ABB BALDOR RELIANCE

Customer information packet

VEM3613

5HP, 3450RPM, 3PH, 60HZ, 184C, 3630M, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	184C
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	5.000 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	NEMA PREMIUM
	CURUSEEV
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	11.800 A @ 230.0 V
	5.900 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	88.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	5.9 a

Part Detail

Revision	H
Type	AC
Mech. spec.	36A013
Base	
Status	PRD/A
Elec. spec.	36WGS042
Layout	36LYA013
Eff. date	01-05-2026
CD Diagram	CD0005
Poles	02
Leads	9#16
Proprietary	False
Created date	02-27-2015

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 @ 16 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3630M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	15.67 IN
Power Factor	91
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
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	3450 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

NP1259L											
CAT.NO.	VEM3613										
SPEC.	36A013S042G1										
HP	5										
VOLTS	230/460										
AMP	11.8/5.9										
RPM	3450										
FRAME	184C	**HZ**	60				**PH**	3			
SER.F.	1.15	**CODE**	L	**DES**	A	**CL**	F				
NEMA-NOM-EFF	88.5	**PF**	91								
RATING	40C AMB-CONT										
CC	010A										
DE	6206	**ODE**	6205								
ENCL	TEFC	**SN**									

AC Induction Motor Performance Data
Record # 32158
Typical performance - not guaranteed values

Winding: 36WGS042-R002	**Type:** 3630M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			5	**Full Load Torque**	7.67 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			11.8/5.9	**Breakdown Torque**	33.7 LB-FT
R.P.M.			3450	**Pull-up Torque**	23.5 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	27.5 LB-FT
NEMA Design Code	A	**KVA Code**	L	**Starting Current**	57.2 A
Service Factor (S.F.)			1.15	**No-load Current**	1.68 A
NEMA Nom. Eff.	88.5	**Power Factor**	91	**Line-line Res. @ 25ºC**	2.3313 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	72°C
S.F. Amps				**Temp. Rise @ S.F. Load**	89°C
				Locked-rotor Power Factor	45
				Rotor inertia	0.134 LB-FT2

Load Characteristics 460 V, 60 Hz, 5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	62	81	88	91	93	93	92
Efficiency	84.1	88.9	89.4	88.7	87.3	85.8	87.9
Speed	3568.7	3537.4	3504.2	3465.8	3428.2	3385	3443
Line amperes	2.24	3.26	4.47	5.85	7.26	8.8	6.7

