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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	CN278970
IC	1007A-78970
MODEL NUMBER	78970 TRX
PRODUCT DESCRIPTION	ADL 450 MHZ 2PCA-7897-X001
STANDARD APPLIED	CFR 47 Part 2.1091, ISED RSS-102
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 ISED RSS-102 and meets the requirements.

The attached report shall not be reproduced except in full without the written approval of TIMCO ENGINEERING, INC.

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:

Tim Royer

Engineering Project Manager

Date: 9/15/2017

Applicant: LAIRD CONTROLS NORTH AMERICA INC.
FCC ID: CN278970
IC: 1007A-78970
Report: 1063AUT17RF Exp MPE Rpt.docx

RF Exposure Requirements

General information

Device type: ADL 450 MHZ 2PCA-7897-X001

MPE Calculation:

The minimum separation distance is calculated as follows:

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

The limit for general uncontrolled exposure environment is shown in FCC rule Part 1.11310, Table 1 and ISSED RSS-102 § 4 Table 3.

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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	0.017	W	<i>equals</i>	Max Power	17
Duty Cycle	100	%	<i>equals</i>	Duty Factor	1
Antenna Gain	2.15	dBi	<i>equals</i>	Gain numeric	1.64059
Coax Loss	0	dB		Gain - Coax Loss	1.64059
Power Density	0.3	mW/cm ²			
Enter power Density from the chart to the right			Rule Part 1.1310, Table 1 (B)		
Frequency	470	MHz		Frequency range	Power density
				MHz	mW/cm ²
				0.3-1.34	100
				1.34-30	180/f ²
				30-300	0.2
				300-1,500	f/1500
				1,500-100,000	1
			f = frequency in MHz		
Minimum Separation Distance			3 cm		0.03 m
Minimum Separation in Inches		1.070023 Inches			

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