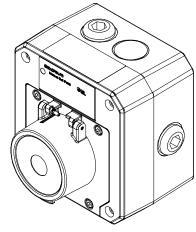


## **GNExCP6A-PB** Manual Call Point – Push Button For use in Flammable Gas and Combustible Dust Atmospheres.



#### 1) Introduction

The GNExCP6A-PB is a push button manual call point which is certified to the European and International Gas and Dust standards. The unit meets the requirements of the ATEX directive 2014/34/EU. IECEx and UKEX schemes.

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

All units have no monitoring resistors, diodes or zener diodes and are not fitted with an LED indicator.

The units are Group II, EPL (equipment protection level) Gb. The equipment is certified 'Ex db eb IIC T6 Gb' and as such may be used in Zones 1 and 2 with flammable gases and vapours with apparatus 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 tb IIIC T75°C Db' and as such may be used in Zones 21 and 22 for combustible dusts groups IIIA. IIIB & IIIC.

# **GNExCP6A-PB Push Button Manual Call Point** For use in Flammable Gas and Dust Atmospheres EN60079-7:2015 / IEC60079-7:2017

**Ratings & Markings** 

following important information: -

GNExCP6A-PB Manual Call Point

load : 0.03A Max Inductive load

load : 0.03A Max Inductive load

Load; Inductive Load 3.0A Max

AC voltage 250V Max Current 5.0A Max

DC voltage 75V Max Current 0.75A Max

DC voltage 50V Max Current 1.0A Max

DC voltage 12V Max Current 5.0A Max

DC voltage 250V Max Current 0.25A Max Resistive

DC voltage 125V Max Current 0.5A Max Resistive

DC voltage 30V Max Current 5.0A Max Resistive

II 2GD

2)

Unit Type No.:

Input Voltage:

Code:

IP66

Ex db eb IIC T6 Gb

Certificate No .:

Epsilon x:

CE Marking

UKCA Marking

Notified Body No.

WITH A DAMP CLOTH

to the following standards: -

Year/Serial No. i.e. 20/1CP6APB000001

WARNING - DO NOT OPEN WHEN AN

Type Approval Standards

EN60079-0:2018 / IEC60079-0:2017

EN60079-1:2014 / IEC60079-1:2014

EXPLOSIVE ATMOSPHERE MAY BE PRESENT

The call point has an EC Type examination

certificate issued by SIRA and have been approved

ELECTROSTATIC HAZARD - CLEAN ONLY

Notified

Body No.

3)

Ex tb IIIC T75 °C Db

SIRA 09ATEX3286X

IECEx SIR 09.0121X

CSAE 21UKEX3556X

-40°C <= Ta <= +70°C

EN60079-18:2015 / IEC60079-18:2014 All units have a rating label, which carries the EN60079-31:2014 / IEC60079-31:2013

> The equipment is certified for use in ambient temperatures in the range -40°C to +70°C and shall not be used outside this range.

#### 4) Installation Requirements

INSTRUCTION MANUAL

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

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.

Refer to certificates SIRA 09ATEX3286X, IECEx SIR 09.0121X and CSAE 21UKEX3556X for special conditions of safe use.

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

Enclosure: GRP - Glass Reinforced Polyester

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, gases or solvents that may affect polymeric materials.

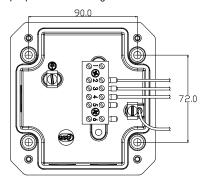
"Suitable precautions" - e.g. regular checks as part of routine inspections or establishing from the material's data sheet that it is resistant to specific chemicals

Under extreme conditions the unit may generate an ignition-capable level of electrostatic charges. The unit must not be installed in a location where it may be subjected to external conditions (such as high pressure steam) which may cause a build-up of electrostatic charges on non-conducting surfaces.

Cleaning of the unit must only be carried out with a damp cloth.

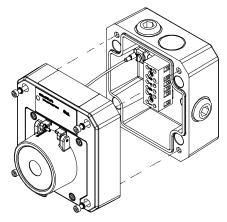
#### 5) Call Point Location and Mounting

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 M5 sized fixings.



View of base unit showing fixing centres (in mm).

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.

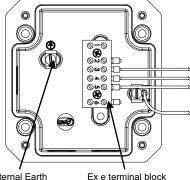


Once the screws are removed the cover will hang down out of the way to gain access to the Ex e terminal block, the internal earth terminal and mounting hole recesses.

#### Earthing 6)

The unit has an internal earth terminal. 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.



Internal Earth terminal

Note: Depending on options chosen an 8-Way DIN Rail or 6-Way terminal block may be selected.

