

Door Sensor

1 Introduction

1.1 About the Accessory

The TZ-8166 door sensor is an actuator mechanically linked to a set of contacts. It is operated by the motion of a machine part or presence of an object. When an object comes into contact with the actuator, the device operates the contacts to make or break an electrical connection.

1.2 Legal Information

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1.3 Compatibility

The door sensor is compatible with the following devices with the newest firmware version:

- HCV5
- LCV5
- Pro5
- Trace5
- FM-Tco4 HCV
- FM-Tco4 LCV
- FM-Pro4
- FM-Eco4
- FM-Eco4 S
- FM-Eco4 T

1.4 Contact Information

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1.5 Document Changelog

Version	Date	Modification
2.0	2021-03-19	Updated: Manual structure and design.

1.6 Notations

The following notations are used in this document to highlight important information:

Bold text

Used to indicate user interface elements or for emphasis.

Italic text

Used to indicate items that belong to a list and can be selected.

Note



Used to highlight important information or special conditions.

Tip



Suggestions on how to proceed.

2 Principles of Operation

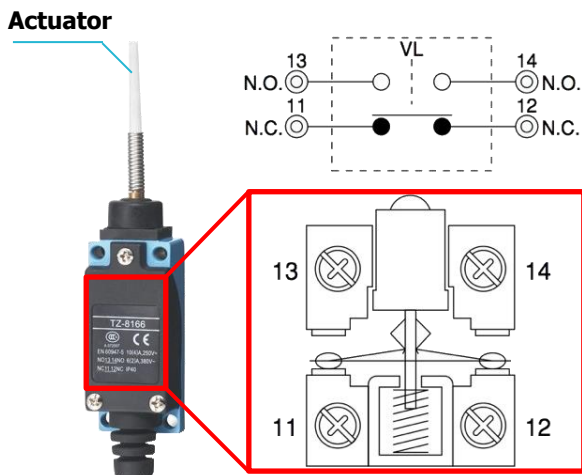
There are two sets of contacts inside the sensor. One set is called NO (normally open), another NC (normally closed).

NO contacts

If power supply wires are connected to the NO contacts, the current flow starts only when the actuator is in contact with an object (e.g. door).

NC contacts

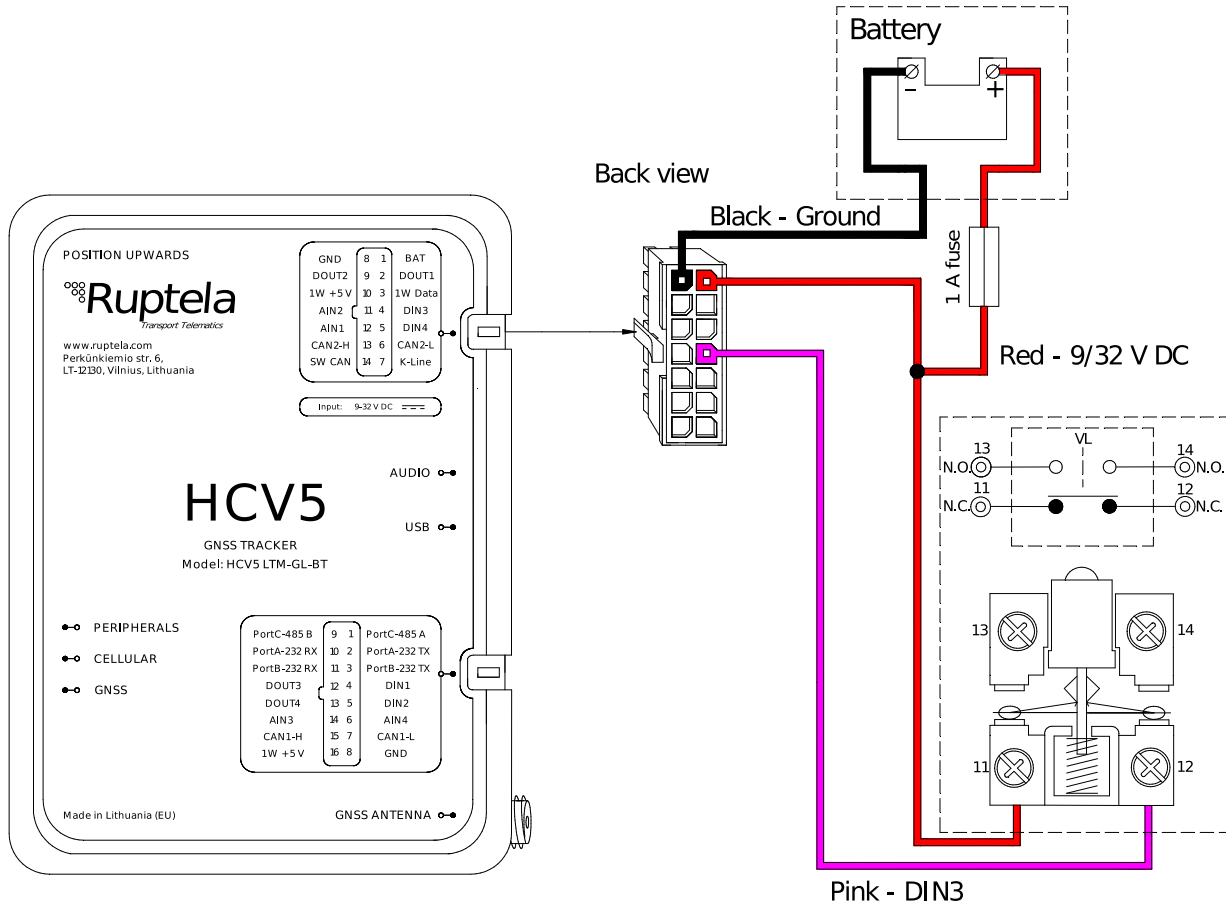
If power supply wires are connected to the NC contacts, the current flow stops when the actuator is in contact with an object (e.g. door).