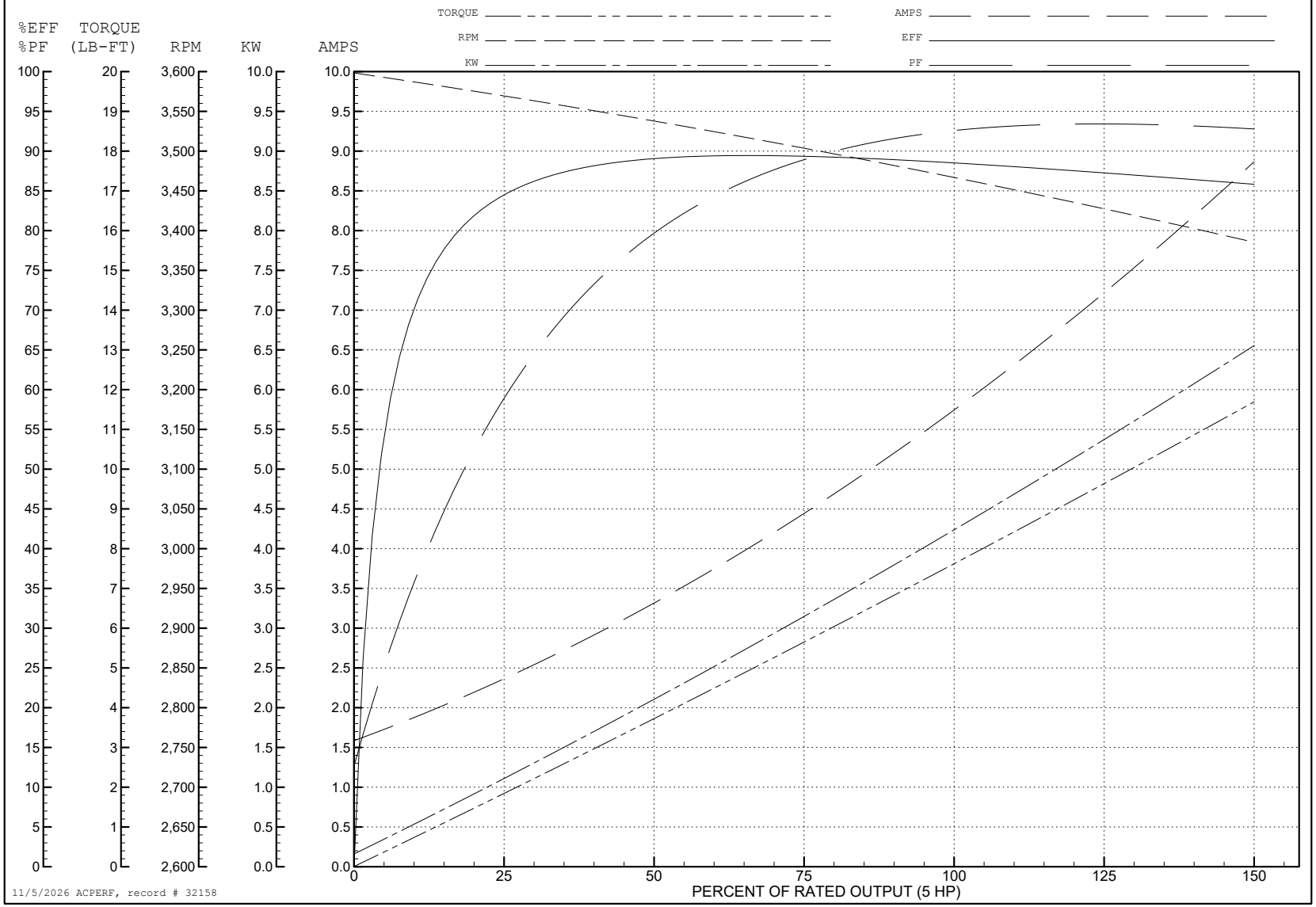
ABB Motors and Mechanical Inc.

WINDING # 36WGS042

5 HP 3 PH 60 HZ 3450 RPM 460 V 3630M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=33.7 