

ABB BALDOR RELIANCE III

Customer information packet

VEM3545

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

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	56C
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	No Mounting
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	AC
Type	AC
Mech. spec.	35J302
Base	
Status	PRD/A
Elec. spec.	35WGY474
Layout	35LYJ302
Eff. date	01-12-2026
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	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	C-Face
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.	VEM3545								
SPEC	35J302Y474G1								
HP	1								
VOLTS	230/460								
AMPS	2.8/1.4								
RPM	3450								
FRAME	56C		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								

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

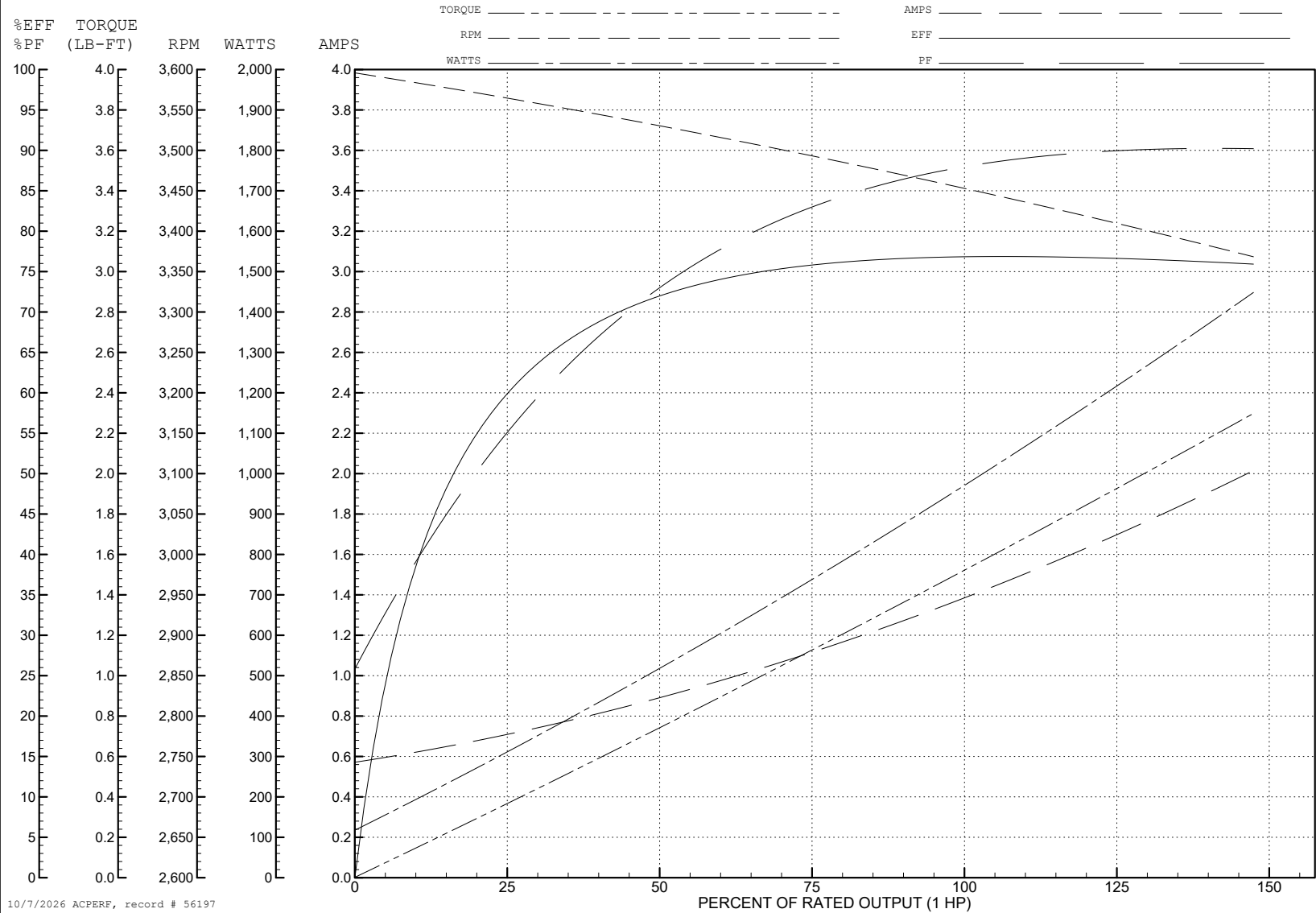
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WINDING # 35WGY474

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

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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

