

TEST RESULT SUMMARY

FCC Part 15 Subpart C Section 15.231

IC RSS-210 Issue 8

Amendment 1: Feb. 2015

Updated: May 2015

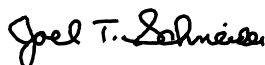
IC RSS-Gen Issue 4

MANUFACTURER'S NAME	Cinch Systems Inc 12075 43rd Street NE Suite 300 St Michael MN 55376 USA
PRODUCT NAME	Recessed Door Window Sensor
MODEL NUMBER(S) TESTED	RF-RDWS-AAA
SERIAL NUMBER(S) TESTED	n/a
PRODUCT DESCRIPTION	Recessed Door Window Sensor with 319.5 MHz transmitter
TEST REPORT NUMBER	NC72117878.1
TEST DATE(S)	7-18 July 2016

TÜV SÜD America Inc., as an independent testing laboratory, declares that the equipment tested as specified above conforms to the applicable EMC requirements of FCC Part 15 Subpart C Section 15.231 "Periodic operation in the band 40.66–40.70 MHz and above 70 MHz." and Industry Canada RSS-210 Issue 8 "Licence-exempt Radio Apparatus (All Frequency Bands): Category I Equipment" and Industry Canada RSS-Gen Issue 4 "General Requirements and Information for the Certification of Radio Apparatus".

It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics. Any modifications necessary for compliance made during testing on the above mentioned date(s) must be implemented in all production units for compliance to be maintained.

Issue Date: 17 August 2016



Joel T Schneider
Senior EMC Engineer



Greg Jakubowski
Senior EMC Technician

Not Transferable

EMC TEST REPORT

Test Report No. NC72117878.1 Date of issue: 17 August 2016

Product Names Recessed Door Window Sensor

Model(s) Tested RF-RDWS-AAA

Serial No(s) Tested n/a

Product Description Recessed Door Window Sensor (319.5 MHz)

Manufacturer Cinch Systems Inc
12075 43rd Street NE
Suite 300
St Michael MN 55376 USA

Issuing Laboratory TÜV SÜD America Inc
1775 Old Highway 8 NW, Suite 104
New Brighton MN 55112 - 1891
Phone: 651-631-2487 / Fax: 651-638-0285

Test Result **Positive** **Negative**

TÜV SÜD America Inc. reports apply only to the specific samples tested under stated test conditions. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. TÜV SÜD America Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD America Inc. issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval. TÜV SÜD America's New Brighton and Taylors Falls Labs maintain A2LA accreditation to ISO/IEC 17025 for the specific tests listed in A2LA Certificate #2955.11 as an Electrical Testing Laboratory.

TÜV SÜD America Inc. and its professional staff hold government and professional organization certifications and are members of AAMI, ACIL, AEA, ANSI, IEEE, NARTE, and VCCI.

REVISION RECORD

REVISION	TOTAL NUMBER OF PAGES	DATE	DESCRIPTION
	22	17 August 2016	Initial Release



DIRECTORY

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LAB ACCREDITATION:

TÜV SÜD America's New Brighton and Taylors Falls Labs maintain A2LA accreditation to ISO/IEC 17025 for the specific tests listed in A2LA Certificate #2955.11 as Electrical Testing Laboratories, and are recognized by the National RRA under Phase I of the APEC Tel MRA, Identification Number US0080. These Labs are located at the following addresses:

Main Location: 1775 Old Highway 8 NW, Suite 104
New Brighton MN 55112-1891 USA
Satellite Location: 19333 Wild Mountain Road
Taylors Falls MN 55084 USA

EMC TEST REGULATIONS:

The tests were performed according to the following regulations:

FCC Part 15 Subpart C §15.231
IC RSS-210 Issue 8
IC RSS-Gen Issue 4

ENVIRONMENTAL CONDITIONS IN THE LAB

Temperature:	<u>Actual</u> : 21°C
Atmospheric pressure	: 99kPa
Relative Humidity	: 48%

POWER SUPPLY UTILIZED

Power supply system : 3 VDC

TEST EQUIPMENT

All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.

MEASUREMENT UNCERTAINTY

The test system for conducted emissions is defined as the LISN, tuned receiver or spectrum analyzer, and coaxial cable. The test system has a measurement uncertainty of ± 1.8 dB. The test system for radiated emissions is defined as the antenna, the pre-amplifier, the spectrum analyzer and the coaxial cable. The test system has a measurement uncertainty of ± 4.8 dB. All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.

