

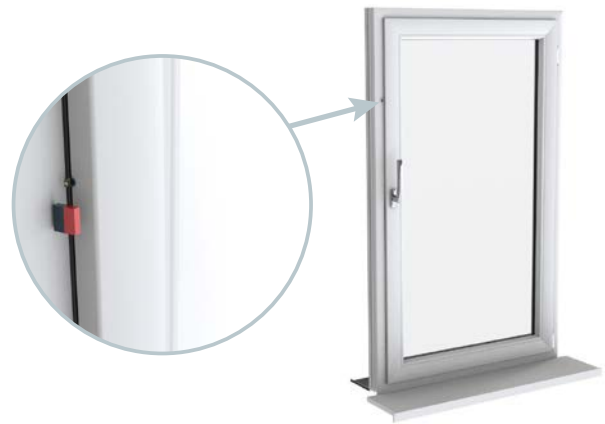
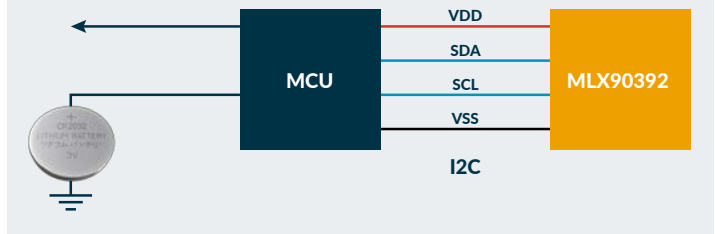
## DOOR & WINDOW CLOSURE DETECTION

A safe closure detection solution for all doors and windows is necessary to secure your home. Additionally it should detect when someone is trying to tamper with the alarm system. This functionality is traditionally done with non-contact switches (e.g Reed or Hall) which suffer from major flaws:

- Single switching point solutions can easily be tampered with using external magnets. A multiple switching points solution is complex and costly.
- They only measure a magnetic field in 1 direction which limits the re-usability of the mechanical design.

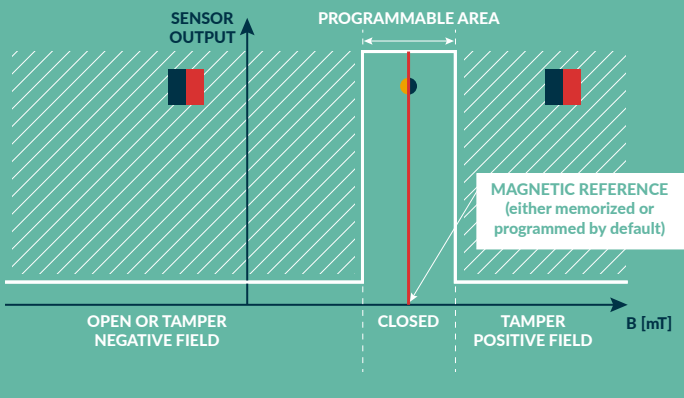
Melexis offers a 3D magnetometer that can solve these problems all at once, without compromising any of the key application requirements.

### Block diagram



### Home security

The sensor measures magnetic fields along the 3 axes. It can be programmed to only respond to magnets located in a specified position.



### Melexis 3D magnetometer solution

The MLX90392 may be integrated into a Melexis patented solution to detect an attempt to tamper with the closure detection sensor.

Using a MLX90392 would allow:

- Flexibility to add one or more thresholds on any of the field components (i.e Bx, By, Bz)
- Adjustable thresholds level from -50mT to +50mT
- On the fly modification of the application parameters through I2C protocol
- Average current consumption down to 2.5µA @1Hz update rate

### More about our products and solutions



Europe, Middle East and Africa  
[sales\\_europe@melexis.com](mailto:sales_europe@melexis.com)  
 +32 13 67 04 95

Asia and Oceania  
[sales\\_asia@melexis.com](mailto:sales_asia@melexis.com)  
 +86 21 5820 6899

Americas  
[sales\\_usa@melexis.com](mailto:sales_usa@melexis.com)  
 +1 248 306 5400