Operating Instructions
RPW414-FTL-902-ALC Room Control Module

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1 General Information

1.1 Information on the operating instructions

These operating instructions contain information on the RPW414-FTL-902-ALC and information on the safe installation, commissioning, handling and correct operation of the device.

The operating instructions is intended for all persons who operate the RPW414-FTL-902-ALC and should increase the reliability and the service life of the RPW414-FTL-902-ALC; it should also help prevent hazards, downtime and possible exclusion of warranty claims.

Each person who carries out work on the RPW414-FTL-902-ALC must have read and understood these operating instructions.

- If you have any questions that are not resolved by these operating instructions, you can obtain further information from the supplier or manufacturer.

1.1.1 Validity and storage of the operating instructions

These operating instructions are an integral part of the RPW414-FTL-902-ALC and apply exclusively to this device.

- Keep the operating instructions in the immediate vicinity of the device throughout the entire service life of the RPW414-FTL-902-ALC.
- The operating instructions must be passed on to any subsequent owners or users.

1.1.2 Copyright

1.1.3 As an operator, what can you do?

You may only perform the following actions on the device:

- Setting the time and date
- Setting vacation mode
- Setting the initial display to Room temperature or Time
- Manually switching between comfort and economy mode
- Automatically switching between comfort and economy mode
- Restoring defaults
- Maintenance and Cleaning
- Contacting customer service in case of Malfunctions
- Removal and Disposal

NOTE

Mounting, installation, commissioning and troubleshooting may only be performed by a service technician. Improper changes by the operator can lead to malfunctions and reduce the service life of the device.

1.1.4 Customer service

If problems occur, if you have questions or if you require technical information, please contact your service technician.

1.1.5 Notes on presentation in this manual

Notes contain supplementary information:

NOTE

Indicates additional information and important details that can simplify use of the device.

List symbols

Additional icons are presented in the text to help you follow the operating instructions:

- Indicates a list item.

► Indicates a step that must be performed.

1.2 Scope of Delivery

The standard scope of delivery includes:

- RPW414-FTL-902-ALC
- Holding plate
- Adhesive pad
- Installation note RPW414-FTL-902-ALC

2 Safety

Always observe the following in order to operate the RPW414-FTL-902-ALC Room Control Module correctly and safely:

► Read all warnings in these operating instructions in order to prevent injuries and damage to the device or any equipment connected to it.

► To avoid potential hazards, use the device only as described in the operating instructions.

► Observe the described actions and warnings in this operating instructions.

2.1 Presentation and structure of warnings

Hazardous situations are displayed with warnings and safety instructions in these operating instructions. Hazard symbols and signal words convey the severity of the hazard.

The warnings are action-related and are structured as follows.

⚠ CAUTION

Type/source of danger!

Possible consequences.

- Preventative measures.

2.2 Classification of warnings

Warnings are classified according to the severity of the hazard. Hazard levels with their corresponding signal words and warning symbols are described in the following:

⚠ CAUTION

The “CAUTION” signal word is used for situations that could result in moderate or minor injuries.

NOTICE

The “NOTICE” signal word is used for situations that could result in damage to the device.

2.3 Intended use

Observe the following to operate the device correctly:

- Do not operate the device in wet or moist environments.
- Do not operate the device in a potentially explosive environment.
- Do not open the device.
- Only operate the RPW414-FTL-902-ALC when it is in original condition.
  Modifications to the device could result in unforeseeable dangers and are thus prohibited.

2.4 Responsibilities of the Operator

You may only operate the device if it is technically sound and in safe working order.
Please observe the following items:

