

ABB BALDOR RELIANCE III

Customer information packet

CEM3704T

3HP, 1160RPM, 3PH, 60HZ, 213TC, 3738M, TEFC, F1

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	3.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1200 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM NEMA PREMIUM (OLD LOGO)
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	9.200 A @ 230.0 V 9.600 A @ 208.0 V 4.600 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	89.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None

Part Detail

Revision	M
Type	AC
Mech. spec.	37G814
Base	
Status	PRD/A
Elec. spec.	37WGS519
Layout	37LYG814
Eff. date	05-02-2024
CD Diagram	CD0005
Poles	06
Leads	9#14
Proprietary	False
Created date	06-16-2010

Heater Indicator	No Heater
High Voltage Full Load Amps	4.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	L
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 14 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3738M
Mounting Arrangement	F1
Number of Poles	6
Overall Length	19.76 IN
Power Factor	68
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 Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1160 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									
CAT.NO.	CEM3704T								
SPEC	37G814S519G1								
HP	3								
VOLTS	230/460								
AMPS	9.2/4.6								
RPM	1160								
FRAME	213TC		HZ	60			PH	3	
SF	1.15		CODE	L	DES	B	CLASS	F	
NEMA NOM. EFF	89.5		PF	68					
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6307		ODE	6206					
VPWM INVERTER READY									
CT6-60H(10:1)VT3-60H(20:1									
50Hz 3HP 190/380V 10.6/5.3A									SF1.0

Parts List

Part number	Description	Quantity
SA198865	SA 37G814S519G1	1.000 ea
RA186220	RA 37G814S519G1	1.000 ea
37FN3002C01	EXFN, PLASTIC, 6.00 OD, 1.155 ID	1.000 ea
HW3200A01	3/8-16X3/4 EYEBOLT WELDED F/S	1.000 ea
37CB3006	37 CB CASTING W/1.38 LEAD HOLE @ 6:00	1.000 ea
37GS1000SP	GASKET, CONDUIT BOX STD., .06 THICK LEXI	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
37EP3101A01	FR ENDPLATE, FOR ROUTING PURPOSES	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A06	W2420-025 WVY WSHR (WB)	1.000 ea
37EP3300A01	PUEP ASSEMBLY FOR ROUTING	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
10XN2520A30	HEX HD CAP SCREW-STD THD-.25 X 20 THD PE	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
XY3118A12	5/16-18 HEX NUT DIRECTIONAL SERRATION	4.000 ea
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 ea
07FH4007SP	PRIMED	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
37CB4516	LIPPED LID FOR 37 FRAME NEC KOBX	1.000 ea
37GS1008	37 GS FOR CB LID - LEXIDE	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
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
HA3104A17	5/16-18X13.250 T-BLT/OHIO	4.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.028 ga
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
37PA1074	PALLET PACK GRP, PRINT BOX PK1026A06	1.000 ea

MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea

AC Induction Motor Performance Data

Record # 53388

Typical performance - not guaranteed values

Winding: 37WGS519-R032			Type: 3738M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		3	Full Load Torque			13.4 LB-FT
Volts		230/460	Start Configuration			direct on line
Full Load Amps		9.2/4.6	Breakdown Torque			50.4 LB-FT
R.P.M.		1160	Pull-up Torque			31.8 LB-FT
Hz	60	Phase	3	Locked-rotor Torque		33.9 LB-FT
NEMA Design Code	B	KVA Code	L	Starting Current		34 A
Service Factor (S.F.)		1.15	No-load Current			2.56 A
NEMA Nom. Eff.	89.5	Power Factor	68	Line-line Res. @ 25°C		2.67 Ω
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load			38°C
S.F. Amps			Temp. Rise @ S.F. Load			45°C
			Locked-rotor Power Factor			22.9
			Rotor inertia			0.945 LB-FT2

Load Characteristics 460 V, 60 Hz, 3 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	50	62	69	73	75	70
Efficiency	82.1	88.6	89.5	89.8	89.1	87.6	89.1
Speed	1193	1186	1178	1170	1160	1149	1166
Line amperes	2.74	3.19	3.82	4.53	5.44	6.41	5.14

