

# BExCP3A/B-BG Break Glass Call Point

The BExCP3A-BG and BExCP3B-BG break glass manual call points are approved for Zone 1, 2, 21 and 22 hazardous areas for the control of fire and gas alarm systems. Available with and without monitoring resistors all versions are certified to ATEX and IECEx standards.

The BEx range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.

COMSEC PROTECTION SYSTEMS LTD.  
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 EMAIL: [info@comsec.ie](mailto:info@comsec.ie) • WEB: <http://www.comsec.ie>

## Options:

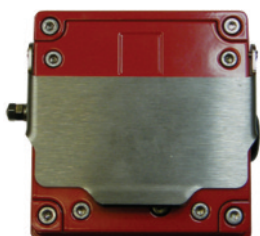
- Alternative housing colours are available to meet specific requirements.
- DIN rail mounted terminal blocks: 8 x 2.5mm<sup>2</sup>
- Stainless Steel lift flap
- Metalised Polyester “Duty” label.
- Series and/or End of Line resistors.

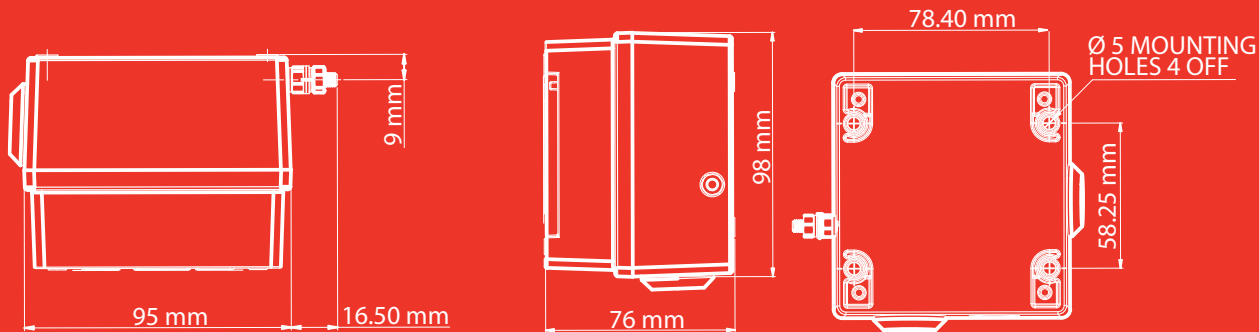
## Approvals:

- ATEX certificate: Sira 09ATEX3286X, IEC 60079-0:2007 Ed 5, EN 60079-1:2004, EN 60079-7:2007, IEC 60079-18:2009 Ed 3, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0121X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-1:2003 Edition: 5, IEC 60079-18:2009 Edition: 3, IEC 60079-7:2006-07 Edition: 4, IEC 61241-1:2004 Edition: 1
- Inmetro certificate: 10-IEEx-0011X
- Complies with design requirements of EN54-11

## Specification:

BExCP3A-BG:	II 2G Ex e d IIC T6 Gb II 2D Ex t IIIC T60°C Db IP66
BExCP3B-BG:	II 2G Ex e d mb IIC T4 Gb II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C (+50°C for BExCP3B)
Ingress protection:	IP66
Housing material:	Marine grade copper free LM6 Aluminium
Housing finish:	Phosphated & powder coated finish: anti-corrosion.
Colour:	RAL3000 Red (others available on request)
Cable entries:	2 x M20 clearance top and 1 x M20 clearance side. Back box can be rotated to give 2 x bottom and 1 x side entries.
Stopping plugs:	2 x Ex e nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm <sup>2</sup> cables.