SIGN EXPLANATIONS

- not applicable
- applicable



Radiated Emissions 30 - 3200 MHz FCC 15.231(b), IC RSS-210 A1.1

Test summary

The requirements are: - MET - NOT MET

Testing was performed in accordance with the test procedure of ANSI C63.10 2013, clause 6.3.

Test location

Taylors Falls Lab Large Test Site (Open Area Test Site)

Test distance

3 meters

Test Equipment

TUV ID	Model	Manufacturer	Description	Serial	Cal Date	Cal Due
WRLE03204	EM-6917B	Electro-Metrics	Biconicalog Periodic	102	31-Aug-15	31-Aug-16
WRLE10896	ZHL-1042J	Mini-Circuits	Amplifier Broadband AMP/ SMA QA1148002	NA	Code B 27-Jan-16	Code B 27-Jan-17
WRLE03895	NHP-600	Mini-Circuits	600 MHz HPF	3	Code B 2-Jun-16	Code B 2-Jun-17
WRLE10998	ESU 26	Rohde & Schwarz	EMI Receiver	100379	05-Oct-15	05-Oct-16
WRLE10863	N/A	TUV SUD America Inc	Test Companion Software Version 3.4.76	N/A	Code Y	Code Y
WRLE03229	3115	Electro-Mechanics (EMCO)	Ridge Guide Antenna	2483	30-Sep-15	30-Sep-16
WRLE10527	SL18B4020	Phase One Microwave	Preamplifier 1 – 18 GHz	0001	Code B 04-Jan-16	Code B 04-Jan-17
WRLE03295	85662A	Hewlett-Packard	Analyzer Display	2349A06144	06-Aug-15	06-Aug-16
WRLE02689	8566B	Hewlett-Packard	Spectrum Analyzer	2416A00321	06-Aug-15	06-Aug-16
WRLE02680	85650A	Hewlett-Packard	Quasi-Peak Adapter	2043A00343	15 Sep-15	15 Sep-16

Code B = Calibration verification performed internally. Code Y = Calibration not required when used with other calibrated equipment

Limit with 319.5 MHz fundamental and 3 meter distance

Detector	Field strength fundamental ($\mu\text{V/m}$)	Field strength Spurious ($\mu\text{V/m}$)
Average	6229	622.9
Peak	62291	6229

The emission limits shown in the above table are based on measurements employing a CISPR average detector. When average radiated emission measurements are specified in this part, including average emission measurements below 1000 MHz, there also is a limit on the peak level of the radio frequency emissions. Unless otherwise specified, e.g., see §§ 15.250, 15.252, 15.255, and 15.509–15.519, the limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit applicable to the equipment under test. Further, compliance with the provisions of §15.205 shall be demonstrated using the measurement instrumentation specified in that section. Radiated emissions from the EUT are measured in the frequency range of 30 to 1000 MHz using a spectrum analyzer or receiver and appropriate broadband linearly polarized antennas. Measurements between 30 MHz and 1000 MHz are made with a 120 kHz / 6 dB bandwidth and average/peak detection and measurements above 1000 MHz are made with a 1 MHz RBW/VBW / 6 dB bandwidth and peak detection, 1 MHz RBW/ 10 Hz VBW for average detection. Table top equipment is placed on a non-conductive support 80 cm above the ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 3, 10 or 30 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT is rotated 360 degrees. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB / decade (inverse linear-distance for field strength measurements).



Test data

Scan through 3 orthogonal axis for the highest fundamental emission level
Initial relative pk levels with hp8566B spectrum analyzer. Final pk & avg levels with a receiver (120kHz RBW)
Configured for test mode pulses to conserve battery and attain accurate average measurements
Device is transmitting packets continuously and configured (for test purposes) to provide its maximum possible total on time of 11.8 mS per 100mS.