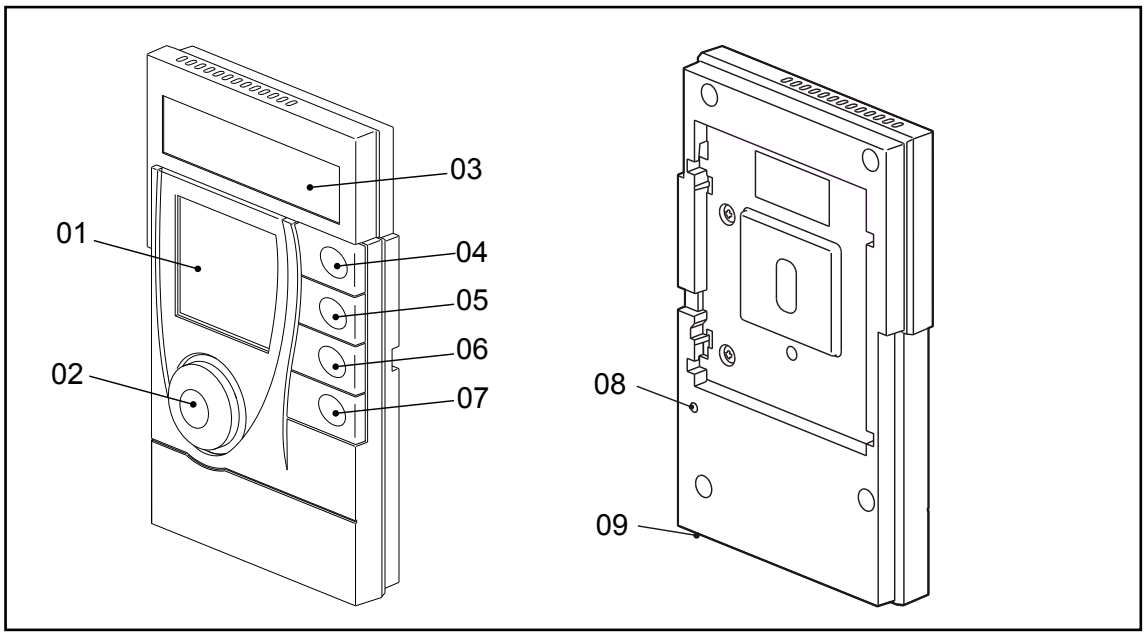
- Ensure that mounting, installation and commissioning are only performed by qualified technicians.
- Ensure that these operating instructions are available to the user.
- Make sure that the user has read the operating instructions before starting work with the RPW414-FTL-902-ALC.
- If the device becomes damaged or if a malfunction message is issued, you must inform your service technician.

3 Equipment Description

The RPW414-FTL-902-ALC is a solar-powered, self-learning room control module.

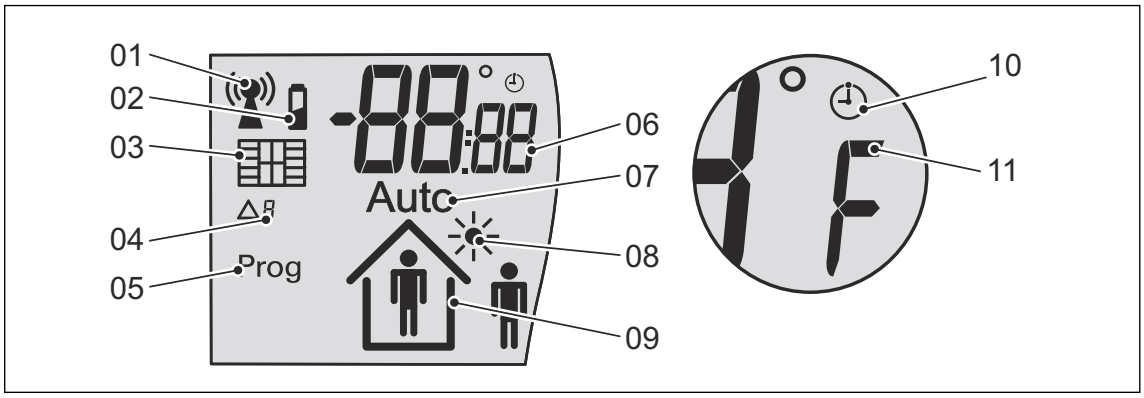
You can use the room control module to measure the room temperature in residential or commercial buildings and to create a utilization time profile from the data. After the RPW414-FTL-902-ALC has measured the room temperature, the device wirelessly transmits the desired room temperature.