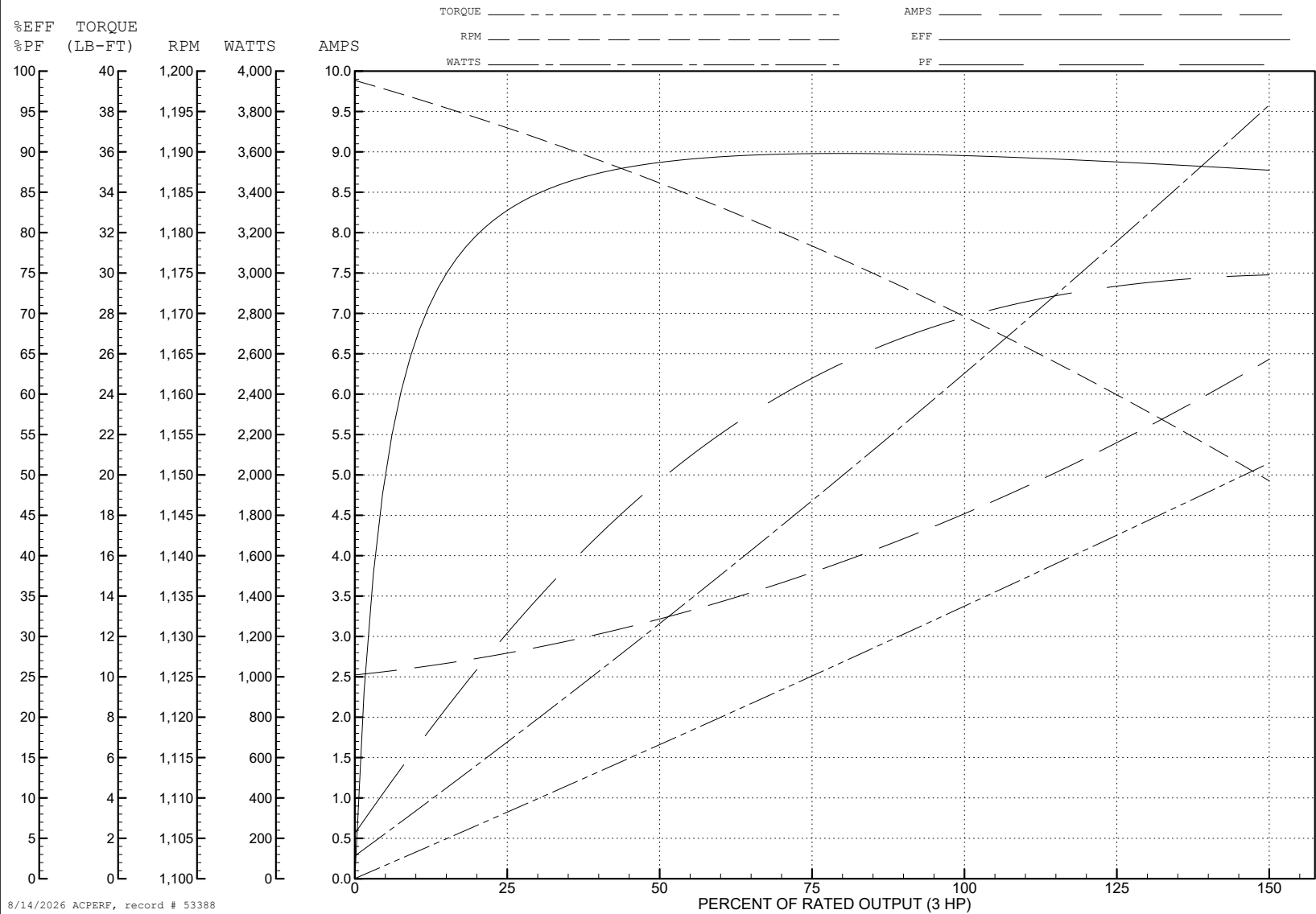
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WINDING # 37WGS519