Measurement summary for limit1: fcc 15.231 w/ 319.5 MHz fundamental (Pk)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA1 fcc 15.231 at 319.5 MHz fundamental Pk
319.508 MHz	72.59 Pk	1.91 / 20.07 / 0.0 / 0.0	94.57	53518	H / 1.00 / 270	-0.54

Measurement summary for limit2: fcc 15.231 at 319.5 MHz fundamental (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA2 fcc 15.231 at 319.5 MHz fundamental Avg
319.508 MHz	48.22 Av	1.91 / 20.07 / 0.0 / 0.0	70.2	3236	H / 1.00 / 270	-4.9

Measurement summary for limit1: fcc 15.231 319.5 MHz spurious (Pk)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA1 fcc 15.231 319.5 MHz spurious pk
639.016 MHz	61.61 Pk	2.76 / 25.32 / 29.05 / 0.55	61.19	1147	H / 1.35 / 90	-14.69
958.524 MHz	57.88 Pk	3.48 / 28.84 / 29.4 / 0.05	60.86	1104	H / 1.35 / 277	-15.02

Measurement summary for limit2: fcc 15.231 - 319.5 MHz spurious (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA2 fcc 15.231 - 319.5 MHz spurious avg
958.524 MHz	34.38 Av	3.48 / 28.84 / 29.4 / 0.05	37.36	73.8	H / 1.35 / 277	-18.52
639.016 MHz	37.53 Av	2.76 / 25.32 / 29.05 / 0.55	37.11	71.7	H / 1.35 / 90	-18.77



Spurious emissions scan 1-3.2 GHz
Limits are a combination of 15.231(b) & 15.205 (restricted bands)
Scanned device 0-360°. Measurement antenna 1-4m high, vertical & horizontal
No significant emissions detected except for harmonics

Measurement summary for limit1: FCC 15.231 (319.5MHz Tx) + 15.205 3m (Pk)						
FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC 15.231 (319.5MHz Tx) + 15.205 3m pk
1.598 GHz	86.0 Pk	4.38 / 25.64 / 42.53 / 0.5	73.98	5000.3	H / 1.00 / 101	-0.02
2.876 GHz	70.6 Pk	6.04 / 29.18 / 43.67 / 0.38	62.52	1336.6	H / 1.00 / 270	-11.48
2.237 GHz	72.35 Pk	5.24 / 27.53 / 43.57 / 0.46	62.02	1261.8	V / 1.00 / 0	-11.98
1.917 GHz	64.3 Pk	4.82 / 27.3 / 43.38 / 0.42	53.47	471.5	V / 1.00 / 180	-22.33
2.556 GHz	61.15 Pk	5.66 / 28.52 / 43.65 / 0.42	52.1	402.7	V / 1.00 / 180	-23.7
3.195 GHz	54.2 Pk	6.4 / 30.29 / 43.6 / 0.33	47.62	240.4	V / 1.00 / 180	-28.18
1.278 GHz	52.7 Pk	4.0 / 26.37 / 41.4 / 0.55	42.21	129.0	V / 1.00 / 0	-33.59

Measurement summary for limit2: FCC 15.231 (319.5MHz Tx) + 15.205 3m (Av)						
FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV/m)	FINAL (uV/m)	POL / HGT / AZ (m)(DEG)	DELTA2 FCC 15.231 (319.5MHz Tx) + 15.205 3m av
2.237 GHz	59.68 Av	5.24 / 27.53 / 43.57 / 0.46	49.35	293.4	V / 1.00 / 0	-4.65
1.598 GHz	59.33 Av	4.38 / 25.64 / 42.53 / 0.5	47.31	232.0	H / 1.00 / 90	-6.69
2.876 GHz	54.75 Av	6.04 / 29.18 / 43.67 / 0.38	46.67	215.5	H / 1.00 / 270	-7.33
2.556 GHz	48.41 Av	5.66 / 28.52 / 43.65 / 0.42	39.36	92.9	V / 1.00 / 180	-16.44
1.917 GHz	49.99 Av	4.82 / 27.3 / 43.38 / 0.42	39.16	90.8	V / 1.00 / 0	-16.64
3.195 GHz	41.06 Av	6.4 / 30.29 / 43.6 / 0.33	34.48	53.0	V / 1.00 / 180	-21.32
1.278 GHz	38.42 Av	4.0 / 26.37 / 41.4 / 0.55	27.93	24.9	V / 1.00 / 0	-27.87

Occupied bandwidth FCC 15.231(c), IC RSS-210 A1.1.3

Test summary

The requirements are: ■ - MET □ - NOT MET

Testing was performed in accordance with the test procedure of ANSI C63.10-2013 clause 6.9.2

Test location

Taylors Falls Lab Large Test Site (Open Area Test Site)

Test equipment

TUV ID	Model	Manufacturer	Description	Serial	Cal Date	Cal Due
NBLE03367	E4440A	Agilent	Spectrum Analyzer	MY42510439	11-Nov-15	11-Nov-16
WRLE01564	7405-901	EMCO	Near field probe	na	Code Y	Code Y

Code Y = Calibration not required when used with other calibrated equipment.

