Product: MICROWAVE SENSOR

Model: EZ-HS301

OEM/Integrators Installation Manual

COMMAX Co.,Ltd.

1. Scope of application

This product is applied to Commax front door controller.

2. Overview

This product has a built-in MCU CONTROLLER and uses DC 5V.
It is used as input power and the output is 0V when there is no detection.
If it is 5V.

3. Electrical characteristics

3.1 Rated Input Voltage: DC5V
3.2 Input Maximum Voltage Range: DC 4.8 – 5.2 Vdc
3.3 output voltage: DC 0-5V

4. Detection distance, (may show slight distance depending on environment)

4.1 Distance: About 1.5 ~ 2M
4.2 Angle: VERTICAL: about 50 degrees, HORIZONTAL: about 140 degrees

5. Detection principle and operation

Microwave sensor of RF type detects the change of frequency caused by movement in transmitting / receiving electromagnetic waves and controls the output.

1) The output waits at 0V until the object is detected
2) Outputs 5V when an object is detected
3) It outputs 5V for 1 second from the moment of the first detection.
   If an object is detected again while 5V is maintained, 1 second is set again and maintains 5V.
4) If no object is detected while 5V is maintained, output goes back to 0V and goes to standby state.

6. Dimensions and connector

1) 36mm x 20mm x 1.0T
2) V: 5V // G: 0V // I: Controller output terminal

7. Features of the product

7.1 Unaffected by environmental factors such as dust, light, noise and temperature.
7.2 Non-metallic structures (plastics, curtains, barriers, office partitions, glass, plywood, etc.) penetrate through and detect the movement of objects on the opposite side.

8. Environmental conditions

8.1 Operating Temperature: -20 ~ 60 ℃
8.2 Operating Humidity: 0 ~ 80% RH

Federal Communication Commission Statement

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.

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.

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

OEM Responsibilities to comply with FCC
- The module is limited to OEM installation only.
- The OEM integrator is responsible for ensuring that the end-user has no manual instructions to remove or install module.
- The module is limited to installation in mobile or fixed applications.
- The transmitter module must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.
- Separate approval will be required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations other than supplied antennas.

As long as the condition above is met, further transmitter testing will not be required. However, the OEM integrator 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.).
Also, the OEM integrator is responsible to provide to the host manufacturer for compliance with the Part 15B requirements.

Host User Manual
The host manual shall include the following regulatory statement:
Part 15.19: 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.
Part 15.21: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.
The antenna(s) must be installed such that a minimum separation distance of at least 20 cm is maintained between the radiator (antenna) and all persons at all times.

Host Product labeling
The module is labeled with its own FCC. If the FCC ID is 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 FCC ID: CCEEZ-HS301”

IC Statement

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 causeundesired operation of the device.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence.
L'exploitation est autorisée aux deux conditions suivantes: (1)l'appareil ne doit pas produire de brouillage, et (2)l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si lebrouillage est susceptible d'en compromettre le fonctionnement.

The host device must be labeled to display the Industry Canada certification number of the module.
Contains transmitter module IC: 22254-EZHS301
Le dispositif d'accueil doivent etre etiquetes pour afficher le numero de certification d'Industrie Canada du module. Contient module emetteur IC: 22254-EZHS301