

ABB BALDOR RELIANCE III

Customer information packet

EM3706

5HP, 3450RPM, 3PH, 60HZ, 213, 3630M, TEFC, F1, N

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	213
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	Rigid
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	E
Type	AC
Mech. spec.	36G890
Base	
Status	PRD/A
Elec. spec.	36WGS042
Layout	36LYG890
Eff. date	05-01-2024
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	No 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	18.17 IN
Power Factor	91
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.125 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.	EM3706								
SPEC.	36G890S042G1								
HP	5								
VOLTS	230/460								
AMP	11.8/5.9								
RPM	3450								
FRAME	213		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							

Parts List

Part number	Description	Quantity
SA294544	SA 36G890S042G1	1.000 ea
RA280623	RA 36G890S042G1	1.000 ea
34FN3002B02	EXTERNAL FAN, PLASTIC, .905/.907 HUB W/	1.000 ea
HW3200A01	3/8-16X3/4 EYEBOLT WELDED F/S	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 W/GRSR, RAISED FH PADS	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HW5100A05	WVY WSHR F/205 & 304 BRGS	1.000 ea
36EP3100A01SP	PUEP ASSEMBLY FOR ROUTING PURPOSES	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HA3101A28	THRUBOLT 1/4-20 X 12.500 OHIO ROD	4.000 ea
XY2520A12	1/4-20 HEX NUT, DIRECTIONAL SERRATIONS	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
HW2501E16	KEY, 1/4 SQ X 1.750	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
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.022 ga
LC0005	CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING	1.000 ea
NP1259L	ALUM SUPER-E UL CC NEMA PREMIUM A60	1.000 ea
36PA1001	PKG GRP, PRINT PK1017A07	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

FE-0000001

ZRTG FE ASSEMBLY

1.000 ea

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	
Service Factor (S.F.)		1.15	Starting Current		57.2 A	
NEMA Nom. Eff.		88.5	Power Factor		91	
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

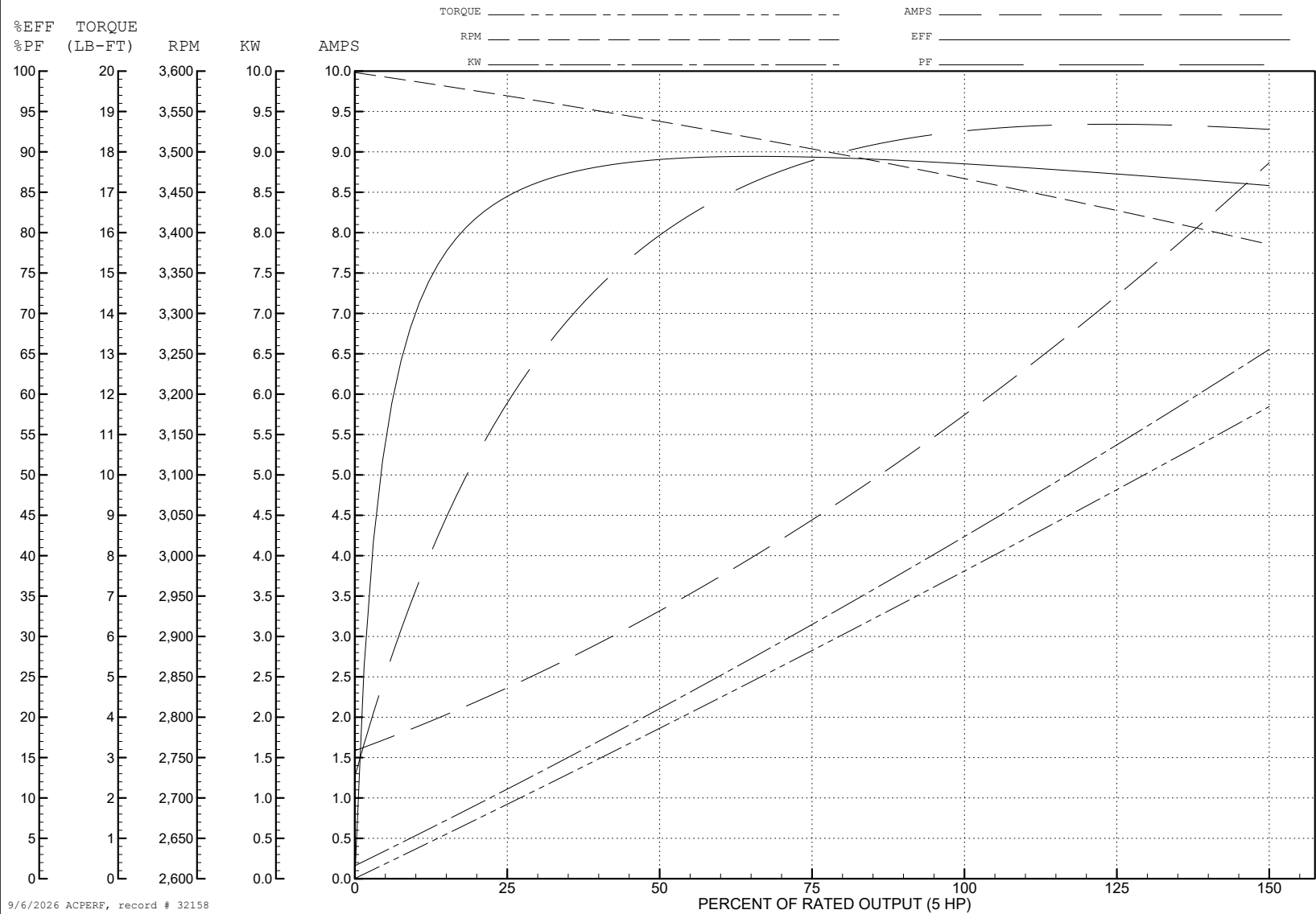
ABB Motors and Mechanical Inc.