### Versions:

Version:	Category:	Voltage:	Switch rating:	Monitoring Resistors:	Terminals:	Cable entries:	Weight:
BExCP3A-BG	II 2G Ex e d IIC T6 Gb	250V ac Max.	5.0A Max.	N	6 x 4mm <sup>2</sup>	2 x M20	0.8Kg
	II 2D Ex t IIIC T60°C Db	50V dc Max.	1.0A Max.			Top/Bottom	
	IP66					1 x M20	
	Ta = -40°C to +55°C					Left/Right	
				Nominal Voltage:	Maximum Voltage:	Min. EOL / Series Value:	
BExCP3B-BG	II 2G Ex e d mb IIC T4 Gb	56V dc Max.	48V	56V	1K8	Y	0.8Kg
	II 2D Ex t IIIC T70°C Db	Rating:	24V	28V	470R		
	IP66	<50V: 1.0A	12V	15V	120R		
	Ta = -40°C to +50°C	>50V: 0.75A	6V	9V	47R		
						6 x 4mm <sup>2</sup>	2 x M20
						or	Top/Bottom
						8 x 2.5mm <sup>2</sup>	1 x M20
						DIN rail	Left/Right

### Part Codes:

Type:	Terminals:	Lift Flap:	Duty Label:	Colour:	Nominal Voltage	E.O.L Resistor:	Series Resistor:
BExCP3A-BG	ST	LF	NL	RD	48V	ExxxR	SxxxR
BExCP3B-BG	DR	NF	DL		24V		
					12V		
					6V		

ST: Standard  
DR: DIN rail  
'DR' option  
only on BExCP3B  
version

LF: Lift Flap  
NF: No Flap  
(Standard)

NL: No label (std)  
DL: Duty Label  
Specify content  
when ordering.

RD: Red (std)  
Contact sales  
for other  
colour options

System Voltage  
only required  
on BExCP3B  
version

xxx: Res. value  
e.g.: E470R  
Only available on  
BExCP3B version

xxx: Res. value  
e.g.: S2K2R  
Only available on  
BExCP3B version

e.g. BEx-CP3A-BG-ST-LF-NL-RD

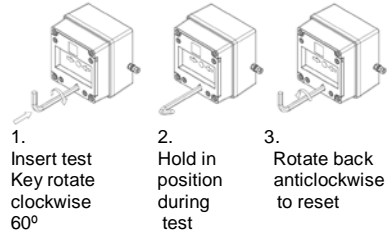
: BEx-CP3A Break glass call point with standard terminals, lift flap and no duty label. Red housing

e.g. BEx-CP3B-BG-DR-NF-NL-RD-24V-E470R

: BEx-CP3B Break glass call point with DIN rail terminals, no lift flap, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

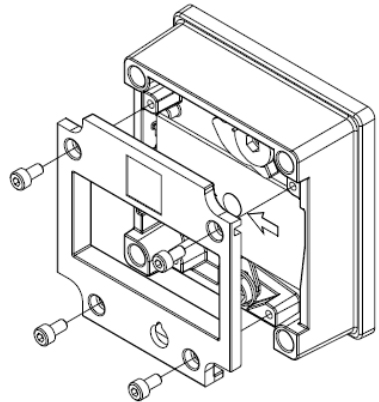
**COMSEC PROTECTION SYSTEMS LTD.**  
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glass element should now raise up so it is level again in the viewable window.

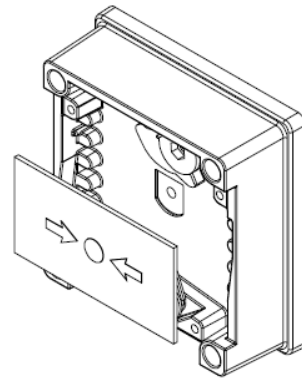


**9) Replacement of glass element**  
 If the break glass unit has been operated the broken glass element can be quickly replaced.

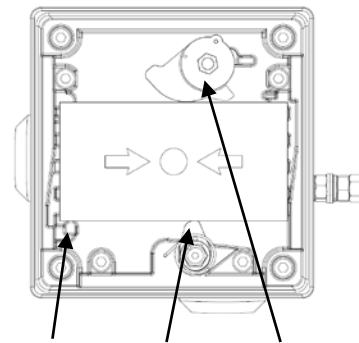
The break glass cover plate is removed by unscrewing the 4 off M4 cap head screws attaching it.



Once cover is removed the broken glass will be free to be removed, clean out any other fragments of glass carefully.