3 Connection

3.1 Connection to 5th Gen Advanced Family Devices

Connect the door sensor to your tracking device as follows:



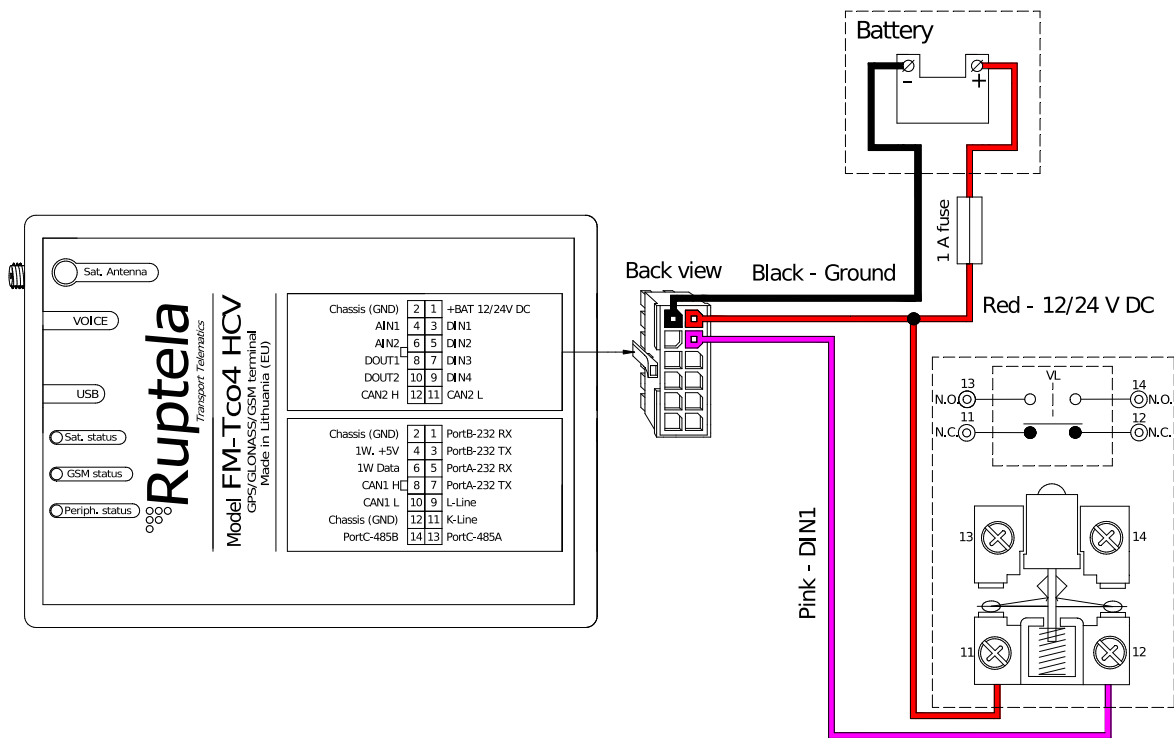
Here the DIN state 1 will represent open doors and DIN state 0 – closed doors. To get vice versa states – connect power supply and DIN wires to NO contacts (13 and 14).