Test limit

No wider than 0.25% of the center frequency. $319.508 \text{ MHz} \times 0.25\% = 798.77 \text{ kHz}$. Per FCC, measured at the -20 dB points. Per IC RSS-210 A1.1.3, the 99% bandwidth.

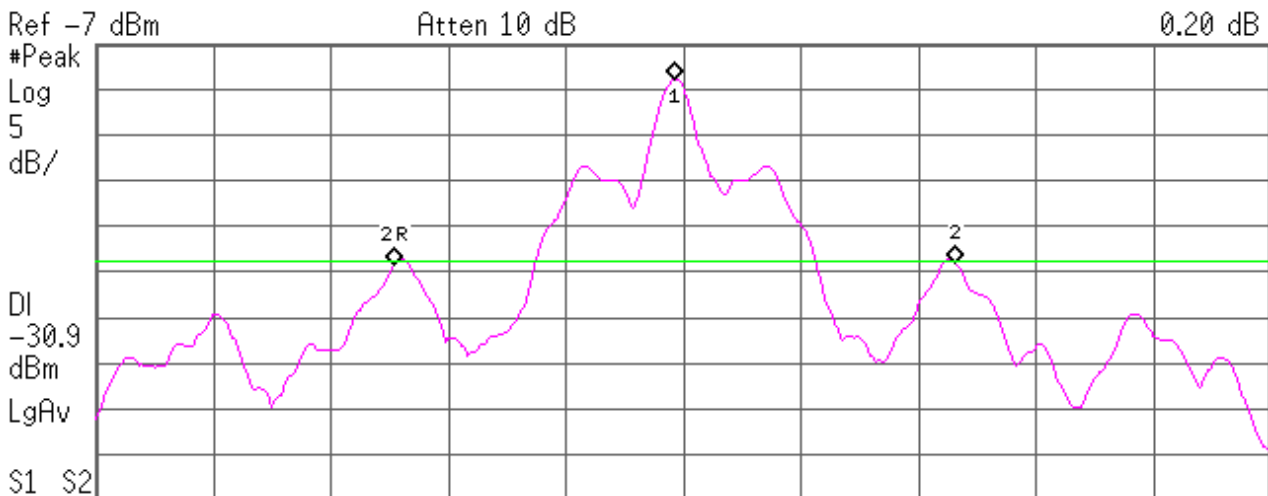
Test data per FCC 15.231(c)

20 dB occupied bandwidth = 23.93 kHz

Agilent

R T

▲ Mkr2 23.93 kHz
 0.20 dB



Center 319.508 00 MHz
 #Res BW 1 kHz
 VBW 3 kHz
 Sweep 47.8 ms (601 pts)
 Span 50 kHz

Marker	Trace	Type	X Axis	Amplitude
1	(3)	Freq	319.507 58 MHz	-10.88 dBm
2R	(3)	Freq	319.495 66 MHz	-31.14 dBm
2Δ	(3)	Freq	23.93 kHz	0.20 dB