3.1 Components



Item	Designation	Explanation
01	Display	Displays information on the current state of the functional unit
02	Occupancy sensor	Detects presence/absence for the utilization time profile
03	Solar cell	Generates energy for the room control module
04	Fahrenheit/Celsius	Switches displayed temperature between Fahrenheit and Celsius
05	Control fan	Turns the fan on and off
06	Raise setpoint	Raises the room temperature setpoint
07	Lower setpoint	Lowers the room temperature setpoint
08	Setting button	Switches the RPW414-FTL-902-ALC on and off (together with the occupancy button) Starts the registration procedure Resets the room control module to factory settings
09	Service connection (underside)	For authorized service technicians only

3.2 Indicators on the display



Item	Icon/display	Explanation
01	Antenna	Status of the radio connection
02	Battery	Room control module energy storage unit charging state < 30%
03	Windows	Rapid temperature drop detected
04	Code	Status and malfunction messages
05	Prog	Radio partners can be registered, registration status active
06	Information field	Display of the room temperature, time (= initial display, can be configured) or messages
07	Auto	Learned utilization time profile is active
08	Sun	The solar cell is active (test installation location). Summer mode is active
09	Occupancy	Occupancy sensor is active (test installation location). Presence/absence detected
10	Clock	The information field displays the time (hh:mm)
11	Degrees Fahrenheit	The information field displays the temperature (°F)

3.3 Operations

The RPW414-FTL-902-ALC sensors, designed for zone control, are low-power wireless devices that use light-harvesting through solar panels as their primary power source. This line of sensors includes the models shown in the table below. All are available in 868, 902, and 928 MHz radio frequency.

The sensors communicate with an Rnet Gateway that can be wired to the Rnet port of any of the following controllers:

- LGR line
- ME line
- SE line
- ZN line
- Equipment portal

The Rnet Gateway translates the sensor's customized EnOcean protocol into the Rnet protocol so that the sensors can be integrated with the existing programming logic for wired ZS sensors.

NOTE: WS sensors do not operate with the standard EnOcean protocol, and third-party wireless sensors do not operate on the Rnet network.

Requirements

- A v6.5 or later WebCTRL® system
- v6-00 or later controller drivers

Features

- Temperature and relative humidity sensor
- On-board PIR (passive infrared) motion sensor
- Wireless
- Digital display
- Fan control
- Solar-powered indoor solar panels collect ambient light to power the sensor and send wireless communication

4 Packaging, transportation and storage

4.1 Packaging

Unpacking

The device is delivered in a cardboard box. When unpacking it, proceed as follows:

► Carefully remove the device from the packaging making sure you do not damage it.

► Dispose of the packaging material according to local regulations.

Repackaging

If you wish to repackage the device for transportation (e.g. for sending a device to the manufacturer), observe the following points:

- Select an appropriate material for the packaging.
  The packaging must not be too large or too small.
- Use packing material to prevent the device from sliding.
- Carefully close and seal the packaging.

4.2 Transportation

If you wish to transport or send a device, proceed as follows:

- Transport the device in appropriate packaging.
- Do not throw or toss the packaged device.
- Do not drop the device.

4.3 Storage

If you wish to store the packaged device for a long period of time, you must observe the following:

- Ensure that the environment is dry.
- Only store the device indoors.
- Store the device in a dust-free environment.
- Protect the device from bumps and mechanical damage.

5 Maintenance and Cleaning

5.1 Maintenance

The RPW414-FTL-902-ALC does not require regular maintenance.

5.2 Cleaning

The RPW414-FTL-902-ALC Room Control Module should be cleaned as necessary. There is no prescribed cleaning interval.

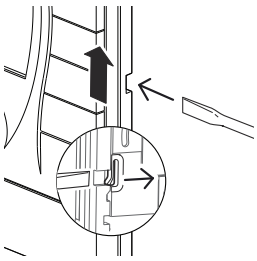
- ► Clean the RPW414-FTL-902-ALC with a lint-free, lightly moistened cloth.
- ► Do not use any aggressive cleaning products.

6 Removal and Disposal

6.1 Removal

6.1.1 Screw mounting

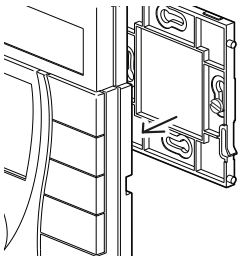
If you want to remove the room control module, proceed as follows:



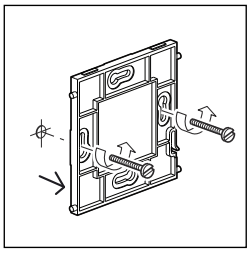
► Insert the flat screwdriver into the notch between the room control module and the holding plate on the right side.

