



EMC Testing/Engineering Services



NVLAP ACCREDITED
NARTE Certified Engineer
Professional Engineer

ELITE Electronic Engineering

TCB Services
1516 Centre Circle
Downers Grove, IL 60515-1082

Re: Application for Certification of Johnson Controls Transmitter under 47CFR 15.231.
FCC ID: **CB2ACRLHL3**

Gentlemen:

On behalf of the applicant, Johnson Controls Interiors, LLC, please find attached the submittal materials for certification of the JCI Universal Garage Door Opener, Model CB2ACRLHL3. This model, a part of their Homelink® III series, is capable of learning the current garage door transmit frequencies from 288MHz through 420MHz except in the forbidden frequency regions.

The complete List of the Exhibits in this submittal package appears on Page 2 of this cover letter.

Johnson Controls Interiors has invested considerable resources into developing this Homelink® series. Having sections of Exhibit B, listed below, available to 'competition' would negate the advantage achieved in developing this product. Since their Homelink® series transmitters will be a major product line for Johnson Controls Interiors, not protecting the details of the design will result in a financial hardship for the company.

Pursuant to 47CFR 0.459, Johnson Controls Interiors requests that these listed exhibits be held confidential.

Circuit Block Diagrams	page 2 of Exhibit B
Theory/Description of Operation,	page 3 of Exhibit B
Schematics	page 4 of Exhibit B

Your prompt consideration of this application for product certification will be greatly appreciated. Should you have any questions regarding the content of this report, kindly contact me.

Sincerely,

Ted Chaffee,
Technical Lab Manager
Narte Certified Engineer, #EMC-002025-NE
tel/fax: 616.424.7014
email: tchaffee@ahde.com, or ahd@localink.net

Table of Contents

Cover Letter / Table of Contents		Total Pages	2
EXHIBIT A:			
ID Label / Location [2.925,2.926,2.1033(b2,7),15.19(a3)]			
Label drawing	EXA_Labeldwg.pdf	Total Pages	2
EXHIBIT B:			
Description of Product [2.1033(b6)]		Total Pages	1
Circuit Block Diagram [2.1033(b5)]		Total Pages	1
Description of Operation [2.1033(b4)]		Total Pages	1
Schematic [2.1033(b5)]			
Transmitter PCB schematic	EXB_Schematic.pdf	Total Pages	1
EXHIBIT C:			
Product photos		Total Pages	7
Exterior views [2.1033(b7)]	Two photos		
EXC_EUTbtm.jpg,	EXC_EUTtop.jpg		
Interior & Printed Circuit Boards [2.1033(b7)]	Four photos		
EXC_EUTin1,	EXC_EUTin2.jpg		
EXC_PCBtop.jpg,	EXC_PCBbtm.jpg,		
EXHIBIT D:			
User's Manual	EXD_OEMUserManual.doc	Total Pages	4
EXHIBIT E:			
Setup photos [2.1033(b8)]	Four photos	Total Pages	5
EXE_pretest.jpg, EXE_side.jpg, EXE_end.jpg, EXE_flat.jpg			
Report of Measurements [2.1033(b6)]		Total Pages	27
Table of Contents	Page 2		
Manufacturer/Applicant [2.1033(b1)]	Page 4		
Measurement/Test Facility & Equipment	Page 4		
Configuration/Setup [2.1033(b8)]	Page 5		
Test Standards / Methods Used [2.1033(b6)]	Page 7		
Test Methodology [2.1033(b6)]	Page 7		
Test Data [2.1033(b6)]			
Summary of Results	Page 6		
Level vs Supply Voltage [15.31(e)]	Page 13		
Occupied Bandwidth	Page 14		
Radiated Field Strength [15.231(b)]	Page 16		
Misc. EXHIBIT:			
Parts List/Tune-up Information [2.1033(b5)]		Total Pages	1
RF Exposure Information [2.1093(c)]		Total Pages	1