WINDING # 36WGS042

Typical performance - not guaranteed values.

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

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	
Service Factor (S.F.)		1.15	Starting Current		60.6 A	
NEMA Nom. Eff.		88.5	Power Factor		91	
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

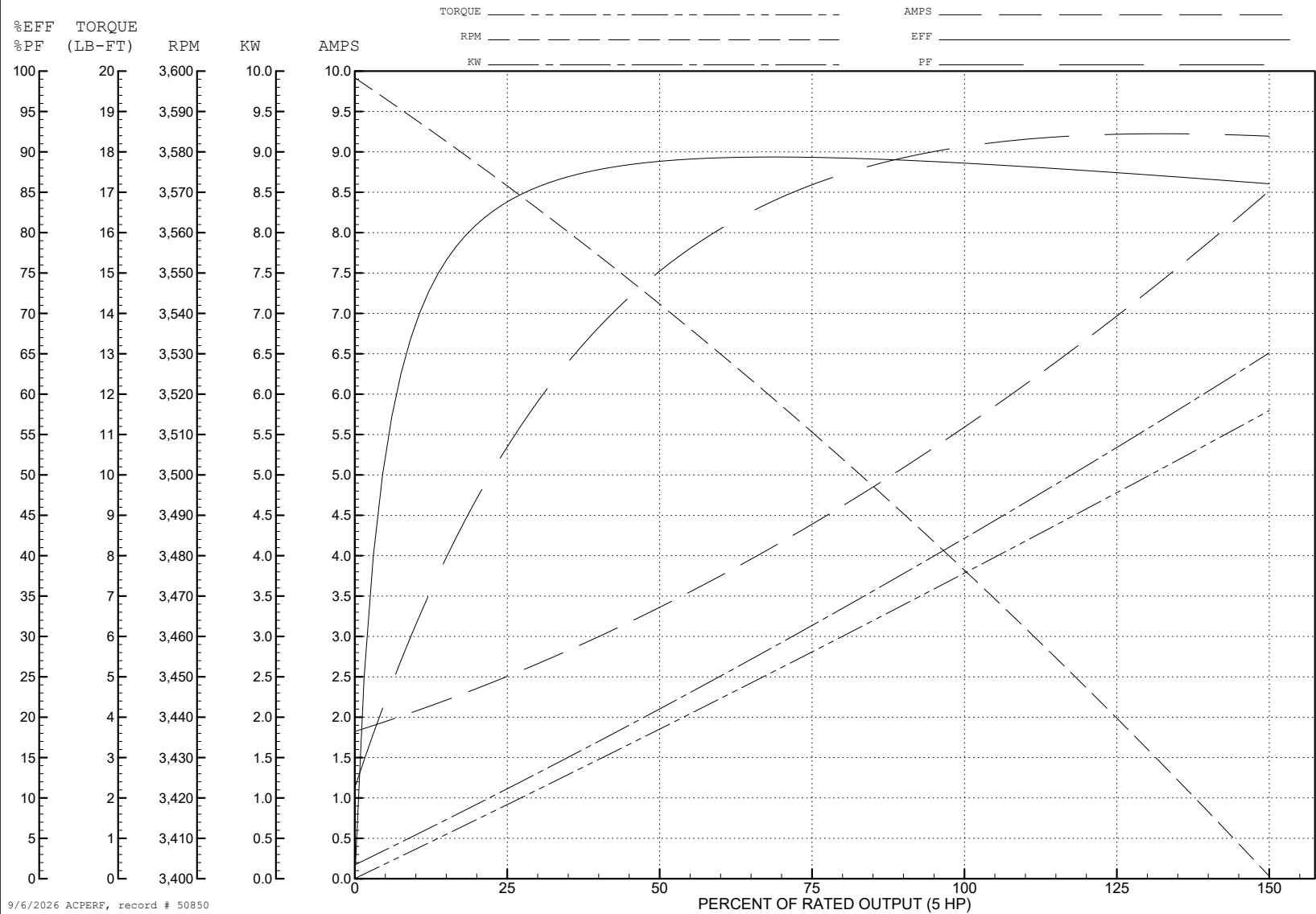
ABB Motors and Mechanical Inc.