► Use the flat screwdriver to press the holding bar and release the connection from the room control module to the holding plate.

► Slide the room control module upward.



► Separate the room control module from the holding plate.



► Remove the screws by turning the flat screwdriver in counter-clockwise direction.

► Remove the holding plate.

6.1.2 Adhesive mounting

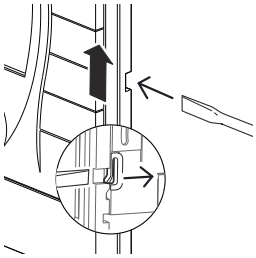
NOTICE

Damage to the mounting surface!

If you use an adhesive pad other than the one supplied, or the mounting surface is textured and does not offer sufficient load-bearing capacity, the mounting surface may become damaged when the adhesive pad is removed.

- ► Only use the adhesive pad supplied when mounting the holding plate.
- ► Only adhere the device to smooth, non-sensitive surfaces (e.g. tiles) and not on textured surfaces that can easily become damaged (e.g. textured plaster, wood-chip wallpaper).

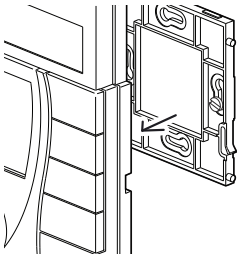
If you want to remove the room control module, proceed as follows:



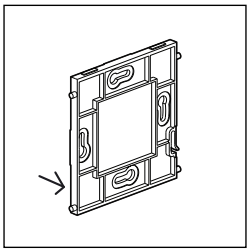
► Insert the flat screwdriver into the notch between the room control module and the holding plate on the right side.

► Use the flat screwdriver to press the holding bar and release the connection from the room control module to the holding plate.

► Slide the room control module upward.



► Separate the room control module from the holding plate.



► Remove the adhesive pad from the wall and the holding plate.

► Remove the holding plate.

6.2 Disposal

The RPW414-FTL-902-ALC Room Control Module is an electrical device with lithium batteries and a solar cell. The RPW414-FTL-902-ALC Room Control Module therefore may not be disposed of with household waste, it may only be disposed of in appropriate receptacles or at designated collection points.

- ► Please observe locally applicable laws and regulations.