Alternatively, door sensor can be connected to DIN1 (yellow/black wire, pin 4), DIN2 (pink/black wire, pin 5), DIN4 (yellow wire, pin 5).

3.2 Connection to 4th Gen Advanced Family Devices

Connect the door sensor to your tracking device as follows:



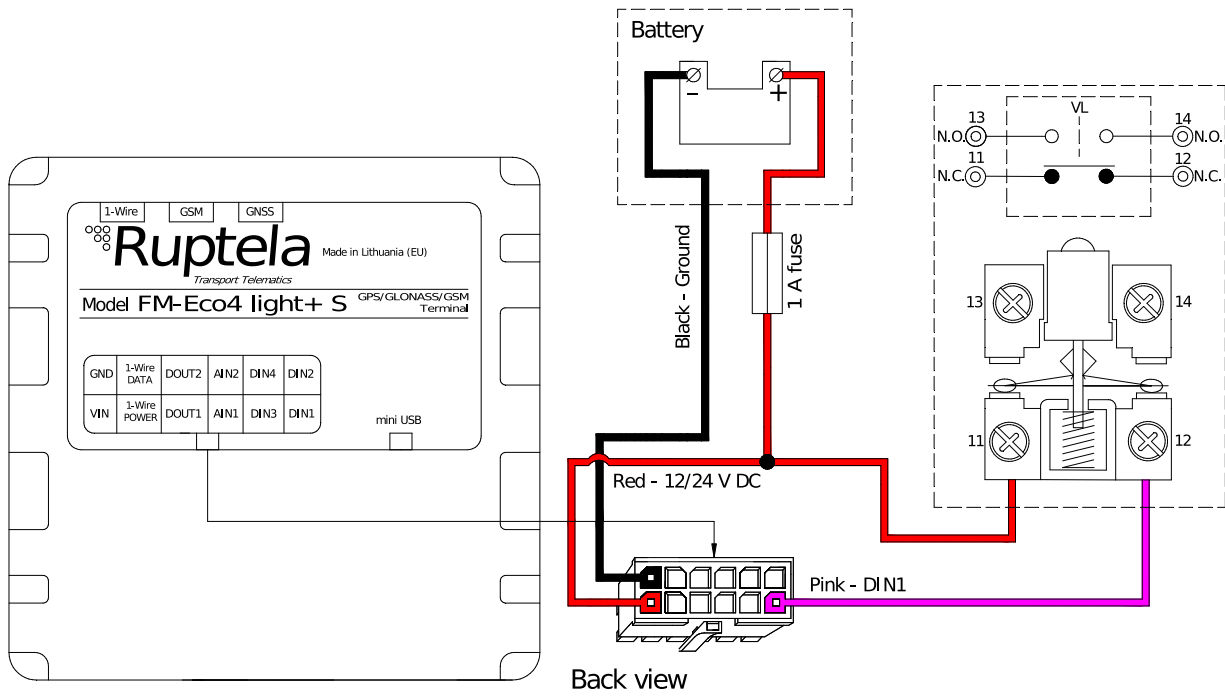
Here the DIN state 1 will represent open doors and DIN state 0 – closed doors. To get vice versa states – connect power supply and DIN wires to NO contacts (13 and 14).



Alternatively, door sensor can be connected to DIN2 (blue wire, pin 5) DIN3 (white wire, pin 7), DIN4 (yellow wire, pin 9).

3.3 Connection to FM-Eco4 Series Device

Connect the door sensor to your tracking device as follows:



Here the DIN state *1* will represent open doors and DIN state *0* – closed doors. To get vice versa states – connect power supply and DIN wires to NO contacts (13 and 14).



Alternatively, door sensor can be connected to DIN2 (blue wire, pin 5) DIN3 (white wire, pin 7), DIN4 (yellow wire, pin 9).

