User's Manual -COMAD400V2 900 MHz Communications Board

The communications module is a 900 MHz transceiver for electronic locks and non-lock devices. The communications module links the access device to the Access Control Management System, with feedback control to the Access Device via a wireless means. The module contains the embedded firmware implementing the radio physical and data layers. There are 5 antennas associated with this module:

1. PCB trace antenna with a 5.7dBi maximum gain (measured over a conducting ground plane).
2. MA-CC60-60 Dual Beam Antenna with a 3.5dBi gain (Data sheet)
3. MA-CL67-15 multi band Directional Panel antenna with 8.5dBi gain (Data sheet)
4. MA-CL92-5 Quasi-Omni Panel antenna with 4.5dBi gain (Data sheet)
5. MA-CM36-15 multi band Omni Antenna with 2dBi gain (Data sheet.

Specifications of the radio module:
Power Output: 19.6 dBm
Operating Frequency: 906 - 924 MHz
Modulation: BPSK

NOTE: The intended use of this module is not for the general public. It is generally for industry/commercial use only. This transceiver is to be professionally installed in the end product by Schlage Lock Company, and not by a third party. The Schlage Lock Company COMAD400V2 900 MHz Communications Board Module will not be sold to third parties via retail, general public or mail order. In the case of a repair, the transceiver will be replaced by a professional Installer.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

FCC/IC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

To comply with FCC/IC RF exposure limits for general population/uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

INDUSTRY CANADA STATEMENTS

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

This radio transmitter, 8053B-COMAD400V2, has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

This device has been designed to operate with the antennas listed below, and having a maximum gain of 8.5 dBi. Antennas not included in this list or having a gain greater than 8.5 dBi are strictly prohibited for use with this device. The required antenna impedance is 50 ohms.

Approved antenna list

Model Number		
23530553	1	Remote antenna, Omni, wall/post, indoors/outdoors
23530561	1	Remote antenna, Omni, ceiling, indoors
23530579	1	Remote antenna, Directional, wall/post, indoors/outdoors
23520587	1	Remote antenna, Bi-directional, ceiling, indoors

To comply with IC RF exposure limits for general population/uncontrolled exposure, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter.

DÉCLARATIONS DE INDUSTRIE Canada

Cet appareil est conforme norme Industrie Canada RSS exempts de licence (s). Son fonctionnement est soumis aux deux conditions suivantes: 1) cet appareil ne doit pas provoquer d'interférences, et 2) cet appareil doit accepter toute interférence, y compris les interférences pouvant provoquer un fonctionnement indésirable de l'appareil.

Conformément aux normes d'Industrie Canada, ce transmetteur radio ne peut fonctionner qu'avec une antenne dont le type et le gain maximum sont approuvés par Industrie Canada. Pour réduire les risques d'interférences radio encourus par d'autres utilisateurs, le type et le gain de l'antenne doivent être choisis de façon à ce que la puissance rayonnée isotrope équivalente (PIRE) ne soit pas supérieure à celle nécessaire pour établir une bonne communication.

Ce transmetteur radio, 8053B-COMAD400V2, a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous avec le gain maximal admissible et l'impédance d'antenne requise pour chaque type d'antenne indiqué. Types d'antennes ne figurent pas dans cette liste, ayant un gain supérieur au maximum le gain indiqué pour ce type, sont strictement interdites pour une utilisation avec cet appareil.

Ce dispositif a été conçu en vue de fonctionner avec les antennes énumérées ci-dessous, et ayant un gain maximal de 8,5 dBi. Il est formellement interdit d'utiliser avec ce dispositif des antennes non comprises dans cette liste ou des antennes ayant un gain supérieur à 8,5 dBi. L'impédance électrique requise pour l'antenne est de 50 ohms.

Liste d'antennes approuvées
Numéro de modèle
23530553 1 Antenne à distance, omni, mur/colonne, intérieur/extérieur
23530561 1 Antenne à distance, omni, plafond, intérieur
23530579 1 Antenne à distance, directionnelle, mur/colonne, intérieur/extérieur
23520587 1 Antenne à distance, bidirectionnelle, plafond, intérieur

Pour assurer la conformité avec les limites permises par la CFC/IC pour l'ensemble de la population/exposition non contrôlée, l'antenne (les antennes) utilisée(s) pour cet émetteur doit/doivent être installée(s) en vue d'assurer une distance d'au moins 20 cm (7,87 po) de toutes personnes et ne doit/doivent pas être colocalisée(s) ou ne pas fonctionner en concomitance avec toute autre antenne ou appareil émetteur.

Schlage Lock Company Responsibilities to comply with FCC and Industry Canada Regulations

The **COMAD400V2 900 MHz Communications Board** Module has been certified for integration into products only by Schlage Lock Company under the following conditions:

1. The antenna(s) must be installed such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and all persons at all times.
2. The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter.

As long as the two conditions above are met, further transmitter testing will not be required. However Schlage Lock Company is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

IMPORTANT NOTE: In the event that these conditions cannot be met (for certain configurations or co-location with another transmitter), then the FCC and Industry Canada authorizations are no longer considered valid and the FCC ID and IC Certification Number cannot be used on the final product. In these circumstances, Schlage Lock Company will be responsible for re-evaluating the end product (including the
transmitter) and obtaining a separate FCC and Industry Canada authorization.

End Product Labeling

The COMAD400V2 900 MHz Communications Board Module is labeled with its own FCC ID and IC Certification Number. If the FCC ID and IC Certification Number are not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. In that case, the final end product must be labeled in a visible area with the following:

"**Contains Transmitter Module FCC ID: XPB-COMAD400V2**"
"**Contains Transmitter Module IC: 8053B-COMAD400V2**"
or
"**Contains FCC ID: XPB-COMAD400V2"**
"**Contains IC: 8053B-COMAD400V2**"

Schlage Lock Company, the OEM integrator of the **COMAD400V2 900 MHz Communications Board** module must only use the approved antenna(s) listed above, which have been certified with this module.

Schlage Lock Company is aware not to provide information to the end user regarding how to install or remove this RF module or change RF related parameters in the user manual of the end product.

The user manual for the end product must include the following information in a prominent location:

"To comply with FCC and Industry Canada RF radiation exposure limits for general population, the antenna(s) used for this transmitter must be installed such that a minimum separation distance of 20cm is maintained between the radiator (antenna) and all persons at all times and must not be co-located or operating in conjunction with any other antenna or transmitter."