The chart below is a general guide to aid the installer in giving an approximate area of coverage. To ensure that the area is fully protected the installer should carry of test once installed

Area of Protection Chart

Mounting Surface	Diameter
Multi-pane glass / sensor on frame	3.5 mtrs
Plate glass / sensor on frame	4.2 mtrs
Plate glass / sensor on glass	4.2 mtrs
Heavy metal (6mm max)	5.0 mtrs
Sheet metal	3.5 mtrs

Features	SD1	SD2	SD3	SD4
Sealed:	✓			
Tampered:			✓	✓
Magnetic Contact:				✓
Termination type:	2 x Wire	Wrap round screw		
Standards:	EN50131-1			
Security Grade:	3	1	2	2
Environmental class:	II	II	II	II
Construction Material:	HIPs			
Dimensions:	17 x 17 x 15mm Ø 13mm	30 x 51 x 12mm		

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V3:20200122

CQR First choice for quality

SD MASS INERTIA SHOCK SENSORS

CQR Shock sensors must be used in conjunction with a remote analyser we recommend the CQR MA100T.
Sensors mounted on the same loop must be mounted on similar materials (brick, wood, etc) and area. If the installation requires protection on three different materials, such as glass, brick and drywall then these should be on different analyser zones
The following recommendations for installation are based on knowledge gained in the design and installation of shock sensors in general and the SD series mass inertia shock sensors in particular.

Installation

If a sensor is to be glued in place with the exception of the SD-1 which is a push fit, use epoxy or other hard setting glues, soft silicone will tend to cushion the shock and shorten the detection range. Use sharp bits to drill holes, this is especially important with the push fit SD-1.
If mounting on wall-board or wood panelling, always mount the sensor to the area backed by the stud. The more solid the mounting the more shock will be transmitted to the sensor giving an increased detector range and reduces the amount of sensors required. The material of the construction will alter the area of the protection achieved, the more solid the construction the greater the detection range for each sensor. This will be noticed when installing sensors on temporary or inertia walls where studs have been placed more than 460mm apart.

Important

Any cracks or seams in walls or doors will decrease the range of the sensors placed to protect that area. A rule of thumb is to reduce the area of protection by half when mounting in any area divided by the crack or seam. The protection of glass can be accomplished by attaching the sensor to either the glass itself or to the adjacent frame. We recommend attaching to the frame because the sensor is then shielded from the sun and window cleaning activities, which can affect its attachment. However this is a choice that is made by the installer. In every case, the sensor should be centred within the desired area of the protection.

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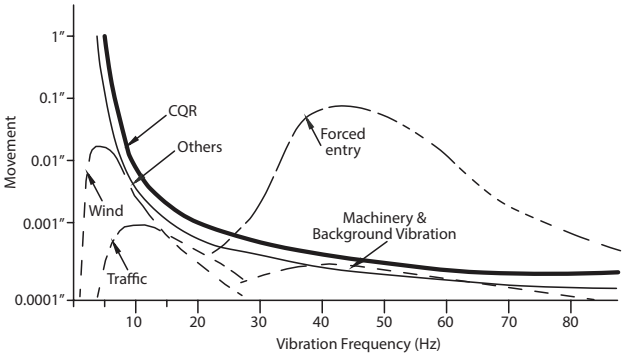
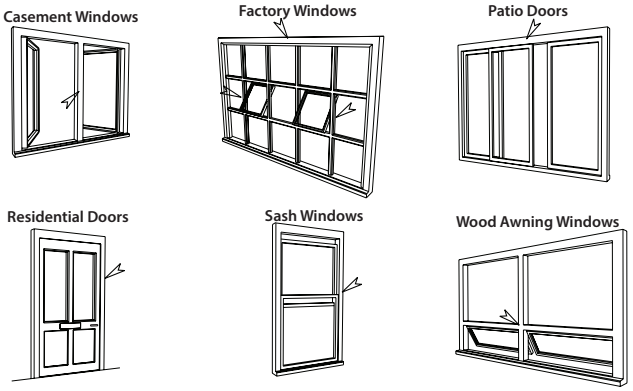
Why CQR Shock sensors work better than others

Because of the lighter mass and exclusive 'Crowbar' leverage design, CQR shock sensors do not react as quickly to low end vibrations caused by traffic, wind, etc. therefore reducing potential false alarms. The inherent stability allows us to offer a non-dampened sensor with greater protection capability and higher performance, this avoids many of the problems associated with more traditional piezo based solutions.