4 Configuration

i This functionality requires the use of the advanced configurator.

4.1 Starting the Configuration

To start the configuration, follow these steps:

1. Open the advanced configurator. Select your tracking device.
2. Select the COM port to which your device is connected.
3. Click **Connect**.
4. Click the **Options** button in the **IO events** section to open the **IO Settings** window.

The screenshot shows the advanced configurator interface with several elements highlighted by red boxes and numbered callouts:

- COM3**: A red box highlights the COM port selection dropdown, with a circled '2' next to it.
- Connect**: A red box highlights the 'Connect' button, with a circled '3' next to it.
- HCV5**: A red box highlights the device model selection dropdown, with a circled '1' next to it.
- IO events Options**: A red box highlights the 'Options' button in the 'IO events' section, with a circled '4' next to it.

The interface includes various configuration sections such as Global, APN settings, Connection settings, Configuration Password, Authorized numbers, Eco-Drive, Authorized IDs, Wireless, Audio settings, Movement sensor sensitivity, Driver registration, Trip type detection, Geofencing, Auto-geofencing, GNSS, Offline tracking, Towing detection, Impact detection, Sleep, Data sending, Data collection, Network, Operator list, and IO events.

4.2 Configuring the Door Sensor

Follow these steps to configure the door sensor:

1. Select an empty parameter slot.
2. In the **ID** section select *DINX* from the drop-down list for the same DIN that you used for the connection.
3. Enable the slot by ticking the **Enable** checkbox.
4. Set **Event on** to *Change*.
5. Set Priority to *High*.



You can check the DIN state in TrustTrack reports.

IO settings

1 : DIN3 ①

IO properties

③ Enable Make a Call

ID DIN3 ②

Level 0

Delta 0

Debounce 1000 ms

Event on Change ④

Include data only on event

Priority High ⑤

Switch to No Switch

SMS Alert

Alert text

Event on high

Event on low

Interfaces

PortA

PortB

PortC

K-Line

CAN

CAN2

1-Wire

LCV Autoselect

Start Enable I/Os

DIN1 mode Positive mode

DIN2 mode Positive mode

DIN3 mode Positive mode

DIN4 mode Positive mode

Clear all IO

Enable common IO

Enable IO

IO counters

Records on event: 1

Digital outputs

DOUT1 Disabled Inverted

DOUT2 Disabled Inverted

DOUT3 Disabled Inverted

DOUT4 Disabled Inverted

Activation conditions

4.3 Finishing the Configuration

To finish the configuration, close the **IO settings** windows. Click **Send CFG** to send the configuration to the device.

The screenshot displays a configuration window for a device. On the left, there are dropdown menus for 'COM5' and 'HCV5', and buttons for 'Disconnect', 'Send CFG' (highlighted with a red border), 'Get CFG', and 'Send FW'. Below these are device identifiers: IMEI: 866600049035322, FW: 00.03.60.03, BL: 0x54 0x2d, BLE St: (5) No power, BLE APP:, BLE BL:, and BLE SD:.

The main configuration area is divided into several sections:

- Global:** Protocol selection (UDP selected, TCP unselected).
- APN settings:** Name, User, Psw fields, and checkboxes for 'Lock FM device to the SIM card' and 'AutoAPN' (with an 'Options' button).
- Connection settings:** IP1, Port1 (0), IP2, Port2 (0) fields, checkboxes for 'SSL 1', 'SSL 2', and 'Two servers', and buttons for 'Periodical redirect', 'SSL settings', and 'DNS settings'. An 'Identification string' dropdown is set to 'Disabled'.
- Driver registration, Trip type detection, Geofencing, Auto-geofencing, GNSS, Offline tracking, Towing detection, Impact detection:** Each has an 'Options' button.
- Configuration Password:** A text input field.
- Authorized numbers:** An 'Options' button.
- Eco-Drive:** A checked 'Enable' checkbox with an 'Options' button.
- Authorized IDs:** A checked 'Enable' checkbox with an 'Options' button.
- Wireless:** A checked 'Enable' checkbox with an 'Options' button.
- Audio settings:** An 'Options' button.
- Movement sensor sensitivity:** A slider ranging from 1 (Min) to 10 (Max), with a blue marker at 8.