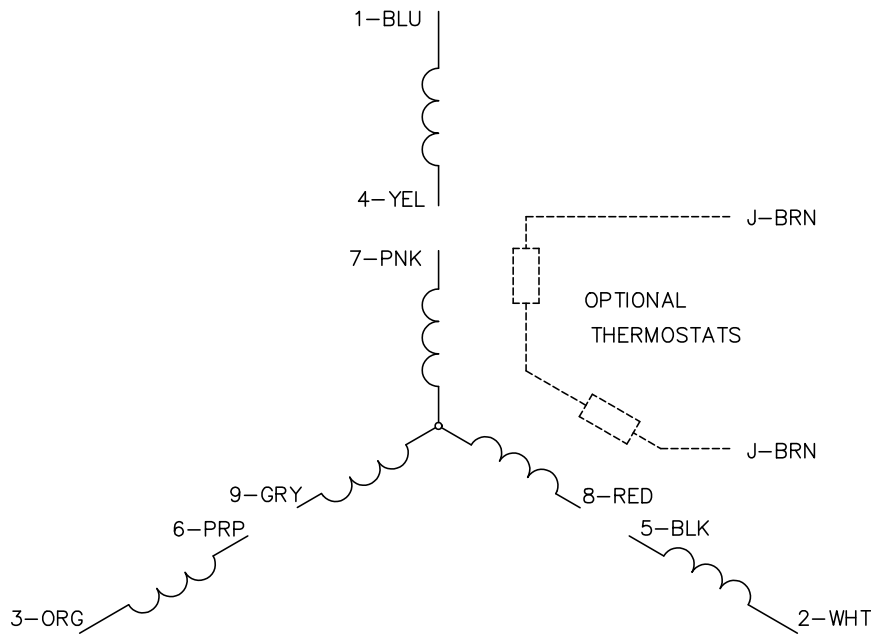
TORQUES (LB-FT): PO=73 PU=49.1 LR=62.3 LRA=112



10/23/2024 ACPERF, record # 85922



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.

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

CD0005