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



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. @ 25°C		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

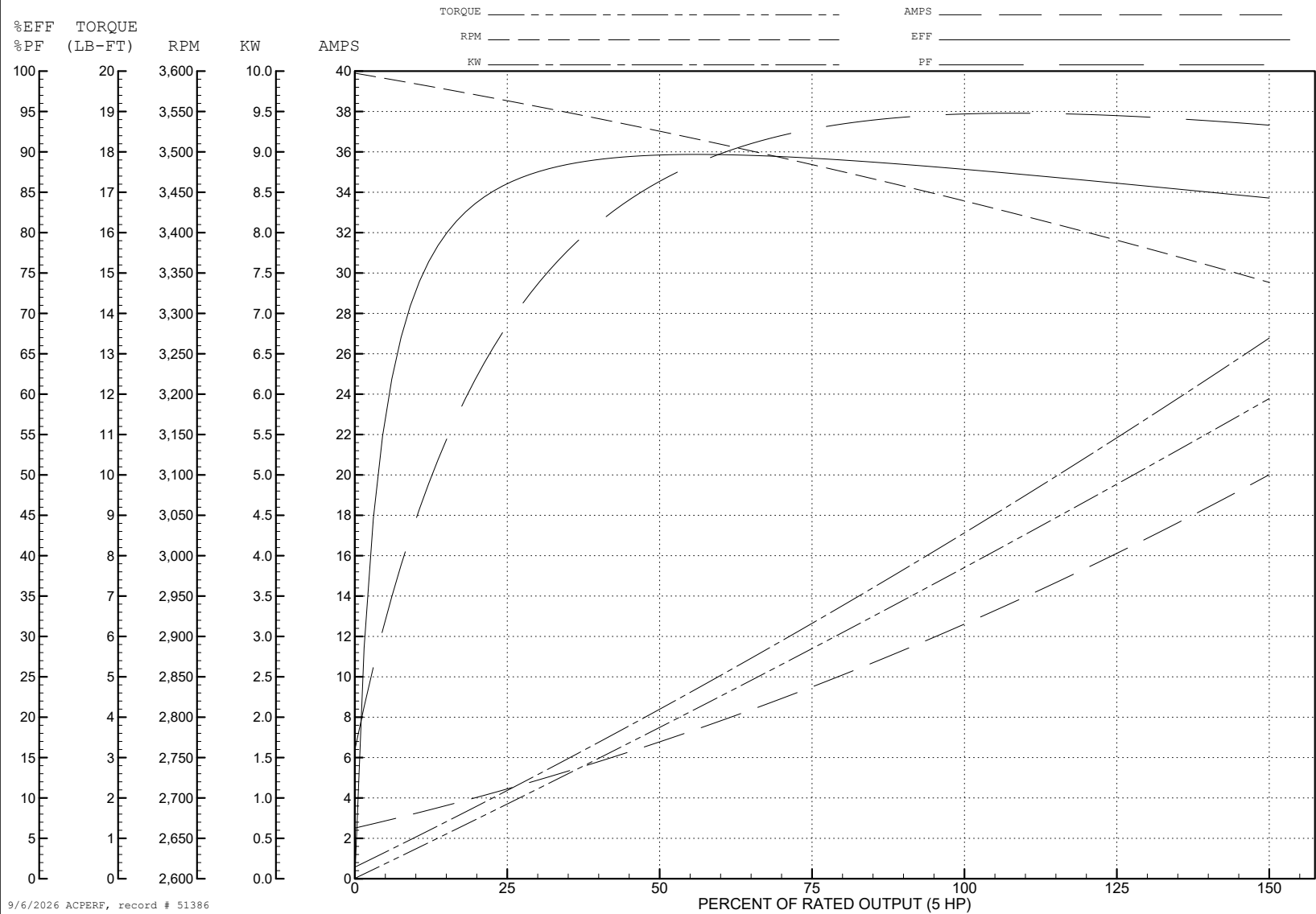
ABB Motors and Mechanical Inc.