Examples of suitable applications and fixing points

Recommended fixings points

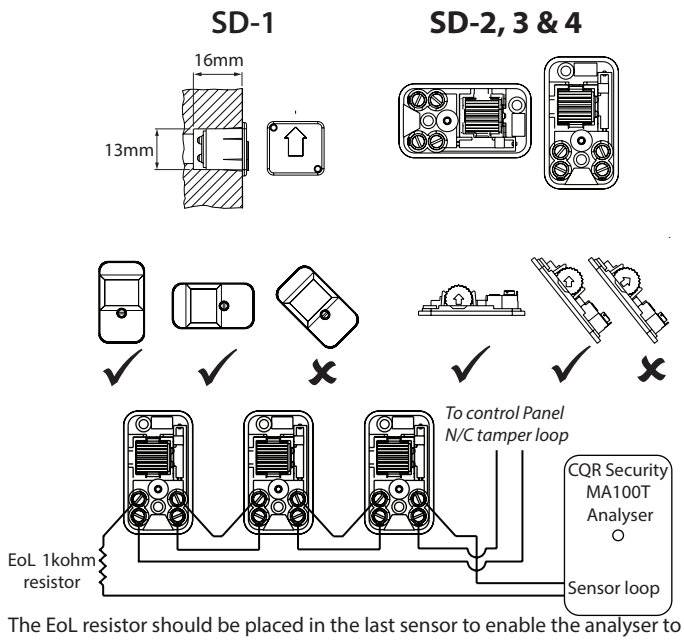


Shock sensor mounting and adjustment

Mount the base first, either horizontally or vertically at the angle required. Locate the sensor body in the cradle, ensuring that it 'locks' in position with the arrow pointing **UP**.

Connect the appropriate terminal and set the analyser.

Note: The SD-1 **MUST** only be mounted on a vertical place with the arrow pointing **UP**.



The EoL resistor should be placed in the last sensor to enable the analyser to detect a cable short circuit.

Note: For 2 wire systems, connect the tampers in series with the sensor loop, this will not give a 24^{hr} tamper protection circuit, but will show as a sensor detection. The SD-4 must be used with the magnet provided

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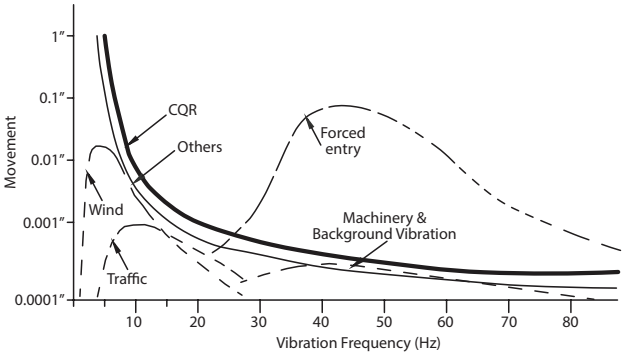

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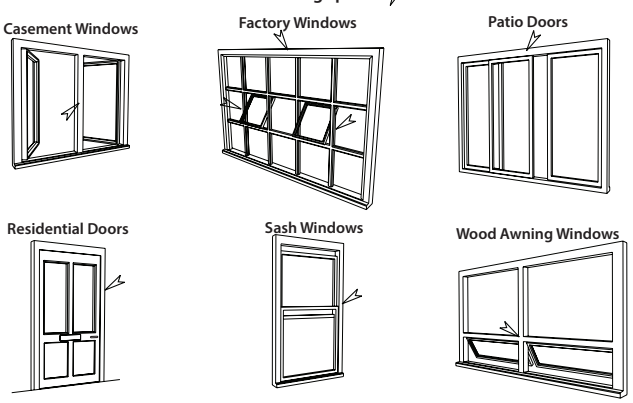

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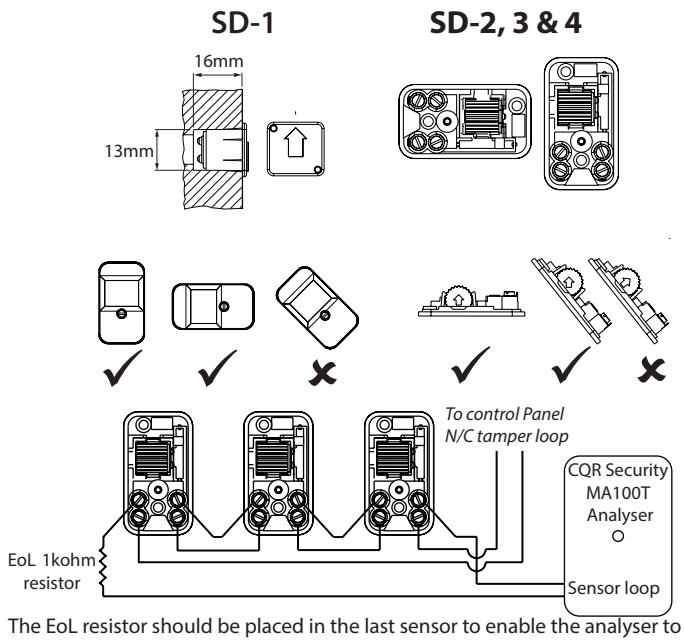

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