

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									

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

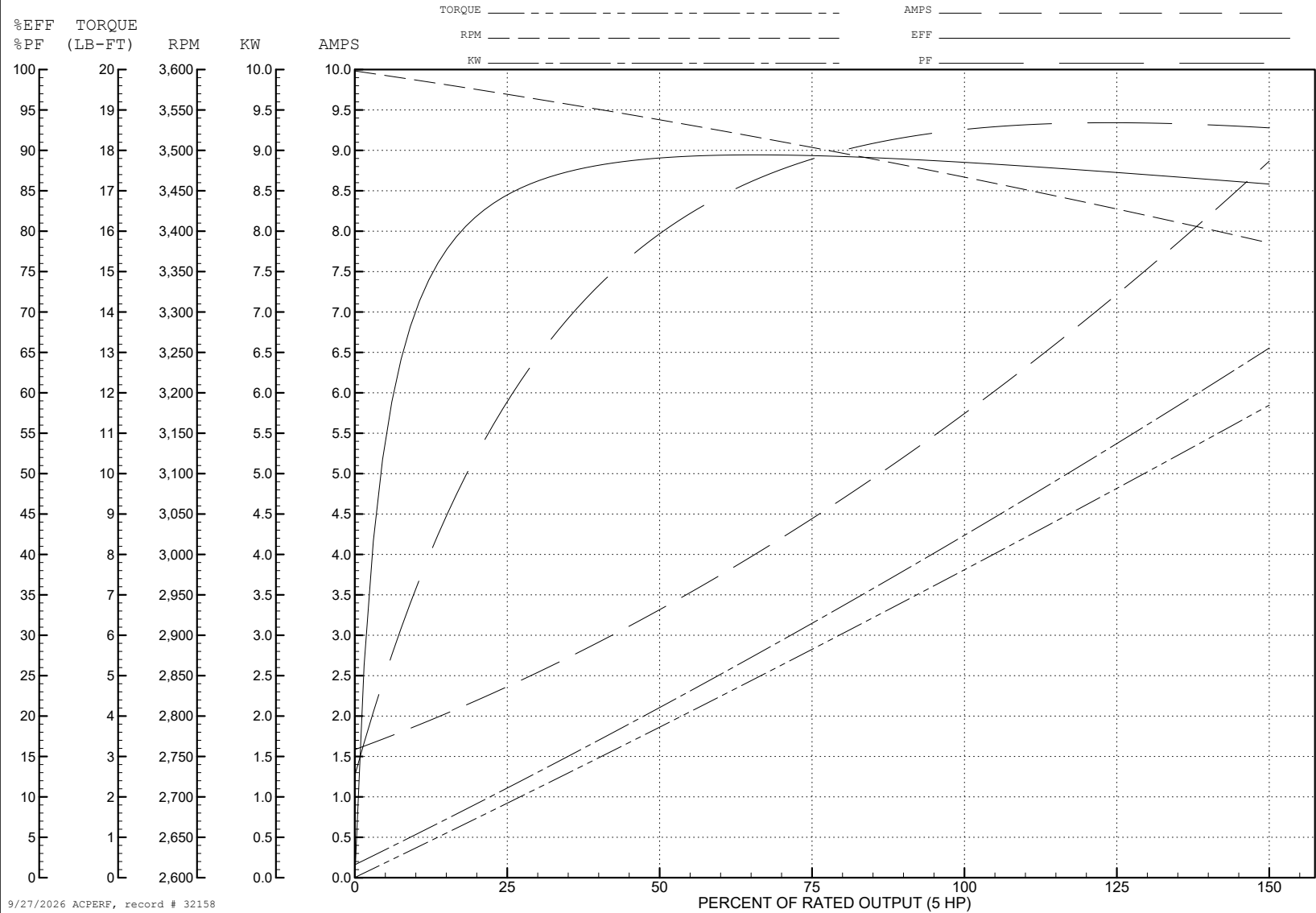
ABB Motors and Mechanical Inc.

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	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. @ 25°C		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

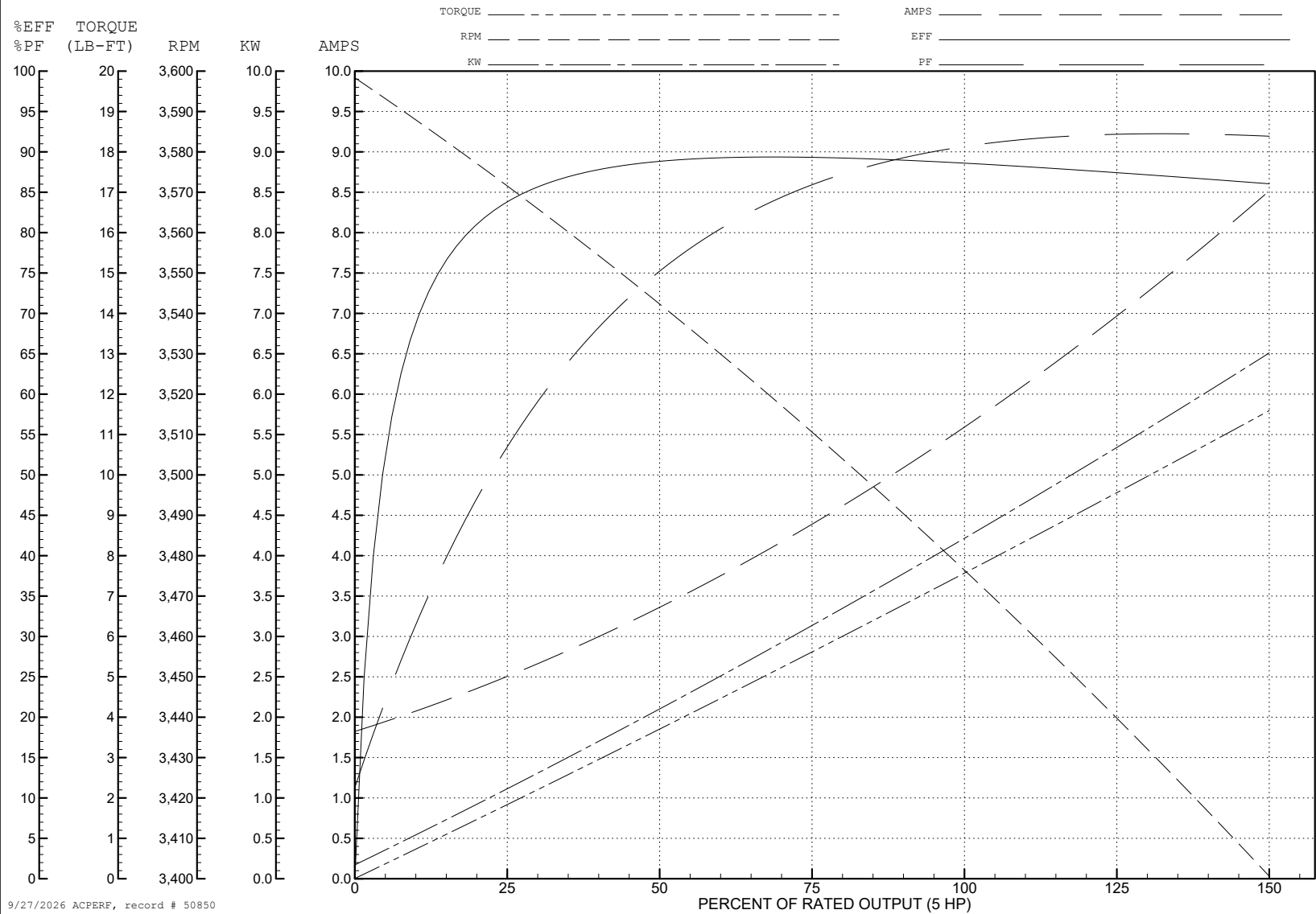
ABB Motors and Mechanical Inc.

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



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

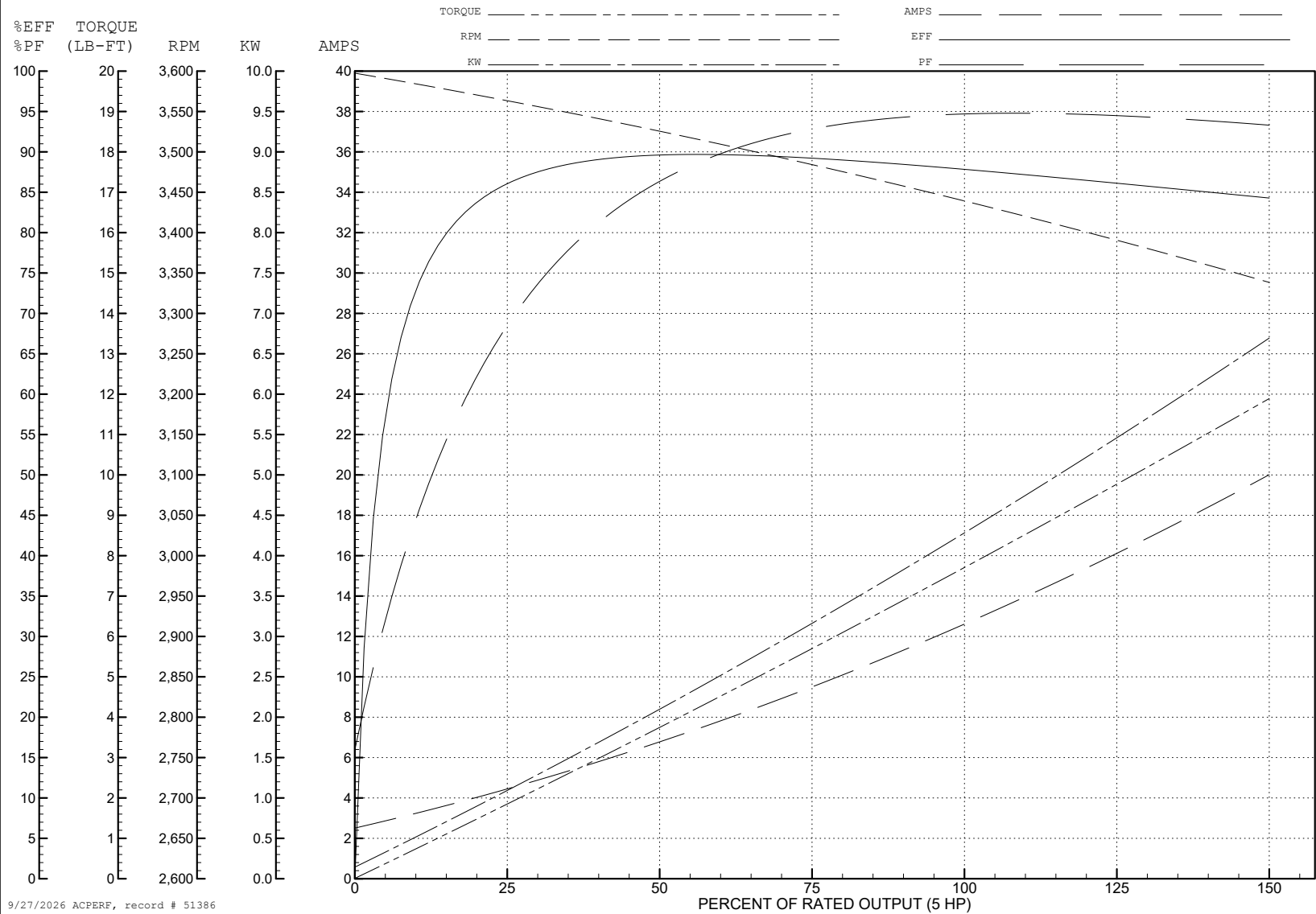
ABB Motors and Mechanical Inc.

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