WINDING # 36WGS042

Typical performance - not guaranteed values.

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

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. @ 25°C	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

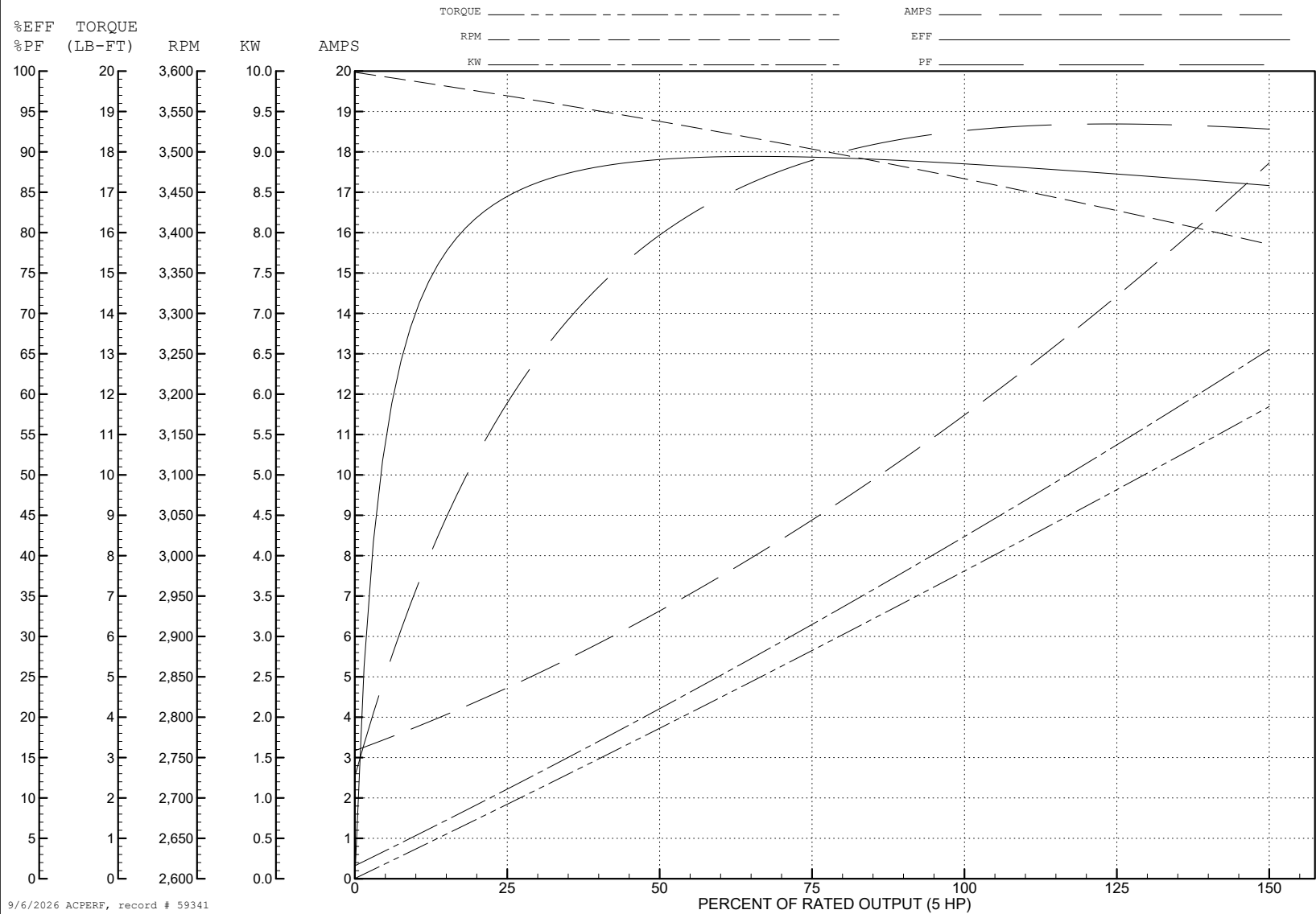
ABB Motors and Mechanical Inc.

