

# IS-CP4A/B-PB Push Button Call Point

The IS-CP4A-PB and IS-CP4B-PB push button manual call points are approved for Zones 0, 1, 2, 21 & 22 requiring intrinsically safe equipment 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 push button mechanism is protected by a spring loaded cover therefore the switch requires a two-action activation. The product is user resettable by rotating the push button.

The IS-CP4 range features enclosures manufactured from corrosion proof, marine grade, copper free LM6 (A413) aluminium which is phosphated and powder coated.

## Specification:

IS-CP4A-PB:	II 1G Ex ia IIC T6 Ga II 2D Ex t IIIC T60°C Db IP66
IS-CP4B-PB:	II 1G Ex ia IIC T4 Ga II 2D Ex t IIIC T70°C Db IP66
Ambient:	Ta = -40°C to +55°C
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 nylon plugs as standard Brass and stainless steel plugs optional
Terminals:	6 x 4.0mm <sup>2</sup> cables.

## Options:

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

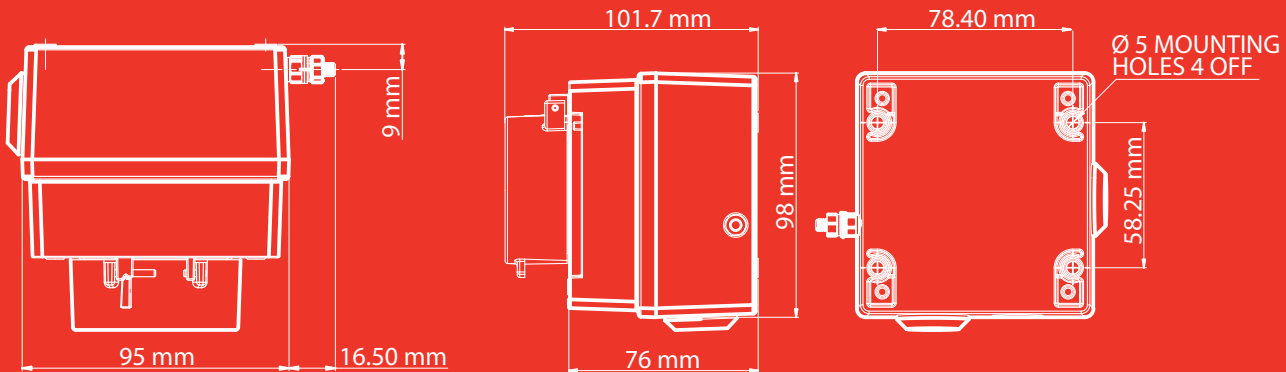
## Approvals:

- ATEX certificate: SIRA 09ATEX2287X, IEC 60079-0:2007 Ed 5, EN 60079-11:2007, EN 60079-26:2007, EN 61241-1:2004
- IECEx certificate: IECEx SIR 09.0122X, IEC 60079-0:2007-10 Edition: 5, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2006 Edition: 2, IEC 61241-1:2004 Edition: 1



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### Versions:

Version:	Category:	Input Parameters:	Monitoring Resistors:	Terminals:	Cable entries:	Weight:
IS-CP4A-PB	II 1G Ex ia IIC T6 Ga	$U_i = 30V$	N	6 x 4mm <sup>2</sup>	2 x M20 Top/Bottom	0.8Kg
	II 2D Ex t IIIC T60°C Db	$I_i = 500mA$			1 x M20 Left/Right	
	IP66	$P_i = 1.1W$				
	$T_a = -40^\circ C$ to $+55^\circ C$	$C_i = 0$				
		$L_i = 0$				
IS-CP4B-PB	II 1G Ex ia IIC T4 Ga	$U_i = 30V$	Y	6 x 4mm <sup>2</sup> or	2 x M20 Top/Bottom	0.8Kg
	II 2D Ex t IIIC T70°C Db	$I_i = 500mA$		8 x 2.5mm <sup>2</sup>	1 x M20 Left/Right	
	IP66	$P_i = 1.1W$		DIN rail		
	$T_a = -40^\circ C$ to $+55^\circ C$	$C_i = 0$				
		$L_i = 0$				

