



September 17, 2013

Federal Communications Commission
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Ref: Bosch CLN AC150W

FCC ID: PFJCLNFIA15001

IC ID: 909C-CLNFIA15000

Subject: Modular Transmitters

(i) The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.

The radio elements of the modular transmitter has its own shielding. The shield is soldered to the printed circuit board.

(ii) The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.

The modulation source is an off-the-shelf microcontroller with integrated on-board transceiver and modulation control. No external modulation source is possible.

(iii) The modular transmitter must have its own power supply regulation.

The modular transmitter has its own power supply regulation circuit.

(iv) The modular transmitter must comply with the antenna and transmission system requirements of §§ 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). The "professional installation" provision of § 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.

The modular transmitter uses a printed antenna on the printed circuit board, and complies with 15.203, 15.204b and 15.204c.

(v) The modular transmitter must be tested in a stand-alone configuration, *i.e.*, the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in § 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see § 15.27(a)). The length of these lines shall be



the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see § 15.31(i)).

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The modular transmitter will be (was) tested in a stand-alone configuration. The transmitter will be powered by the AC line and meets the conducted requirements in 15.207. The test included ferrites which will be installed in the marketed product.

(vi) The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number.

The modular transmitter will be equipped with a permanently affixed label displaying the FCC identification number.

(vii) The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.

Operating requirements will be contained in end user installation and operation instructions.

(viii) The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.

RF exposure requirements will be contained in end user installation and operation instructions.

Sincerely,

A handwritten signature in black ink that reads "Steven Gladstein".

Steven Gladstein
Engineering Manager
Robert Bosch LLC