To fit the new glass element rotate the top cam clockwise by an angle of 50° (use a 6mm Allen key) this will then allow the glass to fit back into the pocket it sits in, resting on the pivot point and test cam, release the top cam to rest on the top of the glass element.

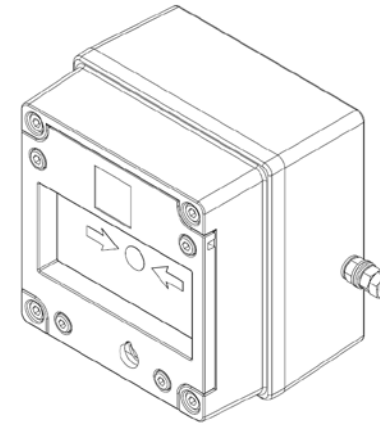


Pivot point Test Cam Top Cam (rotate)

Replace the cover plate and tighten the 4 off M4 cap head screws.

Ensure the glass element is free to move under the cover plate. This can be done by running through the units test operation. See section 8 of this instruction manual.

**BExCP3A-BG**  
**Manual Call Point - Breakglass**  
**For use in Flammable Gas and Combustible Dust Atmospheres.**



**1) Introduction**

The BExCP3A-BG is a break glass manual call point which is certified to the European and International Gas and Dust standards. The unit meets the requirements of the ATEX directive 94/9/EC and IECEx scheme.

The call point can be used in hazardous areas where potentially flammable gas and dust atmospheres may be present.

The BExCP3A-BG has no monitoring resistors. The units are Group II, EPL (equipment protection level) Gb. The equipment is certified 'Ex e d IIC T6 Gb' and as such may be used in Zones 1 and 2 with flammable gases and vapours with gas groups IIA, IIB & IIC and temperature classes T1, T2, T3, T4, T5 and T6.

These units are also Group III, EPL Db. The equipment is certified 'Ex t IIIC T60°C Db' and as such may be used in Zones 21 and 22 for combustible dusts groups IIIA, IIIB & IIIC.

**2) Marking**


All units have a rating label, which carries the following important information:-


Unit Type No.:  
 BExCP3A-BG Manual Call Point

Input Voltage:  
 AC voltage 250V Max Current 5.0A Max  
 DC voltage 50V Max Current 1.0A Max

Code:  
 Ex e d IIC T6 Gb  
 Ex t IIIC T60 °C Db  
 IP66  
 -40°C ≤ Ta ≤ +55°C

Certificate No.:  
 SIR A 09ATEX3286X  
 IECEx SIR 09.0121X

Epsilon x:  II 2GD

CE Marking  
 Notified body No.  0518

Year/Serial No. i.e. 09/1CP3ABG000001

**WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT**

**3) Type Approval Standards**

The beacon has an EC Type examination certificate issued by SIR A and have been approved to the following standards:-

IEC 60079-0:2007  
 EN 60079-1:2004 / IEC 60079-1:2003  
 EN 60079-7:2007 / IEC 60079-7:2006  
 IEC 60079-18:2009

EN 61241-1:2004 / IEC 61241-1:2004

The equipment is certified for use in ambient temperatures in the range -40°C to +55°C and shall not be used outside this range.

**4) Installation Requirements**

Installation of this equipment shall only be carried out by suitably trained personnel in accordance with the applicable code of practice e.g.

IEC 60079-14/EN 60079-14 and IEC 61241-14/EN 61241-14.

9) Repair of this equipment shall only be carried out by the manufacturer or in accordance with the applicable code of practice e.g. IEC 60079-19/EN 60079-19.

10) The certification of this equipment relies on the following materials used in its construction:

Enclosure: Aluminium Pressure Die Cast Body LM6

Through enclosure mechanism: Plastic Nylon Zytel Injection Moulded

Sealing of enclosure and mechanism: O-ring Acrylonitrile-Butadiene Rubber

Potting Compound of resistors where used: Epoxy Resin

If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection is not compromised.