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 1160 RPM 460 V 3738M

TORQUES (LB-FT) : PO=50.4 PU=31.8 LR=33.9 LRA=34



AC Induction Motor Performance Data

Record # 60478

Typical performance - not guaranteed values

Winding: 37WGS519-R032			Type: 3738M		Enclosure: TEFC		
Nameplate Data			208 V, 60 Hz: Low Voltage Connection				
Rated Output (HP)		3	Full Load Torque		13.5 LB-FT		
Volts		208-230/460	Start Configuration		direct on line		
Full Load Amps		9.5-9.2/4.6	Breakdown Torque		41 LB-FT		
R.P.M.		1160	Pull-up Torque		25.7 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		27.3 LB-FT	
NEMA Design Code		B	KVA Code	L	Starting Current		61 A
Service Factor (S.F.)		1.15	No-load Current		4.52 A		
NEMA Nom. Eff.		89.5	Power Factor	68	Line-line Res. @ 25°C		0.668 Ω
Rating - Duty		40C	AMB-CONT		Temp. Rise @ Rated Load		39°C
S.F. Amps					Temp. Rise @ S.F. Load		49°C
					Locked-rotor Power Factor		22.9
					Rotor inertia		0.945 LB-FT2

Load Characteristics 208 V, 60 Hz, 3 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	36	57	68	73	76	76	75
Efficiency	84.3	89.5	90.1	89.6	88	86.1	88.6
Speed	1192	1183	1173	1163	1150	1134	1155
Line amperes	4.98	6.11	7.69	9.46	11.7	14.3	10.8

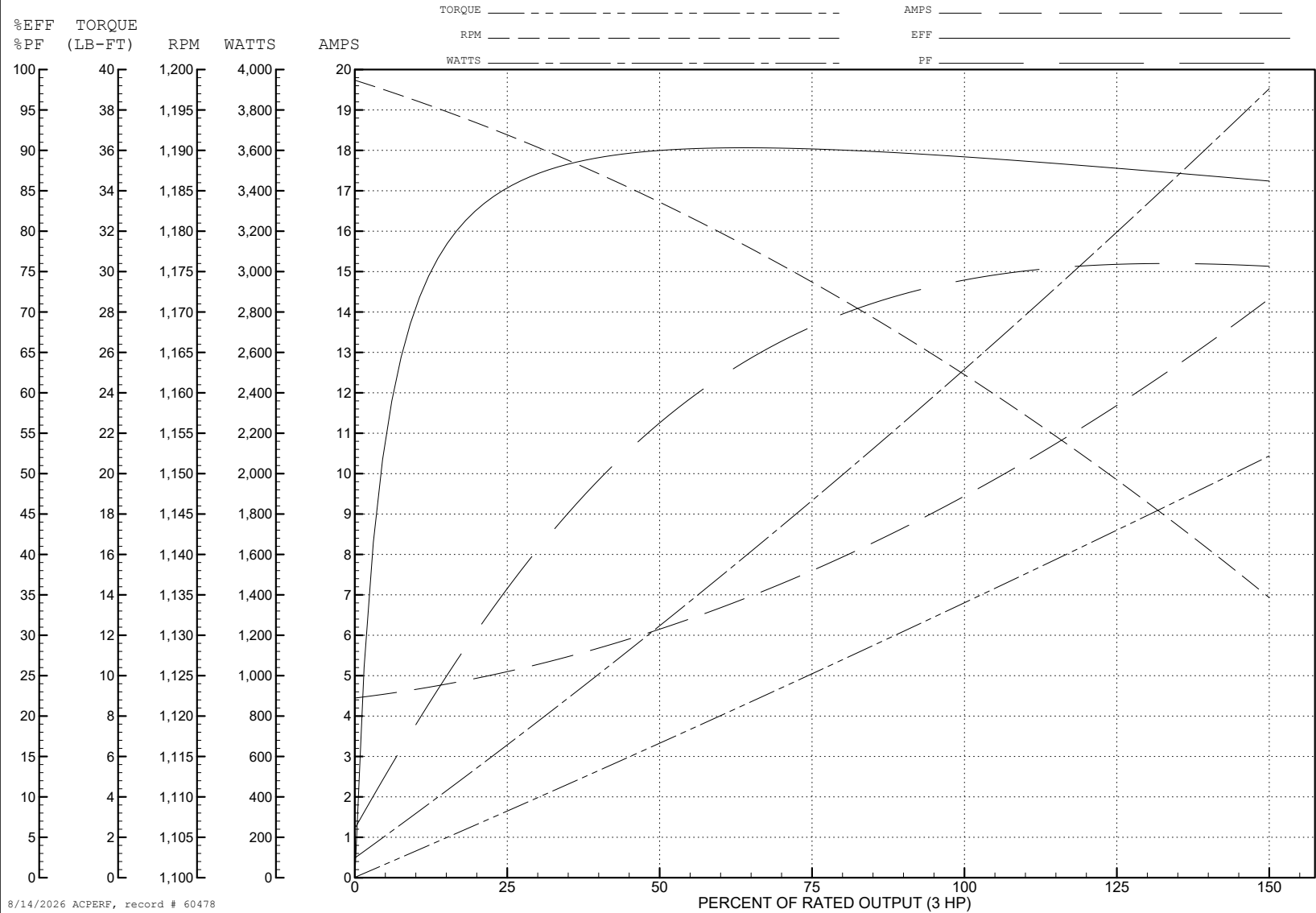
ABB Motors and Mechanical Inc.