### Part Codes:

Type:	Terminals:	Duty Label:	Colour:	E.O.L Resistor:	Series Resistor:
IS-CP4A-PB	ST	NL	RD	ExxxR	SxxxR
IS-CP4B-PB	DR	DL			

ST: Standard  
DR: DIN rail  
'DR' option  
only on IS-CP4B  
version

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

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

xxx: Res. value  
e.g.: E470R  
Only available on  
IS-CP4B version

xxx: Res. value  
e.g.: S2K2R  
Only available on  
IS-CP4B version

e.g. IS-CP4A-PB-ST-NL-RD

: IS-CP4A Push Button call point with standard terminals and no duty label. Red housing

e.g. IS-CP4B-PB-DR-NL-RD-24V-E470R

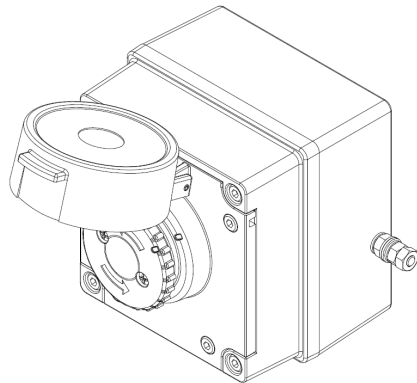
: IS-CP4B Push Button call point with DIN rail terminals, no duty label, 24V supply voltage with a 470 Ohm end of line resistor. Red housing.

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**8) Testing unit operation**

The push button unit can be tested without the need to replace any element.

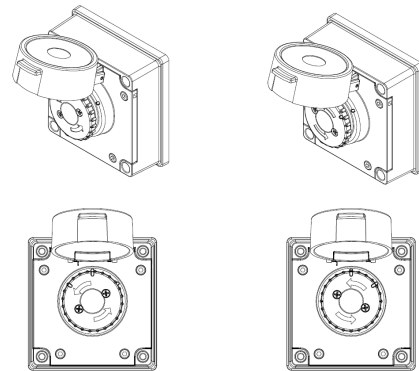
To test, lift the cover lift flap to reveal the push button. The button should be pressed into the body to activate the unit and place it into the operated condition.



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

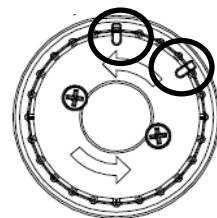
Once testing is complete the unit needs to be reset from the operated condition.

Rotate the push button anticlockwise by an angle of 55°, see guide alignment marks on button and cover, shown below (1). The push button should pop back up to its original position. Ensure that the push button has also twisted back clockwise by 55° to its original position see guide marks on button and cover, shown below (2). The unit is now reset.



1. On operated unit Twist push button Anticlockwise 55° to reset

2. Button should pop up and twist back to original position

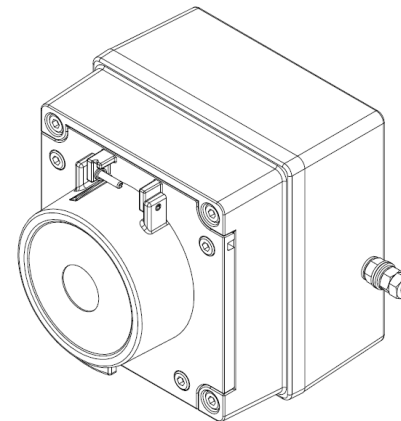


Note: use alignment marks circled to indicate the push button's status /position.

Unit currently shown as 'standby condition'

Resetting an operated unit is the same as resetting a tested unit.

**IS-CP4A-PB**  
**Manual Call Point – Push Button**  
**For use in Flammable Gas and Combustible Dust Atmospheres**



**1) Introduction**

The IS-CP4A-PB is a push button manual call point which is certified intrinsically safe 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 IS-CP4A-PB has no monitoring resistors. The units are Group II, EPL (equipment protection level) Ga. The equipment is certified 'Ex ia IIC T6 Ga' and as such may be used in Zones 0, 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.