Test data per IC RSS-210

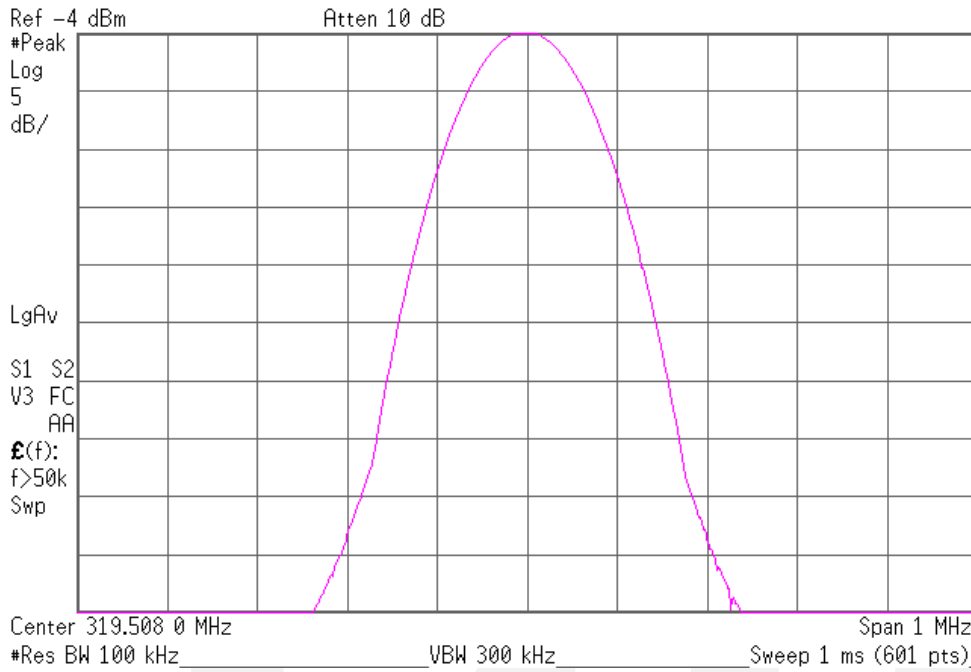
See following pages

99% Bandwidth

1 of 2. RBW greater than OBW. Set ref lvl

Agilent

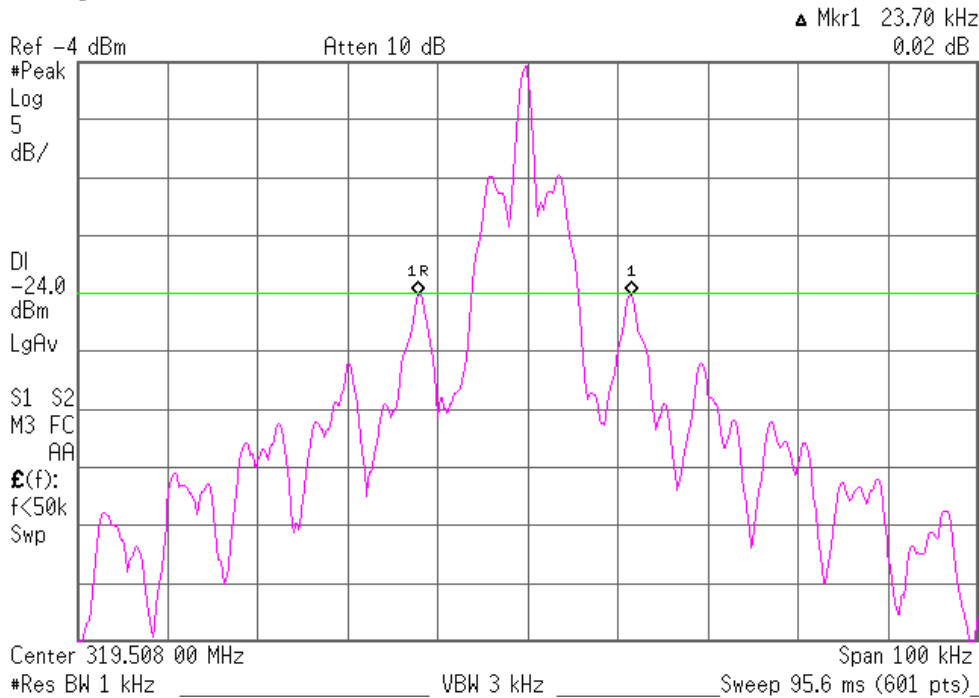
R T



2 of 2. RBW near 1% of OBW. Markers at -20dB from ref level

Agilent

R T



Periodic operation

FCC 15.231(a), IC RSS-210 A1.1.1

Test summary

The requirements are: ■ - MET □ - NOT MET

Manufacturer declared operation mode.

Test Limit 15.231(a);

(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

"Whenever the transmitter is activated automatically it will transmit 8 packets of 23.6 msec in length spaced by 130 msec. Transmission cease after 1.1 seconds."

(3) Periodic transmissions at regular predetermined intervals are not permitted. However, polling or supervision transmissions, including data, to determine system integrity of transmitters used in security or safety applications are allowed if the total duration of transmissions does not exceed more than two seconds per hour for each transmitter. There is no limit on the number of individual transmissions, provided the total transmission time does not exceed two seconds per hour.