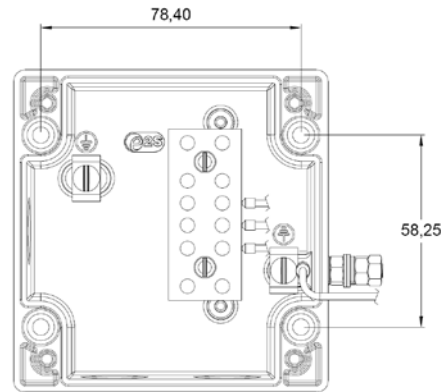
“Aggressive substances” - e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

“Suitable precautions” - e.g. regular checks as part of routine inspections or establishing from the material’s data sheet that it is resistant to specific chemicals.

Refer to certificates SIRA 09ATEX3286X and IECEx SIR 09.0121X for special conditions of safe use.

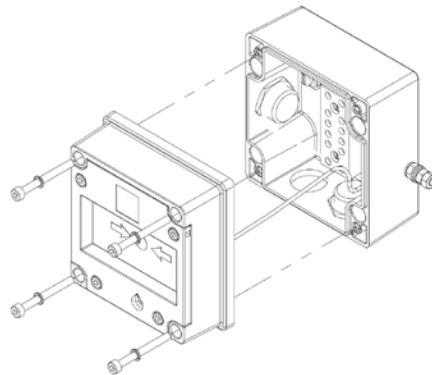
### 5) Call Point Location and Mounting

The location of the call point should enable ease of access for operation and testing. The unit should be mounted using the 4 off fixing holes which will accept up to M4 sized fixings.



View of base unit showing fixing centres.

To gain access to the mounting holes in the base the front cover must be removed. This is achieved by removing the 4 off M4 cap head bolts holding on the cover.



Once the screws are removed the cover will hang down out of the way to gain access to the Ex e terminal block, the internal earth terminal and mounting hole recesses.

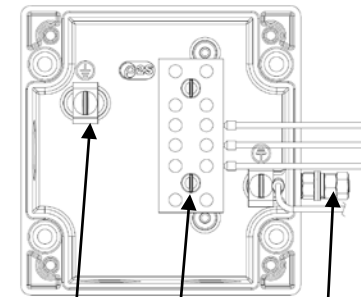
### 6) Earthing

The unit has both internal and external earth terminals.

It is recommended that a cable crimp lug is used on the earth wires.

The internal earth wire is placed under a earth clamp which will stop the cable twisting. This is secured by an M4 screw and spring washer.

The external earth lug should be located between the two M5 washers provided and securely locked down with the M5 spring washer and two locknuts.



Internal Earth terminal

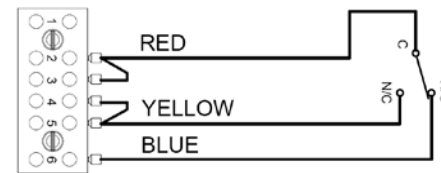
External Earth Stud

Ex e terminal block

### 7) Cable connections

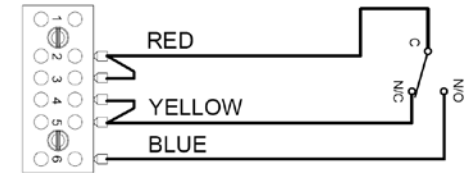
There are 3 off cable entries for M20x1.5 Ex e approved cable glands or stopping plugs

The unit can be wired in a number of different ways depending whether normally open or normally closed contacts are required.



### Unit in 'Standby condition' unoperated

Terminal (2,3) & (6) switch contacts closed  
Terminals (2,3) & (4,5) switch contacts open



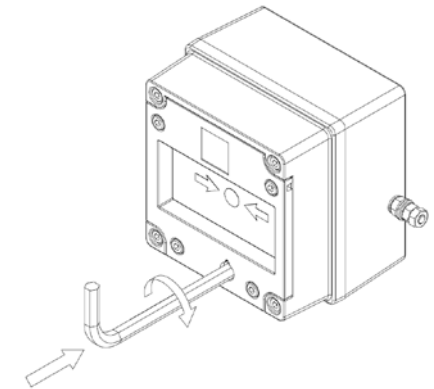
### Unit in 'Operated condition' (broken glass)

microswitch contacts changed over  
Terminal (2,3) & (6) switch contacts open  
Terminals (2,3) & (4,5) switch contacts closed

When wiring to Increased Safety terminal enclosures, you are only permitted to connect one wire into each way on the terminal block, unless a pair of wires are crimped into a suitable ferrule.

