



Radio Frequency Exposure Evaluation Report

For: Lennox Industries Inc.

Brand: Lennox

Marketing Name: Lennox E40 Smart Thermostat

Model Name: 30L26

Product Description: Smart thermostat to control residential HVAC system

FCC ID: 2A6F9-E4025A

IC: 28687-E4025A

Applied Rules and Standards:

CFR Part Part1 (1.1307 & 1.1310), Part 2 (2.1091),
FCC KDB 447498 D01 General RF Exposure Guidance v06
ISED RSS-102 Issue 6

Report number: EMC_LENNX_032_26001_RF_Exposure_Rev1

DATE: 2026-03-12



IC recognized #
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1 Assessment

This RF Exposure evaluation report provides evidence for compliance of the below identified device with the RF Exposure limits for mobile devices as defined in FCC CFR Part 1 (1.1307 & 1.1310), Part 2 (2.1091) and ISED standard RSS-102 issue 6 under worst case conditions (measured or rated RF output power, antenna gain, distance towards human body, multiple transmitter information as presented by the applicant).

In addition, maximum antenna gain or minimum distance towards the human body is calculated respectively, where relevant.

The device meets the limits as stipulated by the above given FCC and ISED rule parts based on available specifications for worst-case conditions at 5 cm distance to the body.

Company Name	Product Description	Model No.
Lennox Industries Inc.	Smart thermostat to control residential HVAC system	30L26

Report Authorized by:

Responsible for testing Laboratory:

2026-03-12	Compliance	Alvin, Ilarina (Director of EMC Services)	Alvin ILARINA Digitally signed by Alvin ILARINA Date: 2026.03.12 16:44:41 -07'00'
Date	Section	Name	Signature

Responsible for the Report:

2026-03-12	Compliance	Cheng Song (EMC Engineer)	Cheng Song CN = Cheng Song email = cheng.song@cetecom.com C = US O = CETECOM INC. 2026.03.12 16:20:28 -07'00'
Date	Section	Name	Signature

The test results of this test report relate exclusively to the test item specified in Section3.

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2 Administrative Data

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing Road
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Country	USA
Telephone:	+1 (408) 586 6200
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EMC Lab Manager:	Alvin, Ilarina
Responsible Project Leader:	Ruby, Hall

2.2 Identification of the Client

Client Firm/Name:	Lennox Industries Inc.
Street Address:	1600 Metrocrest Dr
City/Zip Code	Carrollton, TX 75006
Country	USA

2.3 Identification of the Manufacturer

Manufacturer's Name:	Same as Client
Manufacturers Address:	
City/Zip Code	
Country	

3 Equipment under Assessment

3.1 EUT Specifications

Product Description:	Smart thermostat to control residential HVAC system
Model Name:	30L26
HW Version:	108878
SW Version:	04.60.0156
FCC-ID:	2A6F9-E4025A
IC:	28687-E4025A
Marketing Name:	Lennox E40 Smart Thermostat
FVIN:	04.60.0156
HVIN:	108878-01
PMN:	Lennox E40 Smart Thermostat
Bands/Modes Supported	<u>Wi-Fi Module</u> Model Name : Murata Model Number : LBEE59B1LV <u>Wireless Technologies</u> Wi-Fi 2.4GHz Wi-Fi 5GHz
	<u>Bluetooth Module</u> Model Name : SiliconLabs Model Number : BGM210PA32JIA2 <u>Wireless Technologies</u> Bluetooth LE
Power Supply/ Rated Operating Voltage Range	Vmin: 18 Vac / Vnom: 24 Vac / Vmax: 30 Vac
Operating Temperature Range	Low : 0 °C / High 40 °C
Sample Revision	☐ Production ☒ Pre-Production
EUT Dimensions	136mm x 86mm x 25mm
EUT Diameter	☐ < 60 cm ☐ Other _____
Note: The information of the EUT specifications in the table above is provided by the client.	

4 RF Exposure Limits and FCC and ISED Basic Rules

FCC

4.1.1 § 2.1093(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater. For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP_{20cm} in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

$$P_{th}(\text{mW}) = ERP_{20\text{ cm}}(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \leq f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \leq f \leq 6\text{ GHz} \end{cases}$$

4.1.2 § 2.1093(c)(2)

For multiple mobile or portable RF sources within a device operating in the same time averaging period, routine environmental evaluation is required if the formula in § 1.1307(b)(3)(ii)(B) of this chapter is applied to determine the exemption ratio and the result is greater than 1.