PU=23.5 LR=27.5 LRA=57.2



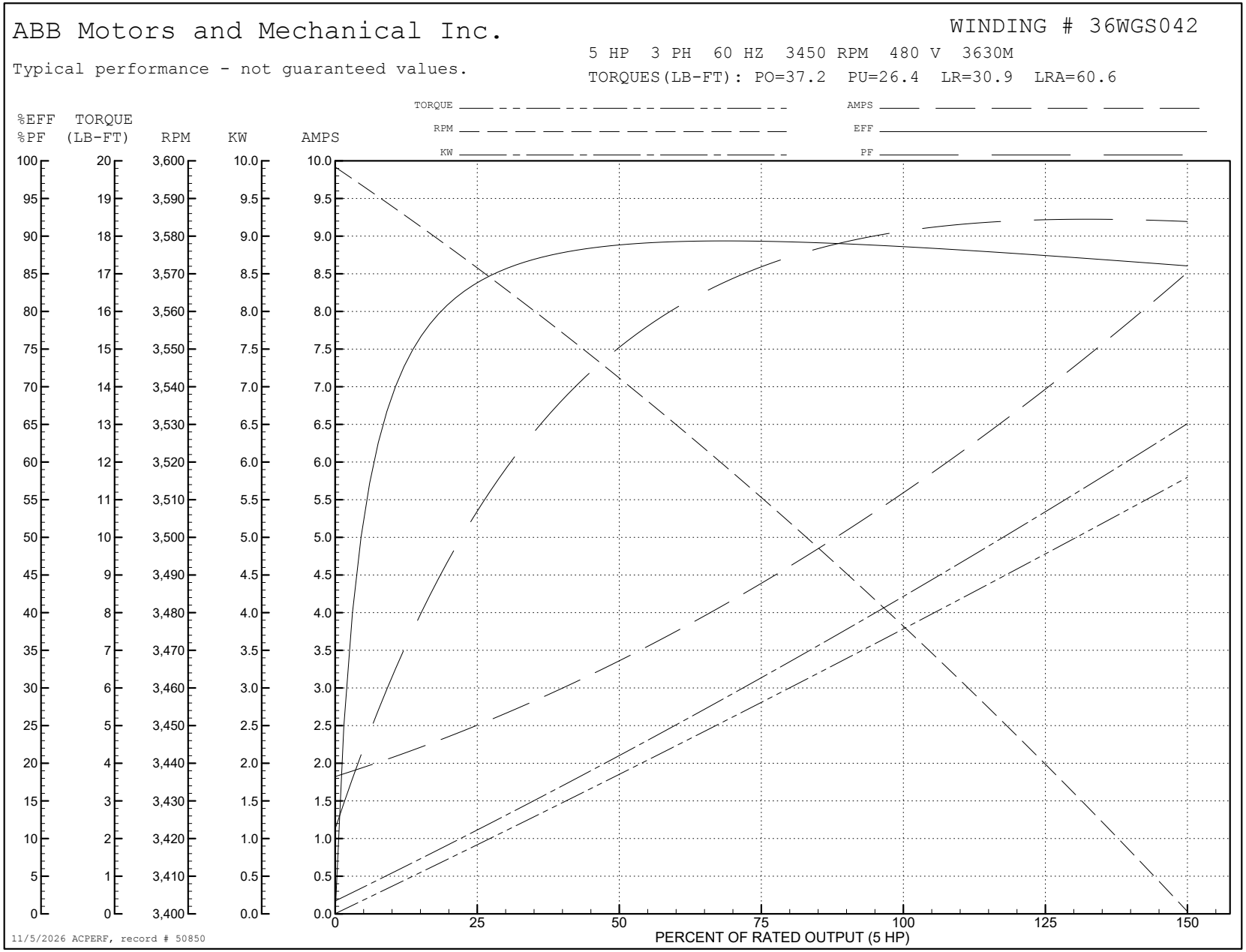
AC Induction Motor Performance Data
Record # 50850
Typical performance - not guaranteed values