### 8) Testing unit operation

The break glass unit can be tested without the need to break/replace the frangible glass element. A test key (7mm Allen key) is used to mechanically drop the glass down activating the switch.



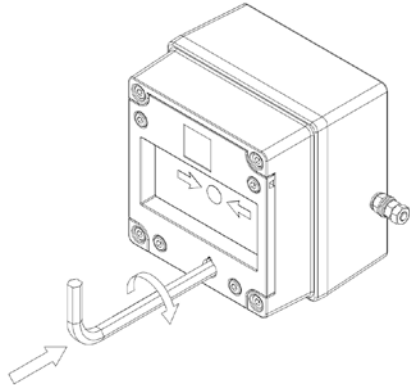
The test key is inserted in the test cam and rotated clockwise by an angle of 60° the glass element will visibly drop down in the viewable window. The call point switch will now change over it's contacts to operate the alarm.

Once testing is complete the unit needs to be reset, the test key is rotated back anticlockwise by an angle of 60° back to its original position. The

**8) Testing unit operation**

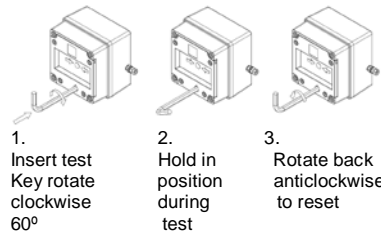
The breakglass unit can be tested without the need to break/replace the frangible glass element. A test key (7mm Allen key) is used to mechanically drop the glass down activating the switch.

The test key is inserted in the test cam and rotated clockwise by an angle of 60° the glass element will visibly drop down in the viewable window.



The call point switch will now change over its contacts to operate the alarm.

Once testing is complete the unit needs to be reset, the test key is rotated back anticlockwise by an angle of 60° back to its original position. The glass element should now raise up so it is level again in the viewable window.

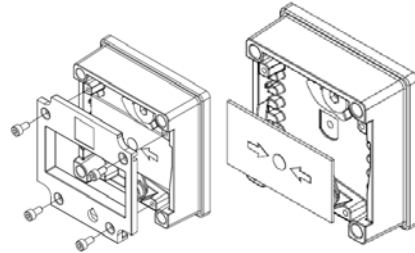


**9) Replacement of glass element**

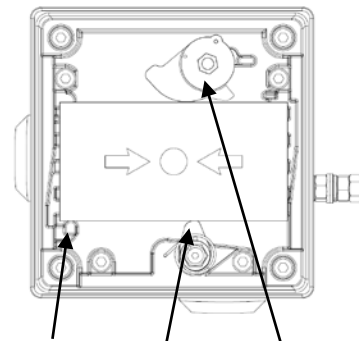
If the breakglass unit has been operated the broken glass element can be quickly replaced.

The breakglass cover plate is removed by unscrewing the 4 off M4 cap head screws attaching it.

Once cover is removed the broken glass will be free to be removed, clean out any other fragments of glass carefully.



To fit the new glass element rotate the top cam clockwise by an angle of 50° (use a 6mm Allen key) this will then allow the glass to fit back into the pocket it sits in, resting on the pivot point and test cam, release the top cam to rest on the top of the glass element.

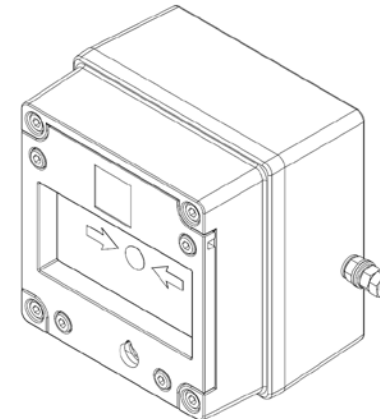


Pivot point Test Cam Top Cam (rotate)

Replace the cover plate and tighten the 4 off M4 cap head screws.

Ensure the glass element is free to move under the cover plate. This can be done by running through the units test operation. See section 8 of this instruction manual.