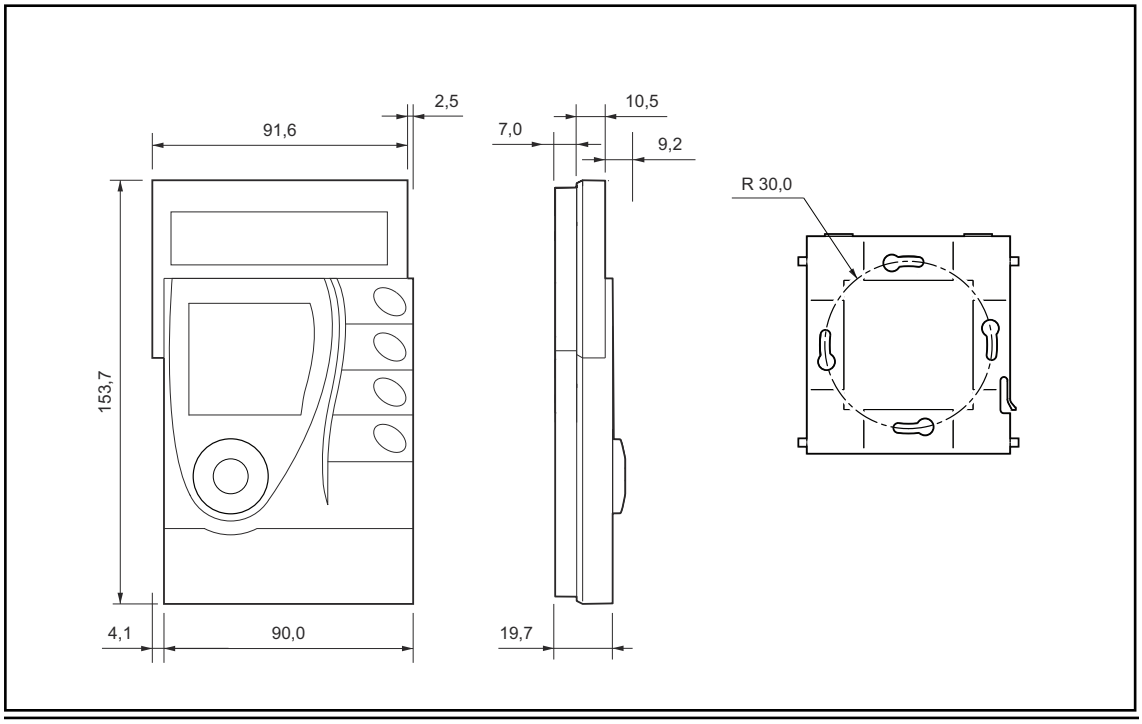
7 Technical Specifications

7.1 Technical data

Nominal voltage	Dual power supply consisting of a solar cell and an internal energy storage unit with priority management Lithium battery (AA): DC 2.3 V; 0.08 W
Measured quantity	Room temperature in homes or offices
Measuring system	Temperature sensor: - Integrated digital sensor Occupancy sensor: - Integrated PIR (“Passive infrared”) sensor
Measuring range	32 °F (0 °C) to 104 °F (40 °C)
Relative measurement precision	0.1 K
Display	LCD: ■ Room temperature/time, optionally ■ Status indicators
Controls	■ **F**/**C** Fahrenheit/Celsius: switch displayed temperature between Fahrenheit and Celsius ■ Control fan: turn the fan on and off ■ ▲ Raise setpoint: raise the room temperature setpoint ■ ▼ Lower setpoint: lower the room temperature setpoint
Interfaces	EnOcean® wireless interface: ■ Radiogram: EnOcean radiogram, bidirectional ■ Frequency: 902,875 MHz ■ Duty cycle: < 1 % ■ Cyclic transmission/reception intervals
Communication cycle	10 min
Transmission power	< 10 mW
Illumination strength	Min. 100 lux recommended
Operating range	Radio: Approx. 30 m in buildings (depending on building structure) Occupancy sensor: Approx. 10 m
Housing	Plastic housing, RAL 9010 (pure white), 7001 Other colors on request
Protection class	III
Degree of protection	IP30
Ambient temperature	32 °F (0 °C) to 122 °F (50 °C)

Ambient humidity	During operation: 20 to 85% r.h. Out of operation: 5 to 90% r.h.; non-condensing
Installation	Flexible mounting using screws or adhesive
Maintenance	Maintenance-free
Weight	0.22 kg
Dimensions (WxHxD)	90 mm x 153.7 mm x 26.7 mm