Winding: 36WGS042-R002	**Type:** 3630M	**Enclosure:** TEFC

Nameplate Data				**480 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			5	**Full Load Torque**	7.64 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			11.8/5.9	**Breakdown Torque**	37.2 LB-FT
R.P.M.			3450	**Pull-up Torque**	26.4 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	30.9 LB-FT
NEMA Design Code	A	**KVA Code**	L	**Starting Current**	60.6 A
Service Factor (S.F.)			1.15	**No-load Current**	1.91 A
NEMA Nom. Eff.	88.5	**Power Factor**	91	**Line-line Res. @ 25ºC**	2.26 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	71°C
S.F. Amps				**Temp. Rise @ S.F. Load**	85°C
				Locked-rotor Power Factor	45.7
				Rotor inertia	0.134 LB-FT2

Load Characteristics 480 V, 60 Hz, 5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	56	77	86	90	92	93	91
Efficiency	83.3	88.5	89.4	88.7	87.6	86	88
Speed	3571	3541	3511	3475	3440	3400	3454
Line amperes	2.39	3.32	4.43	5.71	7.03	8.46	6.5


ABB Motors and Mechanical Inc.
WINDING # 36WGS042
Typical performance - not guaranteed values.
5 HP 3 PH 60 HZ 3450 RPM 480 V 3630M
TORQUES(LB-FT): PO=37.2 PU=26.4 LR=30.9 LRA=60.6
TORQUE
RPM
KW
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
KW
AMPS
PERCENT OF RATED OUTPUT (5 HP)
11/5/2026 ACPERF, record # 50850

AC Induction Motor Performance Data
Record # 51386
Typical performance - not guaranteed values

Winding: 36WGS042-R002	**Type:** 3630M	**Enclosure:** TEFC

Nameplate Data				**207 V, 60 Hz: Low Voltage Connection**	
Rated Output (HP)			5	**Full Load Torque**	7.73 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			11.8/5.9	**Breakdown Torque**	26.7 LB-FT
R.P.M.			3450	**Pull-up Torque**	18.2 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	21.3 LB-FT
NEMA Design Code	A	**KVA Code**	L	**Starting Current**	100 A
Service Factor (S.F.)			1.15	**No-load Current**	2.7 A
NEMA Nom. Eff.	88.5	**Power Factor**	91	**Line-line Res. @ 25ºC**	0.566 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	78°C
S.F. Amps				**Temp. Rise @ S.F. Load**	99°C
				Locked-rotor Power Factor	44
				Rotor inertia	0.134 LB-FT2

