CSA INTERNATIONAL

Certificate of Verification

Certificate: 2424553 **Master Contract:** 170216

Project: 2424553 **Date Issued:** June 7, 2011

Issued to: **SIEMENS AG**
I DT LD P D13
Siemensstrasse 15
D-97615 Bad Neustadt a. d. Saale
GERMANY
Attention: Mr. Josef Schapawalow

The motors listed below are eligible to bear the CSA EEV Mark shown

Issued by: Ioan Goga, Eng.

PRODUCTS

Class 8811 01 - ENERGY EFFICIENCY - MOTORS - Three Phase Induction
Class 8811 81 - ENERGY EFFICIENCY - MOTORS - Three Phase Induction - Evaluated to U.S. Requirements

Energy Efficiency Verification of Three-phase, squirrel-cage, single speed, induction motors, for ordinary locations, 600V ac max, 60 Hz; 2, 4 or 6 poles, TEFC, Premium Efficiency Series **1LA9**, **1LG6** and **1LE1,** with Quoted Efficiency Values at full load, as tabulated in the tables below:

PART A : Series **1LA9** (Types 1LA9080pX – 1LA9223pX),

Section 1: Types 1LA9090pX – 1LA9223pX, IEC Frame sizes 90 to 225, rated 1 to 75 hp:

QUOTED EFFICIENCY VALUE (%)

Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)
1	-	85.5	82.5
1.5	84.0	86.5	87.5
2	85.5	86.5	88.5
3	86.5	-	89.5

5	88.5	89.5	89.5
7.5	89.5	91.7	91.0
10	90.2	91.7	91.0
15	91.0	92.4	91.7
20	91.0	93.0	91.7
25	91.7	93.6	93.0
30	91.7	93.6	93.0
40	92.4	94.1	-
50	93.0	-	-
60	93.6	-	-
75	93.6	-	-

Section 2*: Types 1LA9080pX – 1LA9132pX, IEC Frame sizes 80 to 132, rated 1 to 4 hp:

QUOTED EFFICIENCY VALUE (%)

Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)	Comments
1	77.0	-	-	IEC frame size FS80 (< 90), no NEMA T frame size
3	-	89.5	-	IEC frame size FS16, no NEMA T frame size,
4	88.5	89.5	89.5	IEC frame size FS16, no NEMA T frame size, 4 hp is not a standard output value

Note *): *Motor types that also meet the premium efficiency levels (set out in Table 3 of CSA Standard C390-10, at 100% of rated load), but are outside the scope of the present regulations for these requirements (see comments in the table above).*

PART B: Series **1LG6** (Types 1LG6183-2 – 1LG6318-6 + option D41),

Section 1: Types 1LG6183-2 – 1LG6318-6, IEC Frame sizes 180 to 315, rated 20 to 200 hp:

QUOTED EFFICIENCY VALUE (%)

:Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)
20	-	-	91.7
25	-	-	93.0
30	91.7	-	-
40	-	-	94.1
50	-	-	-
60	93.6	95.0	-
75	93.6	-	-
100	94.1	-	95.0
125	95.0	95.4	95.0
150	95.0	95.8	95.8
200	95.4	96.2	95.8

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Section 2*: Types 1LG6220-p – 1LG6318-p, IEC Frame sizes 225 to 315, rated 50 to 400 hp:

QUOTED EFFICIENCY VALUE (%)

Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)	Comments
50	-	94.5	94.1	IEC frame > NEMA frame
60	-	-	94.5	IEC frame > NEMA frame
65	-	95.0	-	65 hp is not a standard output value
75	93.6	95.4	94.5	IEC frame > NEMA frame
100	94.1	95.4	-	IEC frame > NEMA frame
175	95.4	96.2	95.8	175 hp is not a standard output value
250	95.8	96.2	95.8	> 200 hp, subtype II
300	95.8	96.2	-	> 200 hp, subtype II
400	95.8	96.2	-	> 200 hp, subtype II