**BExCP3B-BG**  
**Manual Call Point – Breakglass**  
**With Resistor Modules**  
**For use in Flammable Gas and**  
**Combustible Dust Atmospheres.**



**1) Introduction**

The BExCP3B-BG is a breakglass manual call point which is certified to the European and International Gas and Dust standards. The unit meets the requirements of the ATEX directive 94/9/EC and IECEx scheme.

The call point can be used in hazardous areas where potentially flammable gas and dust atmospheres may be present.

The BExCP3B-BG has up to two monitoring resistors. The units are Group II, EPL (equipment protection level) Gb. The equipment is certified 'Ex e d mb IIC T4 Gb' and as such may be used in Zones 1 and 2 with flammable gases and vapours with gas groups IIA, IIB & IIC and temperature classes T1, T2, T3 and T4.

These units are also Group III, EPL Db. The equipment is certified 'Ex t IIIC T70°C Db' and as such may be used in Zones 21 and 22 for combustible dusts groups IIIA, IIIB & IIIC.

**2) Marking**


All units have a rating label, which carries the following important information:-


Unit Type No.:  
 BExCP3B-BG Manual Call Point

Input Voltages:  
 48VDC nominal 56VDC Max 0.75Amax  
 24VDC nominal 28VDC Max 1.0A Max  
 12VDC nominal 15VDC Max 1.0A Max  
 6VDC nominal 9VDC Max 1.0A Max

Code:  
 Ex e d mb IIC T4 Gb  
 Ex t IIIC T70 °C Db  
 IP66  
 -40°C <= Ta <= +50°C

Certificate No.:  
 SIRA 09ATEX3286X  
 IECEX SIR 09.0121X

Epsilon x:  II 2GD

CE Marking  
 Notified body No.  0518

Year/Serial No. i.e. 09/1CP3BBG000001

**WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT**

**3) Type Approval Standards**

The beacon has an EC Type examination certificate issued by SIRA and have been approved to the following standards:-

IEC 60079-0:2007  
 EN 60079-1:2004 / IEC 60079-1:2003  
 EN 60079-7:2007 / IEC 60079-7:2006  
 IEC 60079-18:2009

EN 61241-1:2004 / IEC 61241-1:2004

The equipment is certified for use in ambient temperatures in the range -40°C to +50°C and shall not be used outside this range.

**4) Installation Requirements**

Installation of this equipment shall only be carried out by suitably trained personnel in accordance with the applicable code of practice e.g.

IEC 60079-14/EN 60079-14 and IEC 61241-14/EN 61241-14.

Repair of this equipment shall only be carried out by the manufacturer or in accordance with the applicable code of practice e.g. IEC 60079-19/EN 60079-19.

The certification of this equipment relies on the following materials used in its construction:

Enclosure: Aluminium Pressure Die Cast Body LM6

Through enclosure mechanism: Plastic Nylon Zytel Injection Moulded

Sealing of enclosure and mechanism: O-ring Acrylonitrile-Butadiene Rubber

Potting Compound of resistors where used: Epoxy Resin

If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection is not compromised.

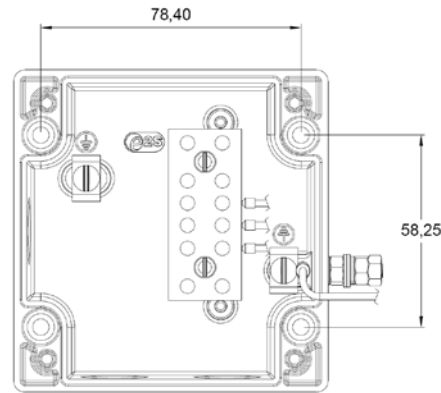
“Aggressive substances” - e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

“Suitable precautions” - e.g. regular checks as part of routine inspections or establishing from the material’s data sheet that it is resistant to specific chemicals.

Refer to certificates SIRA 09ATEX3286X and IECEx SIR 09.0121X for special conditions of safe use.

