

ELECTRIC MOTOR EFFICIENCY TEST REPORT

Form 102

(Revision 3.5)

Filename: AM3765AA

Date of Test: 4-Feb-21

Date of Report: 11-Feb-21

Motor Nameplate Information

Sample Number:	3765	Serial No.:	I000142ADV
Manufacturer:	Adventech	Phases:	3
Model:	IE-225S-4	Hz:	60
Rated Voltage:	480	RPM	1788
Rated Horsepower:	45	Sync. RPM	1800
Rated Current:	49	Type:	B3
Frame:	225S4	Encl.	TEFC
NEMA Design:	B	Ins. Class:	H
Nameplate Eff.(Nom):	95.8%	SF:	1.20
Nameplate Eff.(Min):		Code:	
Power Factor	0.99	CC No.:	
Condition (New/Used):	NEW	Date Received:	13-Jan-21

Test Conditions:

Tested Horsepower:	45.0	RPM:	1788
Tested Voltage:	480	Synchronous RPM:	1800
Tested Current:	49.0	Hz:	60

Notes:

*Current not decreasing during no-load voltage points

*Resistance taken outside of 30 second window due to capacitor disconnection



Tested by: _____
(signature)

Approved by: _____
(signature)

Customer Information:

Name:	Ron Ballman
Address:	4021 Parkway Dr
	Florence, AL 35630
Contact:	rballman@adventechinc.com

- The results of this report relate only to the specific motor tested.
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909 Capability Drive, Suite 2100, Raleigh, NC 27606-3870 Phone 919-857-9000 Fax 919-832-2696

Electric Motor Efficiency Test Report

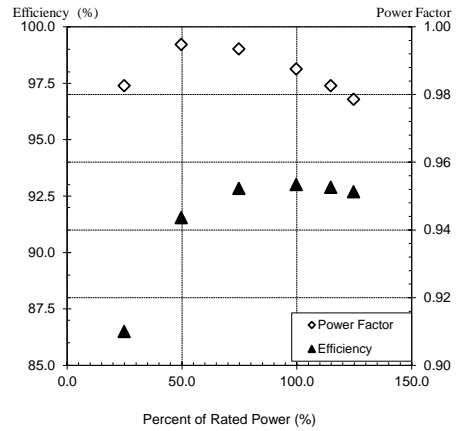
Test Method

Conforms to: CSA C390-10 and IEEE 112-2017 as required by Title 10 CFR Part 431, Subpart B, Appendix A. (with the exception of notes captured on Page 1)

Test Date: 4-Feb-21
Report Date: 11-Feb-21

Motor Description: Sample# 3765

Manufacturer: Adventech
Model: IE-225S-4
Serial: I000142ADV
Rated Power: 45.0 Hp (33.6 kW) 3 φ
Tested Voltage: 480 V unbalance= 0.02%
Tested Current: 49.0 A unbalance= 0.39%
NEMA Design: B PF= 0.99
Frame: 225S4
Speed: 1788 rpm/60 Hz
Nameplate Efficiency: 95.8%
NEMA Encl.: TEFC
Ins. class: H
File Number: AM3765AA



Resistance & Temperature Measurements

	T _{Stator}	Ohms	T _{Ambient}
Initial	20.3 °C	0.162	22.0 °C
No Load (Uncoupled)	61.3 °C	0.186	23.2 °C
No Load (Coupled)	67.4 °C	0.189	23.9 °C
Heat Run	91.0 °C	0.205	24.0 °C

Temperature Rise

Temp. rise (Thermocouple)	67.0 °C
Temp. rise (by Resistance)	62.8 °C

Load Measurements

	124.7	114.8	99.7	74.8	49.6	24.8
% of Rated Power						
Torque output (Nm)	225.9	207.7	180.5	135.3	90.3	45.7
Power input (kW)	45.16	41.47	35.97	27.02	18.20	9.62
Line Current (A)	55.5	50.8	43.8	32.7	22.0	11.8
Speed (rpm)	1781	1783	1786	1789	1793	1796
Winding Temperature (°C)	85.8	87.0	87.0	85.9	84.0	81.4
Ambient Temperature (°C)	24.1	23.9	23.9	23.8	23.8	23.6
Line Voltage (V)	479.9	480.0	480.1	479.9	480.0	480.1
Power Factor	0.98	0.98	0.99	0.99	0.99	0.98

No-Load Measurements

% of Line Voltage	105.0	100.0	95.0	40.0	30.0	25.0
Line Voltage (V)	504.0	480.0	456.0	192.0	144.0	120.0
Line Current (A)	2.9	3.1	3.0	2.6	2.6	2.8
Power Input (kW)	1.34	1.21	1.14	0.61	0.56	0.54
Winding Temperature (°C)	56.3	58.5	56.1	55.1	54.2	53.1

Calculation

Core Loss	0.711 kW						Stray Load Correlation Coefficient: 0.9994
Windage - Friction Loss	0.496 kW						B-factor: -0.2731
Dynamometer Correction	1.033 Nm						Point Deleted: None
% of Rated Power	124.7	114.8	99.7	74.8	49.6	24.8	
Stray Load Loss (kW)	0.68	0.57	0.43	0.24	0.11	0.03	
Stator Loss (kW) Temp. corrected	0.95	0.79	0.59	0.33	0.15	0.04	
Rotor Loss (kW) Temp. corrected	0.46	0.37	0.28	0.15	0.07	0.02	
Power Output (kW) Temp. corrected	41.86	38.52	33.46	25.09	16.66	8.32	
Efficiency (%)	92.70	92.89	93.02	92.84	91.55	86.51	

Efficiency at Rated Load: 93.0 % Efficiency at 75% Load: 92.8 %