Load Characteristics 207 V, 60 Hz, 5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	73	87	92	94	94	94	94
Efficiency	85.8	89.5	89.3	88	86.1	84.3	86.9
Speed	3563	3525	3485	3439	3392	3338	3411
Line amperes	4.17	6.68	9.54	12.8	16.1	19.9	14.8

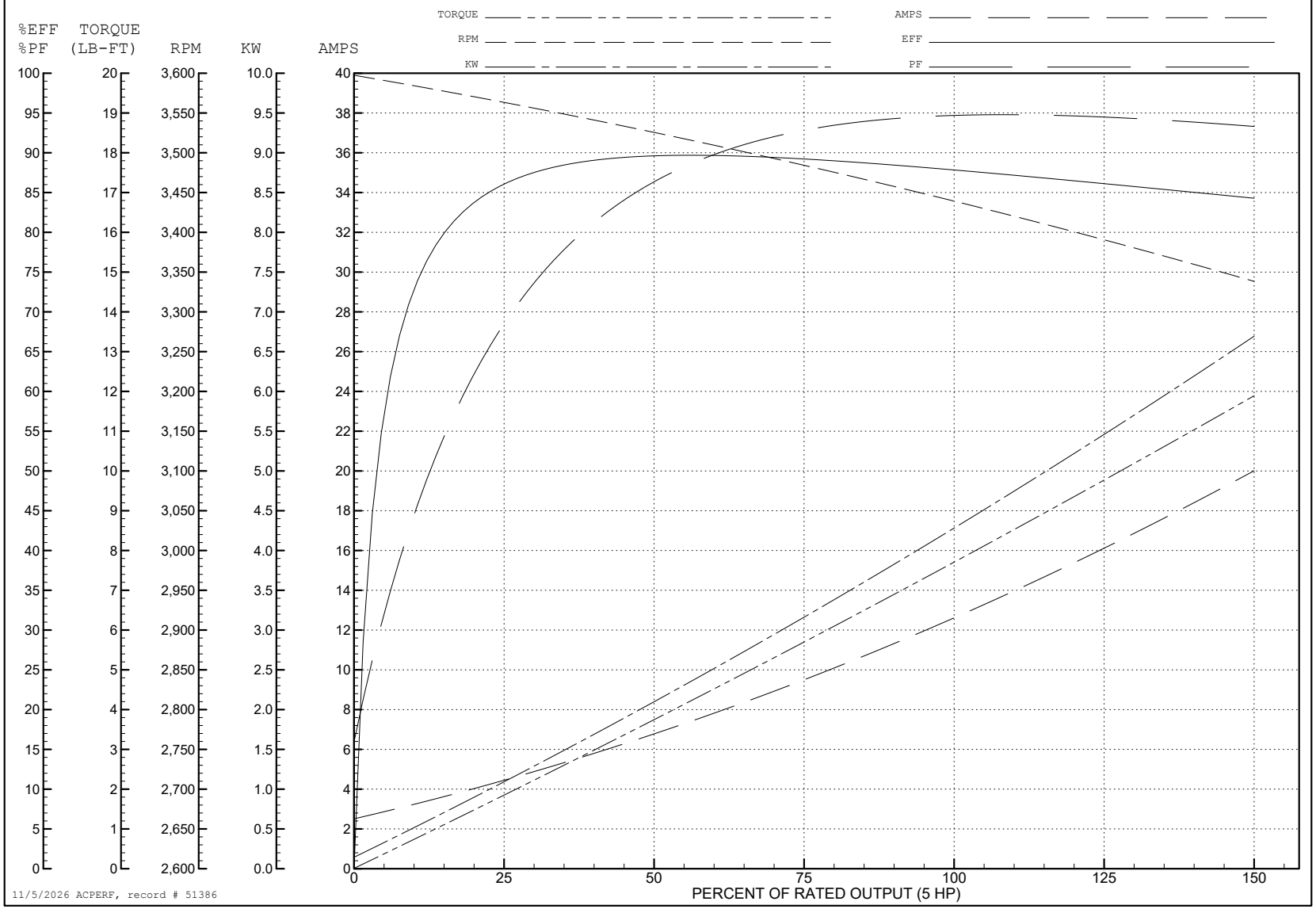
ABB Motors and Mechanical Inc.