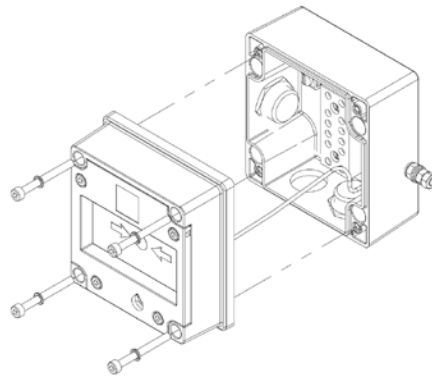
### 5) Call Point Location and Mounting

The location of the call point should enable ease of access for operation and testing. The unit should be mounted using the 4 off fixing holes which will accept up to M4 sized fixings.



View of base unit showing fixing centres.

To gain access to the mounting holes in the base the front cover must be removed. This is achieved by removing the 4 off M4 cap head bolts holding on the cover.



Once the screws are removed the cover will hang down out of the way to gain access to the Ex e terminal block, the internal earth terminal and mounting hole recesses.

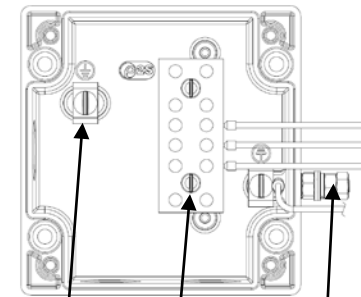
### 6) Earthing

The unit has both internal and external earth terminals.

It is recommended that a cable crimp lug is used on the earth wires.

The internal earth wire is placed under a earth clamp which will stop the cable twisting. This is secured by an M4 screw and spring washer.

The external earth lug should be located between the two M5 washers provided and securely locked down with the M5 spring washer and two locknuts.



Internal Earth terminal

Ex e terminal block

External Earth Stud

### 7) Cable connections

There are 3 off cable entries for M20x1.5 Ex e approved cable glands or stopping plugs

The unit can be wired in a number of different ways depending on the resistor combination selected.

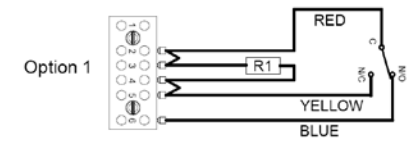
Option 1 – In line resistor R1

Option 2 – End of line resistor R2

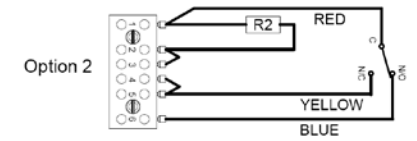
Option 3 – In line and end of line resistors R1 & R2

Note:- The maximum voltage stated must not be exceeded, as the internal resistor modules are rated as compliant with Ex mb according to the units voltage

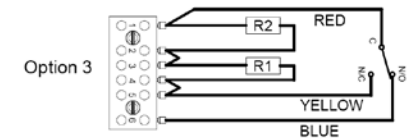
When wiring to Increased Safety terminal enclosures, you are only permitted to connect one wire into each way on the terminal block, unless a pair of wires are crimped into a suitable ferrule.



Option 1

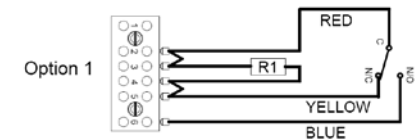


Option 2

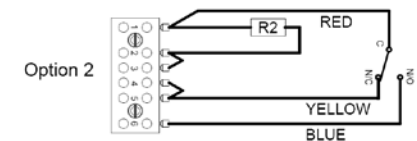


Option 3

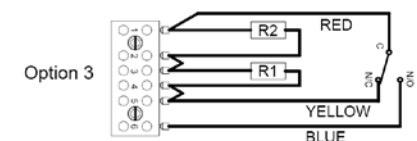
**Unit in ‘Standby condition’ unoperated**  
Terminals (2,3) & (6) switch contacts closed  
Terminals (2,3) & (4,5) switch contacts open



Option 1



Option 2



Option 3

**Unit in ‘Operated condition’ (broken glass)**  
microswitch contacts changed over  
Terminals (2,3) & (6) switch contacts open  
Terminals (2,3) & (4,5) switch contacts closed