



NVLAP ACCREDITED NARTE Certified Engineer Professional Engineer

## EMC Testing/Engineering Services

June 2, 2000

Federal communications Commission Equipment Approval Services, P.O. Box 358315 Pittsburgh, PA 15251-5315 Attention: Authorization & Evaluation Division

Re: Application for Certification of Johnson Controls Transmitter under 47CFR 15.231. FCC ID: CB2300NHL3

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 CB2300NHL3 This generation of their Homelink® series is capable of learning the current garage door transmit frequencies from 288MHz through 420MHz with pulse modulation duty cycles from 30 through 80 percent.

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

| Exhibit G  | Theory/Description of Operation, |
|------------|----------------------------------|
| Exhibit H: | Circuit Block Diagrams           |
| Exhibit I: | Schematics                       |
| Exhibit J: | Bill of Material, Parts List     |
|            |                                  |

Johnson Controls Interiors has invested considerable resources into developing this Homelink® series. Having the listed exhibits available to 'competition' would negate the advantage achieved in developing this product. Since their Homelink® Iseries 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.

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

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,

Med Cheffee

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

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Form 731, form 159 with payment

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|---------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|----|
| EXHIBIT A:                                                          | Cover Letter / Table of Contents                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                         | Total Pages            | 2  |
| EXHIBIT B:                                                          | Statements of Attestation [2.911(d)]<br>Attesting to Accuracy of Data<br>Public Notice 22504<br>Power of Attorney<br>AHD Accreditation                                                                                                                                                                                                                                                                               | Exhibit B, File "EXB_p1DataAtts<br>Exhibit B, File "EXB_p1DataAtts<br>Exhibit B, File "EXB_p2PowrOA<br>Exhibit B, File "EXB_p3NVLAPC                                                                                                    | st.jpg"<br>\ttrny.jpg" | 3  |
| EXHIBIT C:                                                          | Description of Product [2.1033(b6)]                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                         | Total Pages            | 1  |
| EXHIBIT D:                                                          | Product photos - exterior [2.1033(b7)]                                                                                                                                                                                                                                                                                                                                                                               | Two photos                                                                                                                                                                                                                              | Total Pages            | 1  |
| EXHIBIT E:                                                          | Product photos - Printed Circuit Board [2.103                                                                                                                                                                                                                                                                                                                                                                        | 3(b7)]<br>Three photos                                                                                                                                                                                                                  | Total Pages            | 3  |
| EXHIBIT F: ID Label / Location [2.925,2.926,2.1033(b2,7),15.19(a3)] |                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                         | Total Pages            | 2  |
| EXHIBIT G:                                                          | Description of Operation [2.1033(b4)]                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                         | Total Pages            | 1  |
| EXHIBIT H:                                                          | Circuit Block Diagram [2.1033(b5)]                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                         | Total Pages            | 1  |
| EXHIBIT I:                                                          | Schematics [2.1033(b5)]                                                                                                                                                                                                                                                                                                                                                                                              | Exhibit I, File "EXI_Schem.pdf                                                                                                                                                                                                          | Total Pages            | 1  |
| EXHIBIT J:                                                          | Parts List/Tune-up Information [2.1033(b5]<br>Parts List                                                                                                                                                                                                                                                                                                                                                             | Exhibit J, File "EXJ_Parts.pdf"                                                                                                                                                                                                         | Total Pages            | 2  |
| EXHIBIT K:                                                          | Report of Measurements [2.1033(b6)]<br>Detailed Table of Contents<br>Manufacturer/Applicant [2.1033(b1)<br>Measurement/Test Facility & Equipment<br>Configuration/Setup [2.1033(b8)]<br>Summary of Results<br>Test Standards / Methods Used [2.1033(b6)]<br>Test Methodology [2.1033(b6)<br>Test Data [2.1033(b6)<br>Level vs Supply Voltage [15.31(e)]<br>Occupied Bandwidth<br>Radiated Field Strength [15.231(b)] | Exhibit K, Page 2<br>Exhibit K, Page 4<br>Exhibit K, Page 4<br>Exhibit K, Page 5<br>Exhibit K, Page 6<br>Exhibit K, Page 7<br>Exhibit K, Page 7<br>Exhibit K, Page 10<br>Exhibit K, Page 12<br>Exhibit K, Page 13<br>Exhibit K, Page 15 | Total Pages            | 31 |
| EXHIBIT L:                                                          | Setup photos [2.1033(b8)]                                                                                                                                                                                                                                                                                                                                                                                            | Four photos                                                                                                                                                                                                                             | Total Pages            | 2  |
| EXHIBIT M:                                                          | RF Exposure Information [2.1093(c)]                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                         | Total Pages            | 1  |
| EXHIBIT N:                                                          | User's Manual                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                         | Total Pages            | 4  |