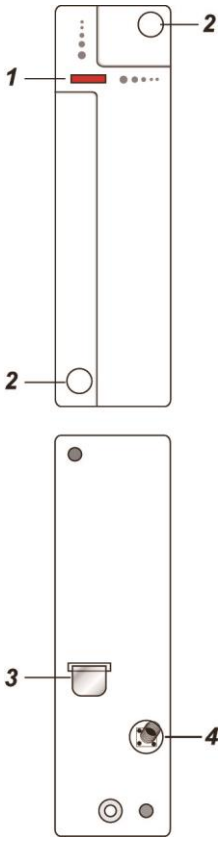
Door Contact (DC-15C2-2W / DCA-15C2-2W)

The Door Contact is used to detect the opening and closing of doors and windows. Typically the Door Contact is fixed to the door frame and the actuating magnet is fixed to the door. When the door opens, the magnet is moved away from the Door Contact and an internal magnetic switch will be activated causing the Door Contact to transmit an alarm.

A PCB tamper switch protects the enclosure from being opened or being removed from the mounting surface and also alert you to signal communication problems and low battery situations.

The Door Contact features extension terminal which can be used to connect to a N.C. (Normal Close) device or roller shutter to provide greater flexibility.

● *Identifying the Parts*



1. RED LED indicator / Test Button

Test Button

- Press once to transmit a learning code.
- Press once to enter Test mode for 3 minutes.

2. Mounting Holes

The mounting holes are covered by white caps. Remove white caps when installing the Door Contact.

3. PCB Tamper Switch

The PCB Tamper Switch protects the device from being opened or being removed from the mounting surface.

4. Battery Insulator

5. Fixing Screw

It is used to secure the top and bottom case of the Door Contact.

● *Accessories Included*

a) 1 Magnet
b) 2 White Caps
c) 2 Screws
d) 2 Wall Plugs
e) 1 double-sided adhesive tape for Magnet
f) 2 screws for Magnet

● *LED Indicator*

In Normal operation mode, the LED indicator remains off except in the following situations:

- When the Door Contact's tamper switch is triggered.
- When the Door Contact is activated under Tamper or Low battery condition.
- When the Door Contact is activated under Test mode.

The LED will not flash if the Door Contact tamper and battery are normal and is not under test mode,

If the LED flashes to indicate signal transmission, it will flash twice rapidly upon receiving acknowledgement from panel.

● *Test Mode*

- Each time the Test Button is pressed, the Door Contact will transmit a test signal to the Control Panel for radio range test and enter the test mode for 3 mins. When the test signal is transmitted, the Red LED will light on.
- Under Test Mode, the LED will light up whenever the Door Contact is activated.
- Each additional press on the Test Button will reset Test Mode time to 3 minutes.

● *Supervision Function*

The Door Contact conducts self-test periodically by transmitting Supervisory signal once every 90~115 mins.

If this signal is not received, the Control Panel will indicate on its screen that the particular Door Contact is experiencing an **out-of-signal** problem.

Battery

The Door Contact uses CR2 3V Lithium battery as its power source. When low battery voltage is detected, a low battery signal will be sent to the Control Panel along with regular signal transmissions for the Control Panel to display the status accordingly.

When the battery is exhausted, the Door Contact will stop all function, the LED will flash every 4 seconds.

Before shipment, the battery is pre-installed by the factory with an Insulator inserted. Please remove the battery insulator to activate the Door Contact.

Door Contact Functions

Internal Magnetic Switch / PCB Tamper

- The Internal Magnetic Switch monitors door opening and closing. The PCB tamper protects the door contact from cover opening and removal from mounting location
- The Internal Magnetic Switch and built-in PCB Tamper Switch are learnt into panel by pressing the Learn/Test button once.

Extension Terminals

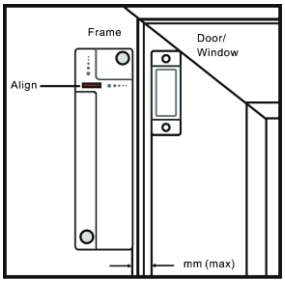
- The Extension Terminal 1 is used to connect to a Roller Shutter
- The Extension Terminal 2 is used to connect to an external N.C. (Normally Closed) device.
- If cable disconnected or cable broken situation is detected for more than 3 seconds, a report will be sent to the Control Panel to notify the user.

If you want to disable one of the functions, remove its corresponding zone from the Control Panel.