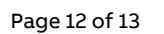
WINDING # 37WGS519

Typical performance - not guaranteed values.

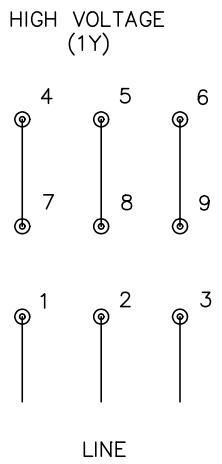
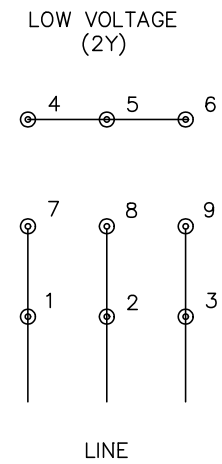
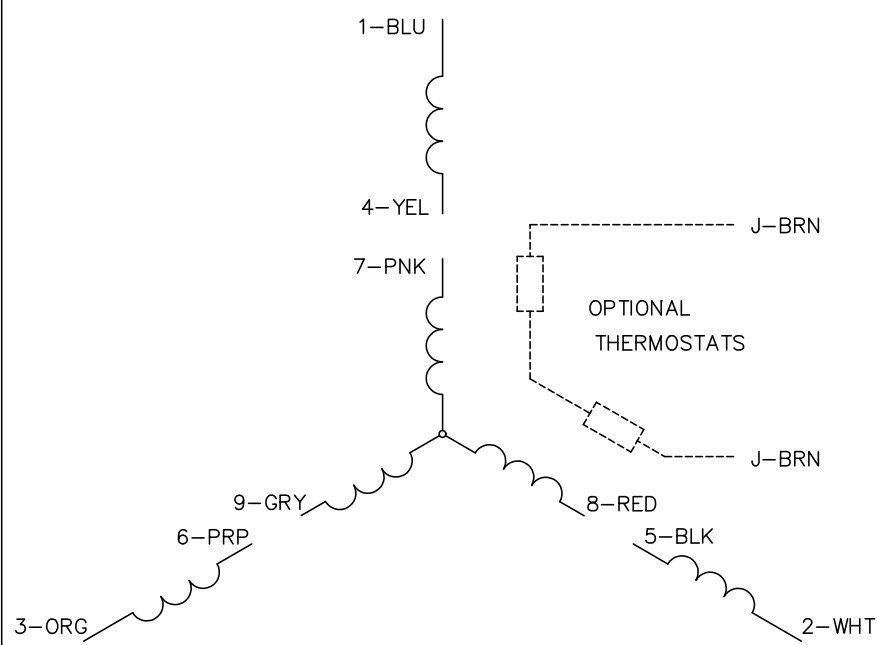
3 HP 3 PH 60 HZ 1160 RPM 208 V 3738M

TORQUES (LB-FT): PO=41 PU=25.7 LR=27.3 LRA=61





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