4.1.3 § 1.1307(b)(3)(ii)(B)

in the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

ISED RSS 102

4.1.4 Clause 6.6 Field reference level exposure exemption limits– RF Exposure Evaluation

Field reference level (FRL) RF exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm, except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP. of the device is equal to or less than 1 W (adjusted for tune-up tolerance);
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance);
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz;
- at or above 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than 5 W (adjusted for tune-up tolerance).

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the e.i.r.p. was derived

5 Evaluations

5.1 FCC RF Exposure (Standalone)

Radio	Tech-Band	Freq-Low [GHz]	Pwr _[dBm]	Power _[W]	Ant-G _[dBi]	Ant-G _[lin]	EIRP _[W]	ERP _[W]	ERP _[mW]	ERP _{20cm} (mW)	$x = -\log_{10}(60/ERP_{20cm}) \sqrt{f_{GHz}}$	FCC 1.1307(b)(3)(i)(B) Pth _[mW]
BT	LE	2.4020	17.80	0.060	2.50	1.78	0.107	0.065	65.31	3060.00	1.90	220.34
WLAN	2.4 GHz	2.4120	15.80	0.038	3.90	2.45	0.093	0.057	56.89	3060.00	1.90	220.07
	UNII-1	5.1800	14.90	0.031	2.70	1.86	0.058	0.035	35.08	3060.00	2.06	174.83

Conclusion (FCC Standalone):

- Based on the calculated values shown in Table 5-1, each standalone transmitter meets the FCC RF exposure exemption / routine evaluation screening criteria at the minimum separation distance of ≥ 5 cm. Therefore, no further FCC RF exposure evaluation (MPE/SAR) is required for standalone operation.

5.2 ISED RF Exposure (Standalone)

Radio	Tech-Band	Freq-Low [MHz]	Pwr _[dBm]	Power _[W]	Ant-G [dBi]	Ant-G [lin]	EIRP _[W]	EIRP _[mW]	Exemption limit for Routine Evaluation
BT	LE	2402.00	17.80	0.06	2.50	1.78	0.11	107.15	251.81
WLAN	2.4 GHz	2412.00	15.80	0.04	3.90	2.45	0.09	93.33	250.39
	UNII-1	5180.00	14.90	0.03	2.70	1.86	0.06	57.54	136.09

Conclusion (ISED Standalone)

- As shown in Table 5-2, each standalone transmitter complies with RSS-102 Issue 6 exemption limits at the declared separation distance. Therefore, no further ISED RF exposure evaluation is required for standalone operation.

5.3 RF Exposure Test Exemptions for Simultaneous Transmission Sources

When multiple radios can transmit simultaneously, compliance was evaluated using the sum of ratios approach as required by:

- FCC KDB 447498 (multi-transmitter / simultaneous transmission guidance), and
- ISED RSS-102 Issue 6 (simultaneous transmission evaluation requirements)

For each applicable simultaneous transmission scenario, the fractional contribution of each transmitter was calculated as:

$$\text{Ratio}_i = \frac{\text{Calculated power metric}_i}{\text{Applicable exemption threshold}_i} \quad \text{and} \quad \sum \text{Ratio}_i \leq 1.0 \Rightarrow \text{Exempt}$$

Rule set	Concurrent radios	Sum of the ratios of the applicable terms	Limit	RF Exclusion No evaluation required
FCC	WLAN UNII-1 + BLE	0.5	≤ 1	Yes
ISED	WLAN UNII-1 + BLE	0.848	≤ 1	Yes

Conclusion (Simultaneous Transmission):

- The sum of the fractional contributions for each applicable simultaneous transmission configuration is ≤ 1.0 . Therefore, the equipment is RF exposure exempt for simultaneous transmission conditions, and no further RF exposure evaluation is required, subject to the stated minimum separation distance.

6 Revision History

Date	Report Name	Changes to report	Report prepared by
2026-03-11	EMC_LENNX_032_26001_RF_Exposure	Initial Version	Cheng Song
2026-03-12	EMC_LENNX_032_26001_RF_Exposure_Rev1	Updated HVIN	Cheng Song

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