WINDING # 36WGS042

5 HP 3 PH 60 HZ 3450 RPM 207 V 3630M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=26.7 PU=18.2 LR=21.3 LRA=100



AC Induction Motor Performance Data
Record # 59341
Typical performance - not guaranteed values

Winding: 36WGS042-R002	**Type:** 3630M	**Enclosure:** TEFC

Nameplate Data				**230 V, 60 Hz: Low Voltage Connection**	
Rated Output (HP)			5	**Full Load Torque**	7.67 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			11.8/5.9	**Breakdown Torque**	33.7 LB-FT
R.P.M.			3450	**Pull-up Torque**	23.5 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	27.5 LB-FT
NEMA Design Code	A	**KVA Code**	L	**Starting Current**	114 A
Service Factor (S.F.)			1.15	**No-load Current**	3.36 A
NEMA Nom. Eff.	88.5	**Power Factor**	91	**Line-line Res. @ 25ºC**	0.576 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	72°C
S.F. Amps				**Temp. Rise @ S.F. Load**	88°C
				Locked-rotor Power Factor	45.4
				Rotor inertia	0.134 LB-FT2

Load Characteristics 230 V, 60 Hz, 5 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	62	81	88	91	93	94	92
Efficiency	84.1	88.9	89.4	88.7	87.3	85.8	87.9
Speed	3569	3537	3504	3466	3428	3385	3443
Line amperes	4.48	6.52	8.94	11.7	14.5	17.6	13.4

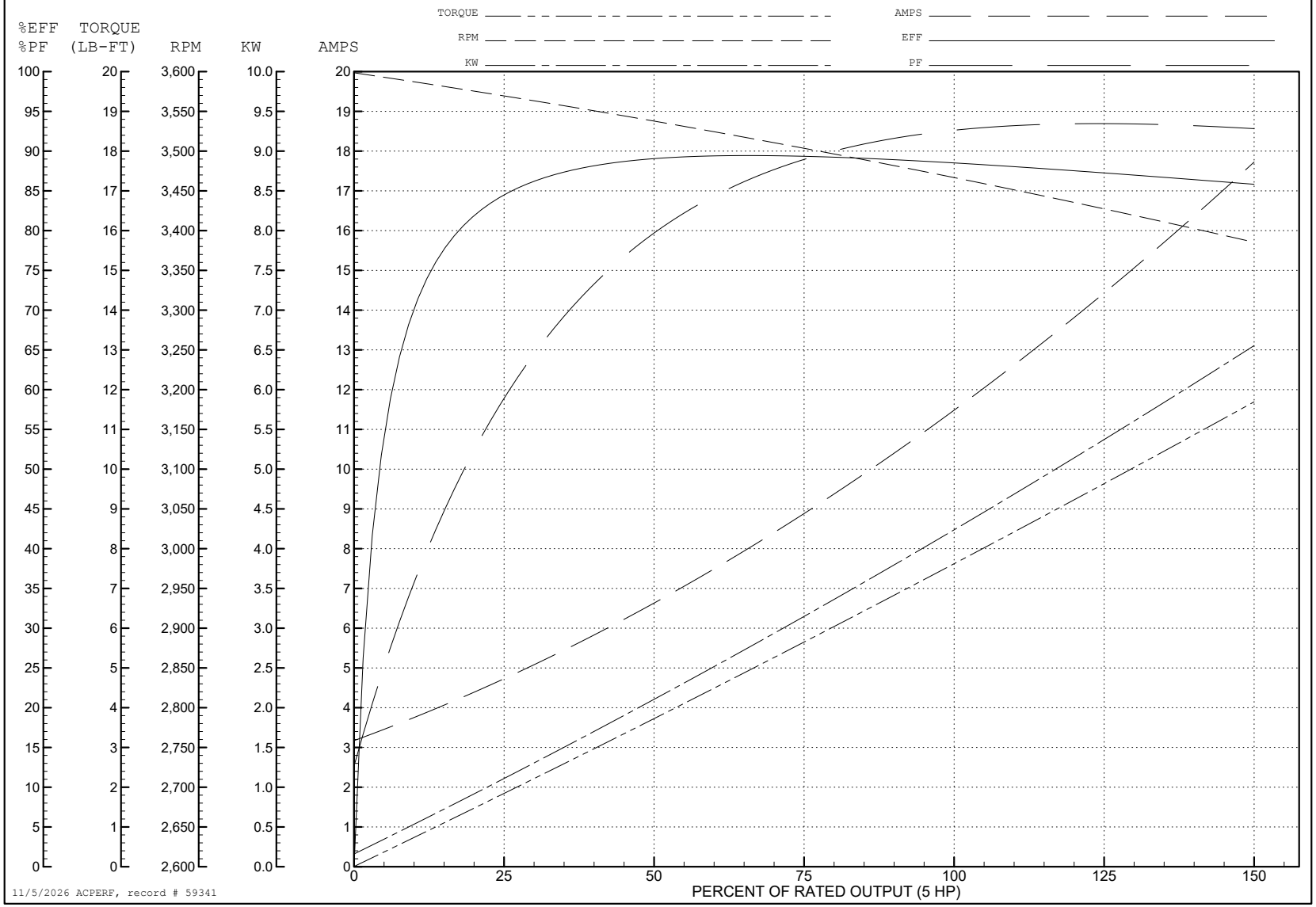
ABB Motors and Mechanical Inc.