"The supervisory periodic transmissions are the four automatic transmissions noted above. They occur once per hour, for a total hourly transmission time of 94.4 msec."

(4) Intentional radiators which are employed for radio control purposes during emergencies involving fire, security, and safety of life, when activated to signal an alarm, may operate during the pendency of the alarm condition

"The transmitter is limited to reporting devices opening and closing. Other than the initial status change condition report there are no repeat transmissions other than the hourly supervisory transmissions."

(5) Transmission of set-up information for security systems may exceed the transmission duration limits in paragraphs (a)(1) and (a)(2) of this section, provided such transmissions are under the control of a professional installer and do not exceed ten seconds after a manually operated switch is released or a transmitter is activated automatically. Such set-up information may include data.

"Set up information cannot exceed 16 23.6 msec packets, spaced by 130 msec. Transmissions cease after 2.2 seconds."

Equipment Under Test (EUT) Test Operation Mode:

The device under test was operated under the following conditions during immunity testing :

- Standby
- Test program (H - Pattern)
- Test program (color bar)
- Test program (customer specific)
- Practice operation
- Sends continuous packets- carrier with modulation

Configuration of the device under test:

- See Appendix A and test setup photos
- See Product Information Form(s) in Appendix B

DEVIATIONS FROM STANDARD:

None.

GENERAL REMARKS:

None

Modifications required to pass:

- None
- As indicated on the data sheet(s)

Test Specification Deviations: Additions to or Exclusions from:

- None
- As indicated in the Test Plan

SUMMARY:

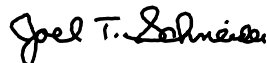
The requirements according to the technical regulations are

- met and the device under test does fulfill the general approval requirements.
- **not** met and the device under test does **not** fulfill the general approval requirements..

EUT Received Date: 7 July 2016
Condition of EUT: Normal
Testing Start Date: 7 July 2016
Testing End Date: 18 July 2016

TÜV SÜD AMERICA INC.

Approved by:



Joel T Schneider
Senior EMC Engineer

Tested by:



Greg Jakubowski
Senior EMC Technician

Appendix A

Constructional Data Form



Form



EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE. IF TESTING RESULTS IN MODIFICATIONS TO THE EQUIPMENT, PLEASE SUBMIT A REVISED TP/CDF INDICATING THOSE MODIFICATIONS.
NOTE: This information will be input into your test report as shown below. Press the F1 key at any time to get HELP for the current field selected.

Company: Cinch Systems Inc
 Address: 12075 43 ST NE
Suite 300
St Michael, MN 55376
 Contact: Jibril Aga Position: Engineer
 Phone: 763-497-1059 Fax: 763-497-0898
 E-mail Address: jibril.aga@cinchsystems.com

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description Recessed Door Window Sensors
 EUT Name Recessed Door Window Sensors
 Model No.: RF-RDWS-AAA Serial No.: 123456
 Product Options: _____
 Configurations to be tested: _____

Equipment Modification (If applicable, indicate modifications since EUT was last tested. If modifications are made during this testing, submit revised TP/CDF after testing is complete.)

Modifications since last test: N/A
 Modifications made during test: N/A

Test Objective(s): Please indicate the tests to be performed, entering the applicable standard(s) where noted.

- | | |
|---|--|
| <input type="checkbox"/> EMC Directive 2004/108/EC (EMC)
Std: _____ | <input checked="" type="checkbox"/> FCC: Class <input type="checkbox"/> A <input checked="" type="checkbox"/> B Part <u>15</u> |
| <input type="checkbox"/> Machinery Directive 89/392/EEC (EMC)
Std: _____ | <input type="checkbox"/> VCCI: Class <input type="checkbox"/> A <input type="checkbox"/> B |
| <input type="checkbox"/> Medical Device Directive 93/42/EEC (EMC)
Std: _____ | <input type="checkbox"/> BSMI: Class <input type="checkbox"/> A <input type="checkbox"/> B (Separate Report) |
| <input type="checkbox"/> Vehicle Directive - 2004/104/EC (EMC)
<input type="checkbox"/> Other Vehicle Std: _____ | <input checked="" type="checkbox"/> Canada: Class <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| <input type="checkbox"/> FDA Reviewers Guidance for Premarket Notification Submissions (EMC) | <input type="checkbox"/> Australia: Class <input type="checkbox"/> A <input type="checkbox"/> B |
| | <input type="checkbox"/> Other: _____ |
| | <input type="checkbox"/> Ag Directive *2009/64/EC (EMC) |

Third Party Certification (contact TÜV for quote), if applicable (*Signature on last page required).

