TIMCO ENGINEERING, Inc.
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RF Exposure Evaluation Report

APPLICANT	LAIRD CONTROLS NORTH AMERICA INC.
	655 N. RIVER ROAD NW SUITE A WARREN OH 44483-2254 USA
FCC ID	CN286942
IC	1007A-86942
MODEL NUMBER	86942 TRX
PRODUCT DESCRIPTION	400 MHZ RF MODULE
STANDARD APPLIED	CFR 47 Part 2.1091
PREPARED BY	Tim Royer

We, TIMCO ENGINEERING, INC. would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and RSS-102 and meets the requirements.

GENERAL REMARKS

Attestations

This equipment has been evaluated in accordance with the standards identified in this report. To the best of my knowledge and belief, these evaluations were performed using the procedures described in this report.

I attest that the necessary evaluations were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Authorized Signatory Name:

Engineering Project Manager

Date: 1/4/2017

RF Exposure Requirements

General information

Device type: Module

Antenna

Configuration	Antenna p/n	Type	Max. Gain (dBi)
Fixed mounted	Any	omni	4.15

MPE Calculation:

The minimum separation distance is calculated as follows:

$$E(V/m) = \frac{\sqrt{30 \times P \times G}}{d} \qquad \text{Power density: } P_d(mW/cm^2) = \frac{E^2}{3770}$$

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.1310, Table 1.

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Minimum Separation Distance for Mobile or Fixed Devices
General Population/Uncontrolled Exposure

Insert values in yellow highlighted boxes to determine Minimum Separation Distance

Max Power	0.5	W	*equals*	Max Power	500	mW
Duty Cycle	100	%	*equals*	Duty Factor	1	numeric
Antenna Gain	4.15	dBi	*equals*	Gain numeric	2.60016	numeric
Coax Loss	0	dB		Gain - Coax Loss	2.60016	numeric
Power Density	0.3	mW/cm^2				

Enter power Density from the chart to the right

Frequency	470	MHz

Rule Part 1.1310, Table 1 (B)

Frequency range	Power de	Enter this value
MHz	mW/cm^2	mW/cm^2
0.3-1.34	100	**100**
1.34-30	$180/f^2$	**0.0**
30-300	0.2	**0.2**
300-1,500	f/1500	**0.3**
1,500-100,000	1	**1**

f = frequency in MHz

Minimum Separation Distance	18.57032	cm

Minimum Separation Distance		**20**	**cm**	**0.20** **m**

Minimum Seperation in Inches	7.868	Inches