Getting Started

- Pull out the battery Insulator.
- Put the Control Panel into learning mode.
- Press the Test Button on Door Contact to transmit a learning signal.
- If the signal is received by the Control Panel, the panel will display the information accordingly, please refer to the Control Panel manual to complete the learning process.
- After the Door Contact is learnt-in, put the Control Panel into "**Walk Test**" mode, hold the Door Contact in the desired location, and press the Test button to confirm this location is within signal range of the Control Panel.
- When you are satisfied that the Door Contact works in the chosen location, you can proceed with installation.

Mounting Methods and Installation

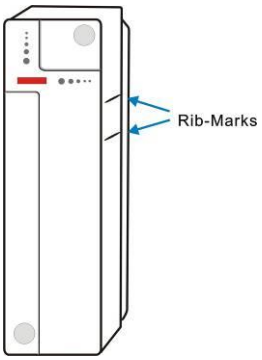


It is recommended that the Door Contact should be placed on the door frame and the magnet on the door. If the door contact is placed on the door, and the door is opened too fast, the transmitted distance may be shorted.

The magnet should not be more than 15mm from the Door Contact when the door is closed.

<NOTE>

☞ If the Door Contact cannot be mounted on the door frame, you can connect additional switches to the "**Extension Terminal**" and mount the Door Contact remotely (for details, please refer to "**Using the Extension Terminal**" section).



Step 1: Find a suitable place that is close to your door / window to locate the Door Contact.

Step 2: The Door Contact has 2 rib-marks on one side (refer to figure), where the internal magnet switch is located. The door contact should be installed either upright or inverted, to ensure that the rib-marked side faces the magnet.

Step 3: To mount the Door Contact:

(i) Using the 2 mounting holes of the Door Contact as a template, mark off the hole positions on the most appropriate place.

(ii) Insert the wall plugs if fixing into plaster or brick

(iii) Screw the Door Contact into the wall plugs.

Step 4: Fit the magnet on the door using the small double sided adhesive tape or the screws provided. The magnet must be aligned with the marked side of the door contact as shown in figure.

< NOTE >

- ☞ Ensure the PCB tamper switch spring is positioned so that it makes contact with the mounting surface through the tamper switch aperture.

Step 5: Test the Door Contact by opening and closing the door or window when the Control Panel is in "Walk Test" mode.

Step 6: Fit the white caps to the two mounting holes of the Door Contact..

Step 7: Installation is now completed.

● *Internal Jumper and Terminal*

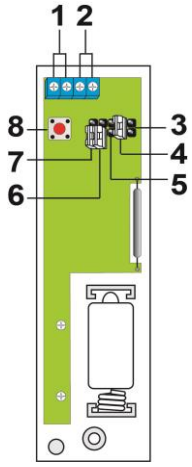
1. Extension Terminal 1

The Terminal 1 is used to connect to the Roller Shutter.

2. Extension Terminal 2

In addition to the built-in magnet switch, you can connect an additional switch or any device with N.C. (Normally Closed) dry contact to this 2 –pin terminal for installation convenience.

For details, please refer to ***Using the Extension Terminal*** section.



3. Reserved (JP2)

4. Internal Magnet Switch Bypass Jumper Switch (JP3)

This 2-pin jumper switch is to select whether the internal magnet switch is being used.

If the jumper is ON (the jumper link is inserted connecting the two pins), the internal magnet switch is bypass. Only the device connected to the Extension Terminal will activate the Door Contact.

If the jumper is OFF (if the jumper link is removed or "**parked**" on one pin), the internal magnet Switch is in use. *(Factory Default)*

5. Roller Shutter Setting ─ 5 Pulse /Disable(JP4)

Only used when Terminal 1 is set to Roller Shutter

This Jumper is to select how many pulses it takes to activate Terminal 1 when it is set to Roller Shutter

If the jumper is ON, when the Terminal 1 counts **5** Pulses **in 10 seconds**, the Door Contact will send alarm signal.

If the jumper is OFF, the Terminal 1 will not be triggered by 5 Pulses in 10 seconds. ***(Factory Default)***

6. Roller Shutter Setting ─ 6 Pulse /Disable(JP5)

Only used when Terminal 1 is set to Roller Shutter

This Jumper is to select how many pulses it takes to activate Terminal 1 when it is set to Roller Shutter

If the jumper is ON, when the Terminal 1 counts **6** Pulses **in 10 seconds**, the Door Contact will send alarm signal.

If the jumper is OFF, the Terminal 1 will not be triggered by 6 Pulses in 10 seconds. ***(Factory Default)***

7. Roller Shutter Setting ─ 8 Pulse /Disable(JP6)

Only used when Terminal 1 is set to Roller Shutter

This Jumper is to select how many pulses it takes to activate Terminal 1 when it is set to Roller Shutter

If the jumper is ON, when the Terminal 1 counts **8** Pulses **in 10 seconds**, the Door Contact will send alarm signal.