- | | |
|--|--|
| <input type="checkbox"/> Attestation of Compliance (AoC)* | <input type="checkbox"/> EMC Certification (used with Octagon Mark)* |
| <input type="checkbox"/> Statement of Compliance (SoC, previously CoC)* - All aspects of the essential requirements were assessed | |
| Protection Class (Req'd for AoC, SoC, EMC Cert. N/A for vehicles) <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III
(Press F1 when field is selected to show additional information on Protection Class.) | |
| <input checked="" type="checkbox"/> FCC / TCB Certification | <input type="checkbox"/> Taiwan Certification |
| <input checked="" type="checkbox"/> Industry Canada / FCB Certification | <input type="checkbox"/> Korean Certification |
| <input type="checkbox"/> e-Mark Certification | |

Form



EMC Test Plan and Constructional Data Form

Attendance

Test will be: Attended by the customer Unattended by the customer

Failure - Complete this section if testing will not be attended by the customer.

If a failure occurs, TÜV SÜD America should:

- Call contact listed above, if not available then stop testing. (After hrs phone): 320-266-4731
- Continue testing to complete test series.
- Continue testing to define corrective action.
- Stop testing.

EUT Specifications and Requirements

Length: 2" Width: 0.675" Height: 0.56" Weight: 1oz.

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: 3V (RF-RDWS- (If battery powered, make sure battery life is sufficient to complete testing.)
AAA),

of Phases: DC/1P

Current (Amps/phase(max)): 100mA Current (Amps/phase(nominal)): 20mA

Other _____

Other Special Requirements

Need all testing/certs. required to obtain FCC ID and be ready to sell in US and Canada.

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)
Residential preferable

EUT Power Cable

- Permanent OR Removable Length (in meters): _____
- Shielded OR Unshielded
- Not Applicable

Form



EMC Test Plan and Constructional Data Form

EUT Interface Ports and Cables														
Type	Analog	Digital	During Test		Qty	Shielding		Termination	Connector Type	Port Termination	Length tested (in meters)	Removable	Permanent	
			Active	Passive		Yes	No							Type
EXAMPLE: RS232	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>



EMC Test Plan and Constructional Data Form

EUT Software.

Revision Level: 1

Description: Production release candidate

Equipment Under Test (EUT) Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Sends continuous packets- carrier with modulation
2. Normal standby with 1 packet transmitted per hour
3. na

Equipment Under Test (EUT) System Components -- List and describe all components which are part of the EUT. For FCC & Taiwan testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc)

Description	Model #	Serial #	FCC ID #
Sensor	RF-RDWS-AAA	123456	na



EMC Test Plan and Constructional Data Form

Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc)
 This information is required for FCC & Taiwan testing.

Description	Model #	Serial #	FCC ID #

Oscillator Frequencies

Manufacturer	Frequency	Derived Frequency	Component # / Location	Description of Use
Tai-Saw Technology	30.0 Mhz	319.508 Mhz	Y1	to derive transmit freq.

Power Supply

Manufacturer	Model #	Serial #	Type
Panasonic	CR2	na	<input checked="" type="checkbox"/> Switched-mode: (Frequency) <u>120 kHz</u> <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____
			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____

Power Line Filters

Manufacturer	Model #	Location in EUT
na		

Form



EMC Test Plan and Constructional Data Form

Critical EMI Components (Capacitors, ferrites, etc.)

Description	Manufacturer	Part # or Value	Qty	Component # / Location
na				

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

na

PLEASE ENTER NAMES BELOW (INSERT ELECTRONIC SIGNATURE IF POSSIBLE)

Authorization (Signature Required if a Third Party Certification is checked on pg 1)

X

Jibril Aqa

Jibril Aqa
 Engineer

Jibril Aqa

Customer authorization to perform tests according to this test plan.

6/15/16
 Date

Jibril Aqa
 Test Plan/CDF Prepared By (please print)

6/15/16
 Date