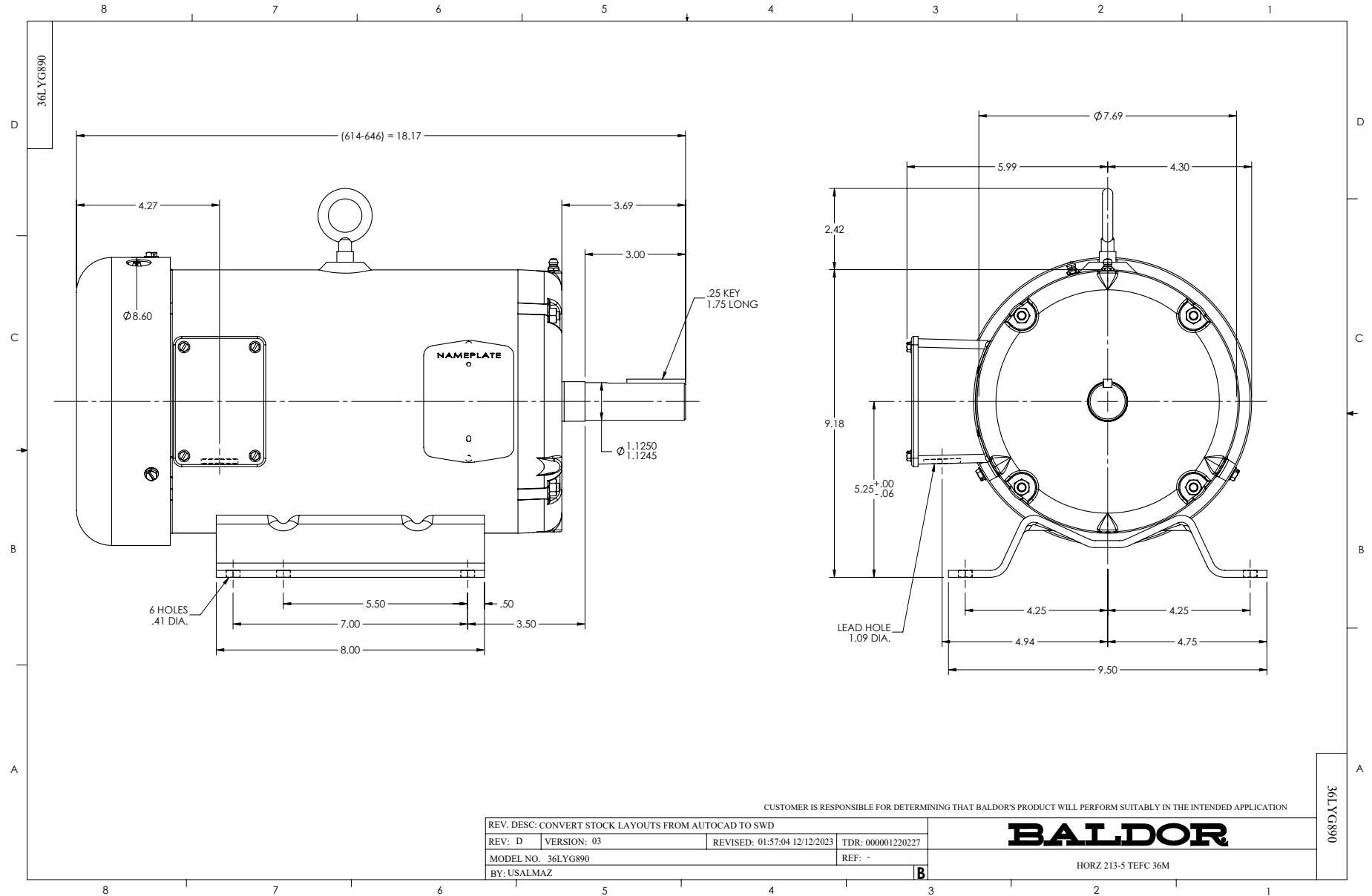
WINDING # 36WGS042

Typical performance - not guaranteed values.

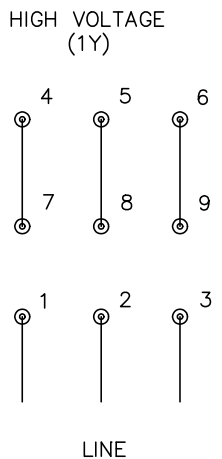
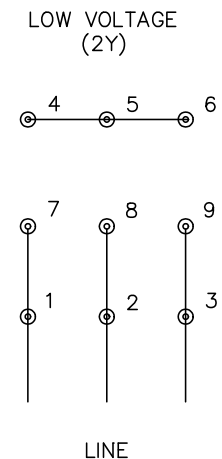
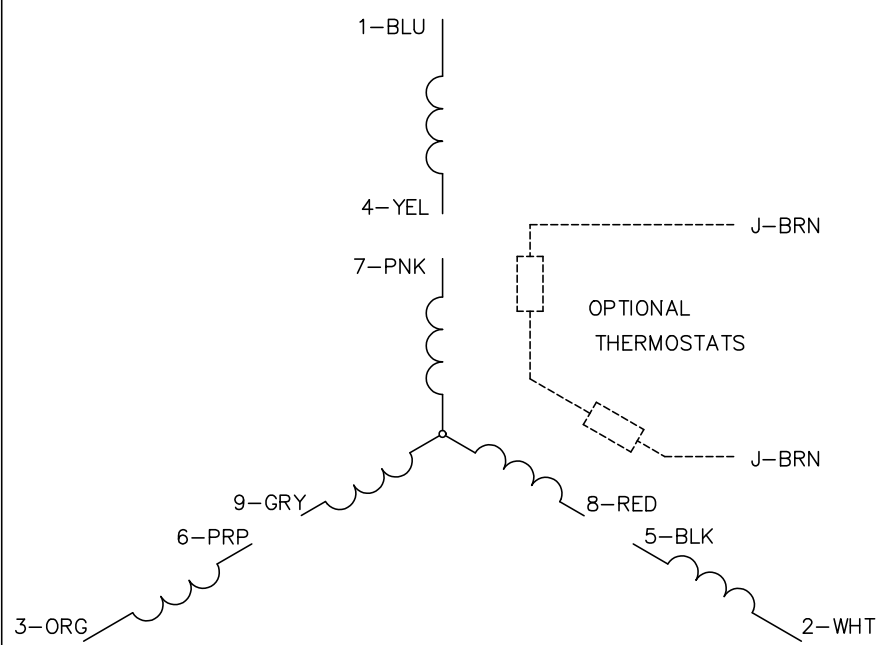
5 HP 3 PH 60 HZ 3450 RPM 230 V 3630M

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





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
900000		FILE: AAA00005140	MDL: -
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BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS

CD0005