The equipment needs to be installed with ATEX and/or IECEx certified Zener Barriers or Galvanic Isolators

**2) Marking**

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


Unit Type No.:  
IS-CP4A-PB Manual Call Point


Code:  
Ex ia IIC T6 Ga  
Ex t IIIC T60 °C Db  
IP66  
-40°C <= Ta <= +55°C

Input Voltage: Dust Protection Ex t  
AC voltage 250V Max Current 5.0A Max  
DC voltage 56V Max Current 1.0A Max

Input Voltage: Gas Protection Ex ia  
Ui=30V Ii=500mA Pi=1.1W Ci=0 Li=0

Certificate No.:  
SIRA 09ATEX2287X  
IECEx SIR 09.0122X

Epsilon x:  II 1G2D

CE Marking  
Notified body No.  0518

Year/Serial No. i.e. 10/1CP4APB000001

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:-

EN 60079-0:2006 / IEC 60079-0:2004  
 EN 60079-0:2009 / IEC 60079-0:2007-10  
 EN 60079-11:2007 / IEC 60079-11:2006  
 EN 60079-26:2007 / IEC 60079-26:2006

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.

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

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.

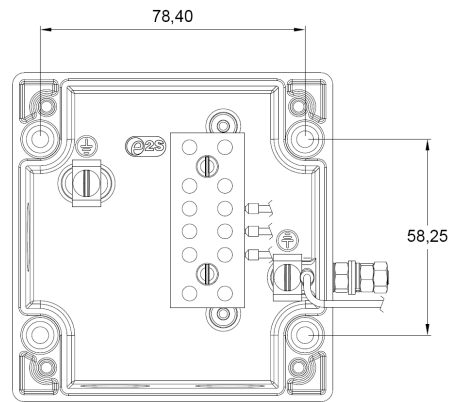
"Aggressive substances" - e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials.

"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 09ATEX2287X and IECEx SIR 09.0122X for special conditions of safe use.

#### 5) Call Point Location and Mounting

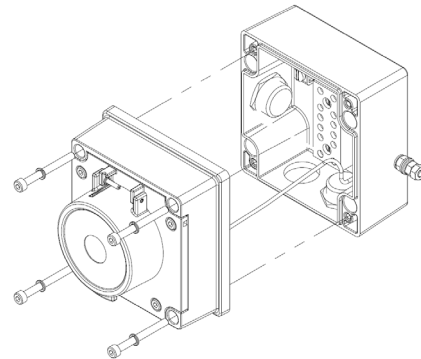
The location of the call point should enable ease of access for operation and testing. The unit should be mounted using the 4 off fixing holes which will accept up to M4 sized fixings.



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.

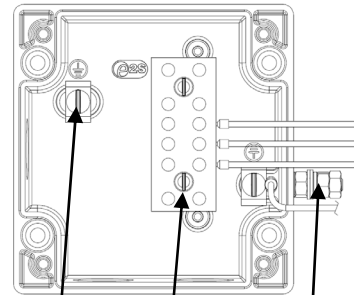
#### 6) Earthing

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 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 terminals

External Earth Stud

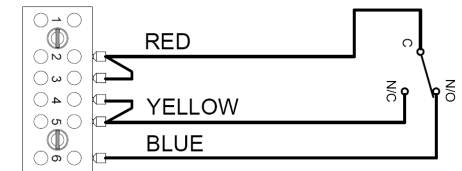
Terminal block

#### 7) Cable connections

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

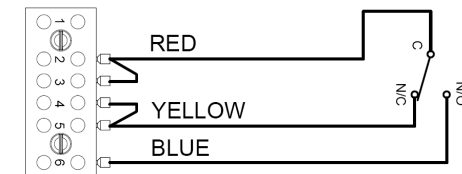
The unit can be wired in a number of different ways depending whether normally open or normally closed contacts are required.

The equipment needs to be installed with ATEX and/or IECEx certified Zener Barriers or Galvanic Isolators.



#### 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