Note *): *Motor types that also meet the premium efficiency levels (set out in Table 3 of CSA Standard C390-10, at 100% of rated load), but are outside the scope of the present regulations for these requirements (see comments in the table above).*

PART C: Series **1LE1** (Types 1LE1y23),

Section 1: Types 1LE1y23, IEC Frame sizes 90 to 315, rated 1 to 200 hp:

QUOTED EFFICIENCY VALUE (%)

Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)
1	-	-	82.5
1.5	-	86.5	87.5
2	85.5	86.5	88.5
3	86.5	-	89.5
5	88.5	89.5	89.5
7.5	89.5	91.7	91.0
10	90.2	91.7	91.0
15	91.0	92.4	91.7
20	91.0	93.0	91.7
25	91.7	93.6	93.0
30	91.7	93.6	93.0
40	92.4	94.1	94.1
50	93.0	-	-
60	93.6	95.0	-
100	-	-	95.0
125	95.0	95.4	95.0
150	95.0	95.8	95.8
200	95.4	96.2	95.8

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Section 2*: Types 1LE1y23, IEC Frame sizes 80 to 315, rated 1 to 250 hp:

QUOTED EFFICIENCY VALUE (%)

Power (hp)	2 poles (%)	4 poles (%)	6 poles (%)	Comments
1	77.0	85.5	-	IEC frame size 80 (< 90), no NEMA T frame size
1.5	84.0	-	87.5	2 poles: IEC frame size 80 (< 90), no NEMA T frame size; 6 poles: FS16, no NEMA T frame size
2	85.5	86.5	-	IEC frame > NEMA frame size, FS16 is not a NEMA T frame
3	86.5	89.5	-	FS16, no NEMA T frame size
4	88.5	89.5	89.5	2 & 4 poles: FS16, no NEMA T frame size; 6 poles: 4 hp is not a standard output value
50	-	94.5	94.1	IEC frame > NEMA frame
60	-	-	94.5	IEC frame > NEMA frame
100	94.1	95.4	-	IEC frame > NEMA frame
175	95.4	96.2	95.8	175 hp is not a standard output value
250	95.8	96.2	-	> 200 hp, subtype II

Note *): *Motor types that also meet the premium efficiency levels (set out in Table 3 of CSA Standard C390-10, at 100% of rated load), but are outside the scope of the present regulations for these requirements (see comments in the table above).*

Notes (Part A, B and C):

1. The above models have been CSA Certified for safety (in submittor's report 170216 – 2413196). See Certification Record 170216, classes 4211 01 and 4211 81 for listing of CSA safety certified models.
2. Equipment verified by CSA for Energy Performance shall also be subject to the safety requirements of the local inspection authorities having jurisdiction.
3. The premium efficiency levels set out in Table 3 of CSA Standard C390-10, at 100% of rated load, apply to motors Series 1LA9, 1LG6 and 1LE1 described in this report.
4. Suffixes may be added to the type/designation indicating construction details.
5. "y" in the motor type designation 1LE1y23 may be:
   - 0 (Aluminum housing), or
   - 5 or 6 (cast iron housings).
6. "p" in the motor type designation represents number of poles (may be 2, 4 or 6);

APPLICABLE REQUIREMENTS

CSA Standard CAN/CSA C390-10 -	Test methods, marking requirements, and energy efficiency levels for three-phase induction motors
CSA Standard CAN/CSA C390-93-	Energy Efficiency Test Methods for Three-Phase Induction Motors

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Supplement to Certificate of Verification

The motors listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
2424553	June 7, 2011	Original Energy Efficiency Verification of Three-phase, squirrel-cage, single speed, induction motors, Premium Efficiency Series 1LA9, 1LG6 and 1LE1, 2, 4 or 6 poles, 600V ac max, 60 Hz, with Quoted Premium Efficiency Values at full load as required in Table 3 of CSA Standard C390-10 and tabulated in the present Verification Report. To the requirements of CSA C390-10 and CSA C390-93.