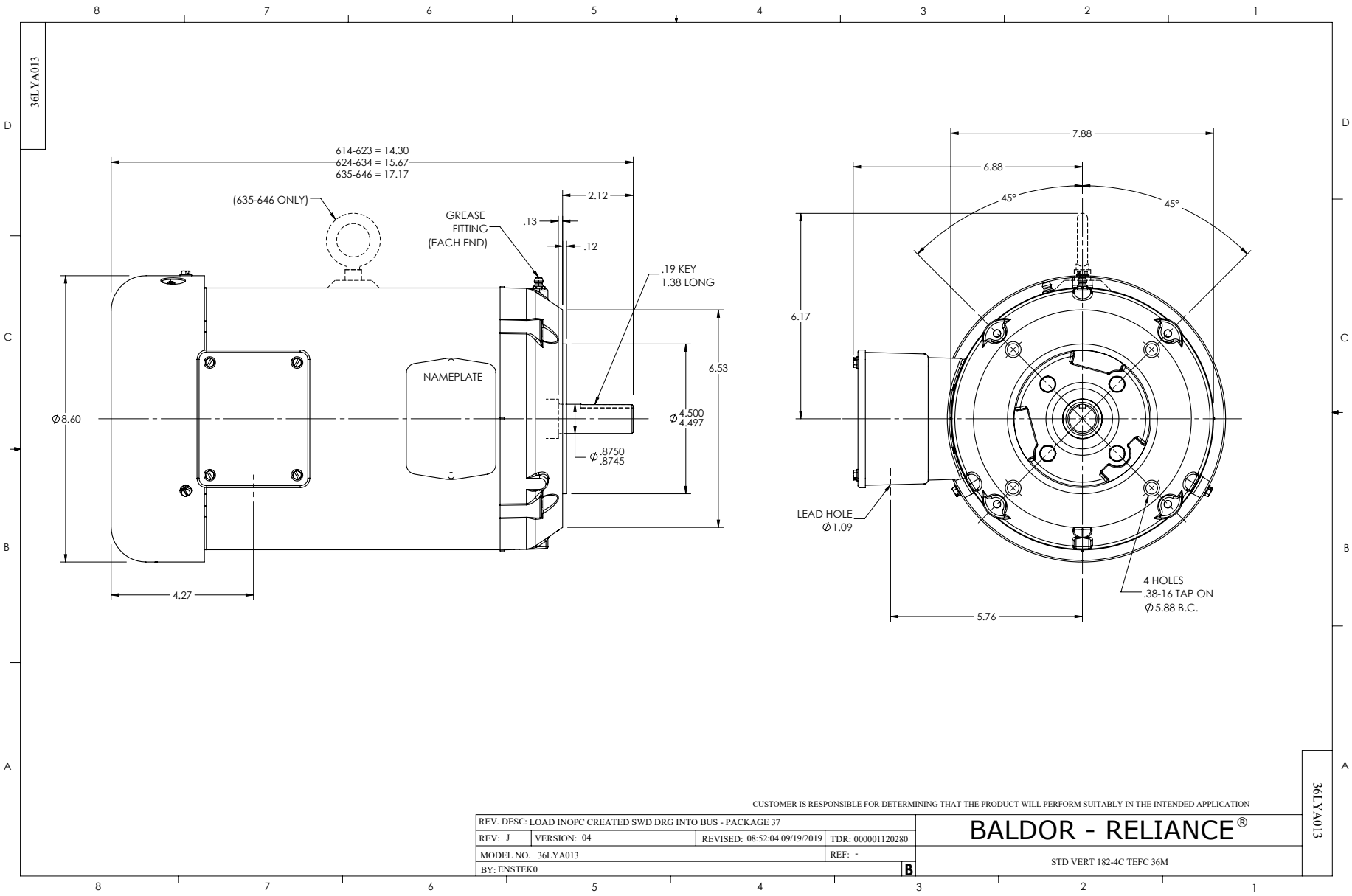
WINDING # 36WGS042

5 HP 3 PH 60 HZ 3450 RPM 230 V 3630M

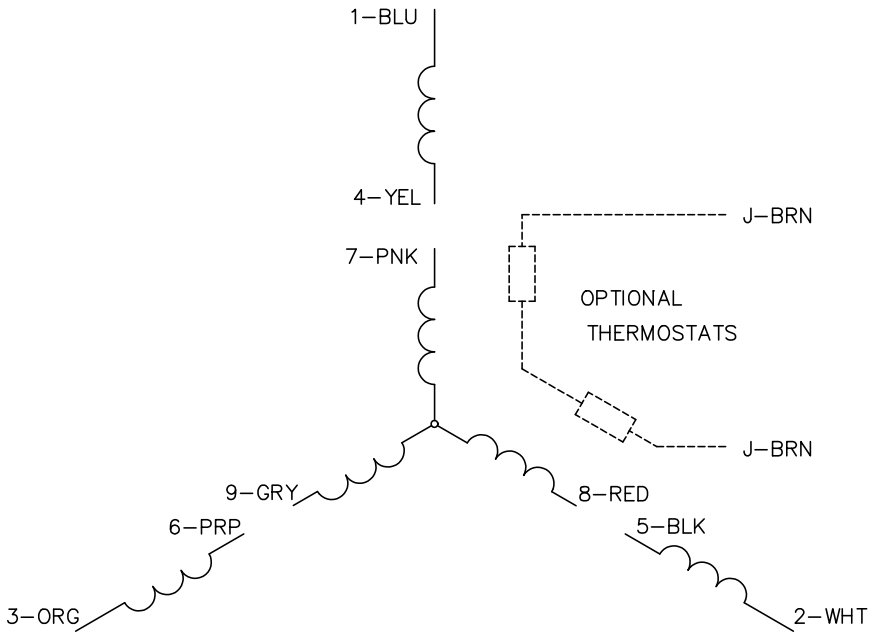
Typical performance - not guaranteed values.

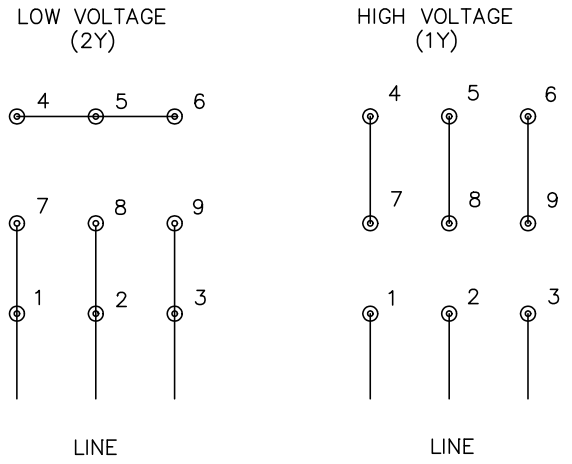
TORQUES(LB-FT): PO=33.7 PU=23.5 LR=27.5 LRA=114




36LYA013
614-623 = 14.30
624-634 = 15.67
635-646 = 17.17
(635-646 ONLY)
GREASE FITTING (EACH END)
2.12
.13
.12
.19 KEY
1.38 LONG
NAMEPLATE
6.53
Ø8.60
Ø4.500
4.497
Ø.8750
.8745
4.27
7.88
6.88
45°
45°
6.17
LEAD HOLE
Ø1.09
4 HOLES
.38-16 TAP ON
Ø5.88 B.C.
5.76
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD INOPC CREATED SWD DRG INTO BUS - PACKAGE 37
REV: J
VERSION: 04
REVISED: 08:52:04 09/19/2019
TDR: 000001120280
MODEL NO. 36LYA013
REF: -
BY: ENSTEK0
B
BALDOR - RELIANCE®
STD VERT 182-4C TEFC 36M
36LYA013

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.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS