

ABB BALDOR RELIANCE III

Customer information packet

EM3545

1HP, 3450RPM, 3PH, 60HZ, 56, 3516M, TEFC, F1, N

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	56
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	1.000 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	1.400 A @ 460.0 V 2.800 A @ 230.0 V 3.000 A @ 208.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	77.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	U
Type	AC
Mech. spec.	35T696
Base	
Status	PRD/A
Elec. spec.	35WGY474
Layout	35LYT696
Eff. date	01-05-2026
CD Diagram	CD0005
Poles	02
Leads	9#18
Proprietary	False
Created date	05-05-2010

High Voltage Full Load Amps	1.4 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	K
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3516M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	12.23 IN
Power Factor	87
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.25
Shaft Diameter	0.625 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

NP3441LUA									
CAT.NO.	EM3545								
SPEC	35T696Y474G1								
HP	1								
VOLTS	230/460								
AMPS	2.8/1.4								
RPM	3450								
FRAME	56		HZ	60		PH	3		
SF	1.25	CODE	K	DES	B	CLASS	F		
NEMA NOM. EFF	77	PF	87						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6205		ODE	6203					
VPWM INVERTER READY	SFA 3.4/1.7								
CT6-60H(10:1)VT3-60H(20:1									
	50Hz 1HP 190/380V 3.4/1.7A								

Parts List

Part number	Description	Quantity
SA194380	SA 35T696Y474G1	1.000 ea
RA181970	RA 35T696Y474G1	1.000 ea
34FN3002A01SP	EXTERNAL FAN, PLASTIC, .637/.639 HUB W/	1.000 ea
NS2512A01	INSULATOR, CONDUIT BOX X	1.000 ea
35CB3007	35 CB CASTING W/.88 DIA. LEAD HOLE	1.000 ea
36GS1000SP	GASKET-CONDUIT BOX, .06 THICK #SV-330 LE	1.000 ea
51XB1016A07	10-16 X 7/16 HWSSLD SERTYB	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
35EP3122K00	MASTER ODE,203 BRG,.683SH,#26 DRN,FH MTG	1.000 ea
HW5100A03	WAVY WASHER (W1543-017)	1.000 ea
35EP3123A00	MASTER DE,205 BRG,.998SH,#26 DRN	1.000 ea
XY1032A02	10-32 HEX NUT DIRECTIONAL SERRATION	4.000 ea
51XB1214A16	12-14X1.00 HWSSLD SERTYB	1.000 ea
35FH4005A32	IEC FH NO GRSR W/3 HOLES - PRIMED	1.000 ea
51XW1032A06	10-32 X .38, TAPTITE II, HEX WSHR SLTD S	3.000 ea
35CB4521GX	CONDUIT BOX LID KIT **ORDER INDIV PARTS	1.000 ea
51XW0832A07	8-32 X .44, TAPTITE II, HEX WSHR SLTD SE	4.000 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A04	KEY RETAINER 0.625 DIA SHAFTS	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*	0.017 ga
HA3100A15	THRUBOLT 10-32 X 8.375	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 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
35PA1066	PKG GRP, PRINT PK1008A07	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
FE-0000001	ZRTG FE ASSEMBLY	1.000 ea
PE-0000001	ZRTG PE ASSEMBLY	1.000 ea

Accessories

Part number	Description	Multiplier
35-8762	C FACE KIT	A8
35EP1604A01SP	D-FLANGE KIT	

AC Induction Motor Performance Data

Record # 56197

Typical performance - not guaranteed values

Winding: 35WGY474-R008			Type: 3516M		Enclosure: TEFC			
Nameplate Data			460 V, 60 Hz: High Voltage Connection					
Rated Output (HP)		1	Full Load Torque		1.47 LB-FT			
Volts		230/460	Start Configuration		direct on line			
Full Load Amps		2.8/1.4	Breakdown Torque		5.6 LB-FT			
R.P.M.		3450	Pull-up Torque		2.56 LB-FT			
Hz		60	Phase		3	Locked-rotor Torque	4.62 LB-FT	
NEMA Design Code		B	KVA Code		K	Starting Current		10.5 A
Service Factor (S.F.)		1.25	No-load Current		0.585 A			
NEMA Nom. Eff.		77	Power Factor		87	Line-line Res. @ 25°C		19.5 Ω
Rating - Duty		40C	AMB-CONT		Temp. Rise @ Rated Load		41°C	
S.F. Amps		3.4/1.7	Temp. Rise @ S.F. Load		52°C			
			Locked-rotor Power Factor		64.1			
			Rotor inertia		0.0443 LB-FT2			

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	55	72	82	86	90	91	90
Efficiency	57.7	70.5	75.4	77	77	75.8	77
Speed	3564	3533	3500	3460	3418	3366	3418
Line amperes	0.68	0.851	1.08	1.37	1.65	2.01	1.65

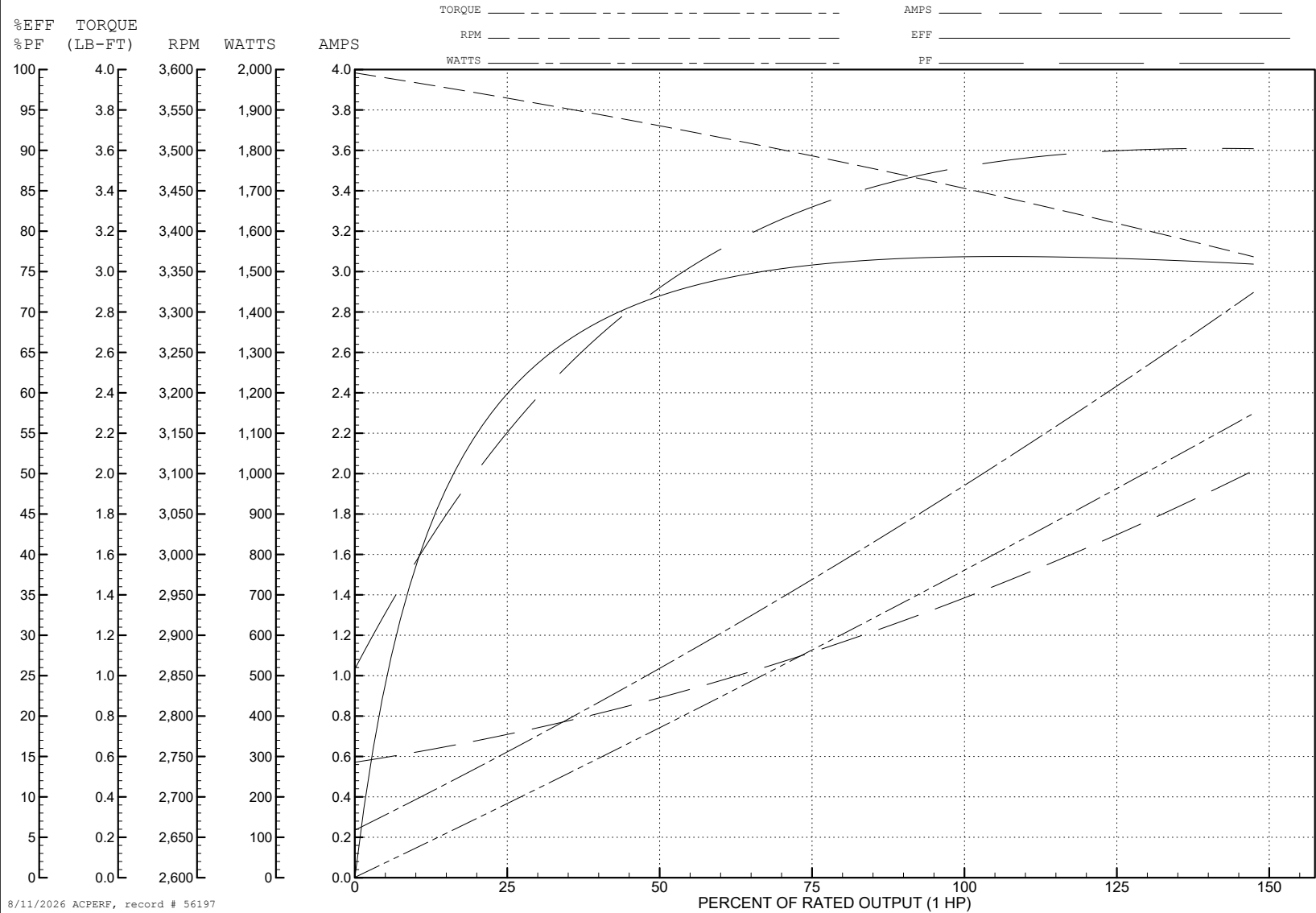
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WINDING # 35WGY474

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 3450 RPM 460 V 3516M

TORQUES (LB-FT): PO=5.6 PU=2.56 LR=4.62 LRA=10.5



AC Induction Motor Performance Data

Record # 59169

Typical performance - not guaranteed values

Winding: 35WGY474-R008			Type: 3516M		Enclosure: TEFC	
Nameplate Data			230 V, 60 Hz: Low Voltage Connection			
Rated Output (HP)		1	Full Load Torque		1.5 LB-FT	
Volts		230/460	Start Configuration		direct on line	
Full Load Amps		2.8/1.4	Breakdown Torque		5.6 LB-FT	
R.P.M.		3450	Pull-up Torque		3.9 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque	4 LB-FT	
NEMA Design Code	B	KVA Code	K	Starting Current	18 A	
Service Factor (S.F.)		1.25	No-load Current		1.32 A	
NEMA Nom. Eff.	77	Power Factor	87	Line-line Res. @ 25°C	4.88 Ω	
Rating - Duty		40C AMB-CONT	Temp. Rise @ Rated Load		47°C	
S.F. Amps		3.4/1.7	Temp. Rise @ S.F. Load		60°C	
			Locked-rotor Power Factor		64.1	
			Rotor inertia		0.0443 LB-FT2	

Load Characteristics 230 V, 60 Hz, 1 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	57	74	81	85	87	87	87
Efficiency	54	67.8	73.5	75.1	75.6	74.6	75.6
Speed	3549	3513	3474	3432	3384	3330	3384
Line amperes	1.54	1.88	2.34	2.86	3.44	4.12	3.44

ABB Motors and Mechanical Inc.

WINDING # 35WGY474

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 3450 RPM 230 V 3516M

TORQUES (LB-FT): PO=5.6 PU=3.9 LR=4 LRA=18