If the jumper is OFF, the Terminal 1 will not be triggered by 8 Pulses in 10 seconds. ***(Factory Default)***

<NOTE>

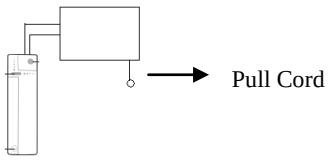
- ☞ Only one of the JP4, JP5 and JP6 can be set as ON at .
- ☞ If more than one of the JP4, JP5 and JP6 are set as ON or none is set as ON, the Terminal 1 will be triggered after **5** Pulse are counted **in 10 seconds**.
- ☞ The pulse count will reset if Terminal 1 is not activated within 10 seconds .

8. Test Button

Using Extension Terminal 1

The Terminal 1 can be triggered by the rotations of the axle.

- Whether the pull string is pulled down or retracted, it will cause axle rotated. Option are available for alarm trigger with 5, 6 or 8 axle rotations.
  - ☞ 5 axle rotations are about 9.5 cm.
  - ☞ 6 axle rotations are about 10.5 cm.
  - ☞ 8 axle rotations are about 13 cm.



- When the Pulse does not achieve the number of triggered times in 10 sec, the count will reset.
- The times of Pulse, which causes the terminal 1 alarm trigger, can be programmed by Jumper 4, 5 or 6 . Only one of the three can be selected ON. If more than one of the three are set as ON or none is set as ON, the Terminal 1 will be triggered after **6** Pulse are counted **in 10 seconds**.

Using Extension Terminal 2

The Door Contact has an extension terminal to provide enhanced flexibility. The extension terminal forms a closed loop with the device connected to it. When the device is triggered, the loop will be opened; the Door Contact will also be triggered.

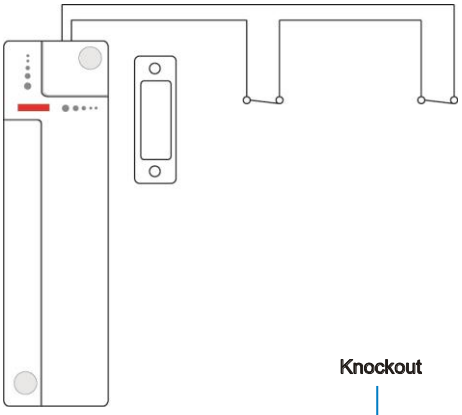
The Extension Terminal 2 and the internal magnetic switch can function together to trigger the Door Contact when either of them is activated, you can also choose to disable the internal magnetic switch through JP3 Jumper setting.

To connect the device to extension terminal:

1. Open the Door Contact by loosening the fixing screw
2. The upper end of the front case has a thinner plastic knockout. Break through the knockout to create a hole for the wiring connection to the extension terminal.
3. Connect the device to the extension terminal

The Extension terminal may be useful for the following situation.

- If the Door Contact cannot be mounted on the door frame, you can connect an additional extension switch to the extension terminal to mount the Door Contact remotely.
- Any dry contact device with N.C. (Normal Close) loop can be connected to the Extension Terminal making the Door Contact serve as an Universal Transmitter.
- Multiple dry contact device can be wired together with Door Contact, as show in diagram.

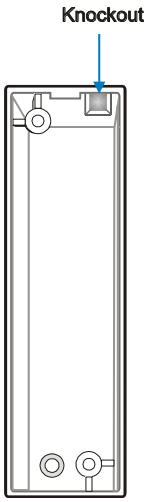


CONNECTION TO EXTENSION TERMINAL:

Step 1: Open the Door Contact by loosening the fixing screw.

Step 2: The upper end of the front case has a thinner plastic knockout. Break through the knockout creating a hole for the wiring connection to the Extension Terminal.

Step 3: Connect the external device(s) to the Extension Terminal as shown in the diagram.



<NOTE>

☞ **If both the Internal Magnet Switch and Extension Terminal 2 are in use:**

When the protected door is opened/closed **or** the external device is triggered, the Door Contact activates and transmits a signal immediately .

The Door contact will only transmit a **Door Closed** or **Restored** signal after both the door **and** the external device are restored for 3 sec.

Battery Change

I. Dismount the Door Contact, by first removing the white caps then the mounting screws.
II. Open the Door Contact by loosening the bottom fixing screw.
III. Remove the old batteries and press the Tamper Switch twice to fully discharge.
IV. Replace the new CR2 3V Lithium battery in the battery compartment, taking care to connect the polarity correctly.
V. Replace and tighten the cover.
VI. Screw back the Door Contact to the surface with mounting screws, and then re-insert the white caps.