7.2 Dimensions

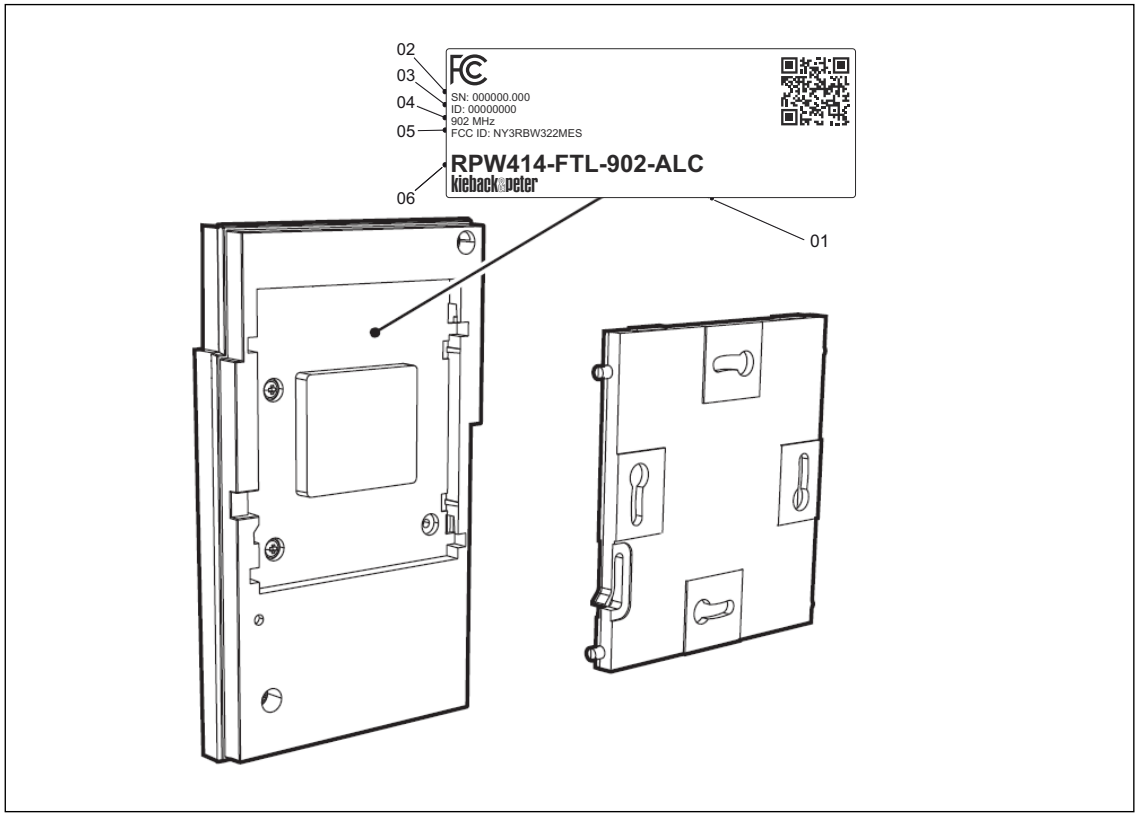


NOTE

The figure shows the dimensions of the device in mm.

7.3 Type plate

The RPW414-FTL-902-ALC Room Control Module type plate is located on the back of the device, behind the holding plate.



01	Type plate of the RPW414-FTL-902-ALC Room Control Module
02	Serial number
03	Identification number
04	Frequency
05	Device approval number (USA)
06	Device name

8 Appendix

8.1 Compliance statement

Compliance statement

This device complies with section 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 that may cause undesired operation.

Modifications not expressly approved by this company could void the user's authority to operate the equipment.

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 when the equipment is operated in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with this document, it 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 or more 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.

Radio Frequency (RF) Signal

The radio device is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limit for exposure to radio frequency (RF) energy set by the OET Bulletin 56 Supplement C in the USA and by the Ministry of Health (Canada), Safety Code 6 in Canada. These limits are part of comprehensive guidelines and established permitted levels of RF energy population. These guidelines are based on the safety standards previously set by international standard bodies. These standards include a substantial safety margin designed to assure the safety of all persons, regardless of their ages and health.

This device and its antenna may not be located too close to or operated in conjunction with any other antenna or transmitter.

This device is capable of compliance with localized specific absorption rate (SAR) for uncontrolled environment/general public exposure limits specific in ANSI/IEEE C95.1-1992 and has been tested in accordance with the measurement procedures specified in IEEE Std. 1528-2003 December 2003.

Class B digital device or peripheral

The RPW414-FTL-902-ALC is a digital device that is marketed for use in a commercial, industrial or business environment, exclusive of a device which is marketed for use by the general public or intended to be used in the home.

The equipment has been tested and found to comply with the limits for a **Class B digital device**, pursuant to section 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 tot 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 or more 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.

Declaration concerning antenna specifications

The device conforms to the FCC recommendations for the internal antenna type described below:

Model no. of antenna:	N/A
Type of antenna:	integrated/onboard PCB antenna, permanently attached
Gain of the antenna:	≤ -10 dBi
Frequency range:	902 MHz

Industry Canada Regulatory Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following conditions:

1) This device many not cause interference.
2) This device must accept any interference, including interference that may cause undesired operation of the device.

Important: Any changes or modifications not expressly approved by manufacturer could void the user’s authority to operate the equipment.

This Class B digital apparatus complies with Canadian ICES-003.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de license. L'exploitation est autorisée aux deux conditions suivantes:

1) L'appareil ne doit pas produire de brouillage.
2) L'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, mem si le brouillage est susceptible d'en compromettre le foncitionnement.

Important: Tous les changements ou modifications pas expressément approuvés par la partie responsable de la conformité ont pu vider l'autorité de l'utilisateur pour actioner cet équipment.

Cet appareil numérique de las classe B est conforme à la norme NMB-003 du Canada.

9 Contact data

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