#### Cable connections 7)

There are 3 off cable entries for M20x1.5 Ex e approved cable glands or stopping plugs with a minimum ingress protection of IP66.

The unit can be wired in a number of different ways depending whether normally open or normally closed contacts are required. See wiring schematic D154-06-001 for wiring options.

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. For the six-way terminal block wire sizes allowable are 0.5mm<sup>2</sup> to 4.0mm<sup>2</sup>. For the 8-way DIN rail wire sizes allowable are 0.5mm<sup>2</sup> to 2.5mm<sup>2</sup>

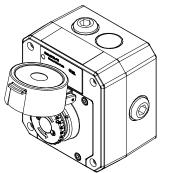
Leads connected to the terminals shall be insulated for the appropriate voltage and this insulation shall extend to within 1mm of the metal of the terminal throat. They shall only be installed and wired with cable in an ambient temperature of -10°C to +80°C

All terminal screws, used or unused, shall be tightened down to between 0.5 Nm and 0.7 Nm.

### 8) Testing unit operation

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

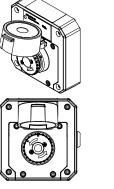
To test, lift the cover lift flap to reveal the push button. The button should be pressed into the body to activate the unit and place it into the operated condition.



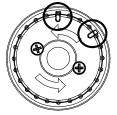
The call point switch will now change over its contacts to operate the alarm.

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 the 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



Note: use alignment marks circled to indicate the push buttons status/position

2. Button should pop

up and twist back to

original position

Unit currently shown as 'standby condition'

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

#### 9) SIL 2 Reliability Data

Reliability and Functional safety IEC/EN61508 which has been assessed and is considered suitable for use in low demand safety function:

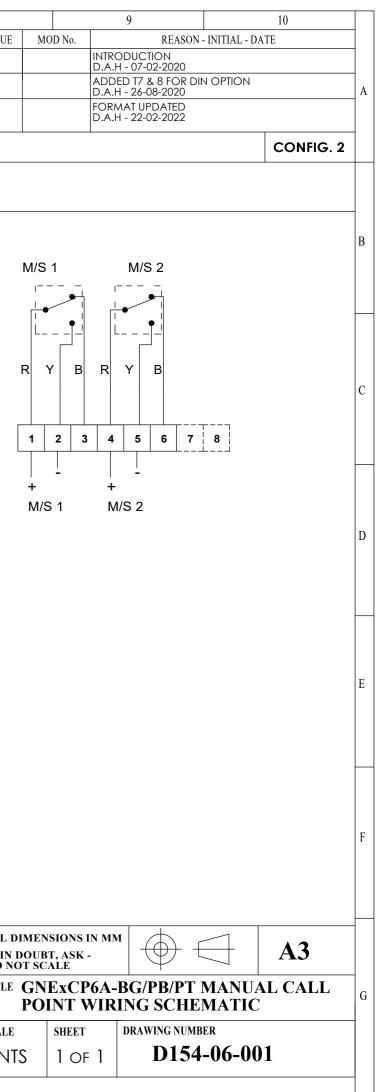
- · Random Hardware Failures and Systematic Failures (route 2H)
- · As an unvoted item (i.e. hardware fault tolerance of 0) at SIL 2

The product was assessed against failure modes:

- · Failure to close a contact when the call point is struck with specified force
- Failure to open a contact when the call point is struck with specified force
- Spurious output despite no input

Integrity in respect of failure to	SIL 2	
close		
Total Failure rate	0.133 pmh	
"hazardous" failure rate (revealed)	0 pmh	
"hazardous" failure rate	0.1 pmh	
(unrevealed)		
"safe" failure rate (revealed)	0.033 pmh	
"safe" failure rate (unrevealed)	0	
Diagnostic Coverage	99%	
System type	А	
Hardware Fault Tolerance	0	
Safe Failure Fraction	>99%	
PFD (hazardous failure)	1.25 x 10 <sup>-3</sup>	
Proof Test Interval	Up to 1 year	

									0
	1 2	3	4		5	6	1		8 ISSUE
WIRING SCHEMATIC FOR PRODUCTS: GNEXCP6A-BG						1			
A	GNExCP6A-PB GNEXCP6A-BG[s][t][l][e][m][d][			d][v][o][x][u]					
		GNExCP6A-PT	<u>Sv</u>	vitch Type [s]/	\Terminals [t]				3
	SINGLE SWITCH				CONFIG. 1	DUAL SWITCH			
	SWITCH TYPE [s] [S] Sing	gle Switch				SWITCH TYPE [s] [D]	Dual Switch		
В									
			M/S 1						
								Г.  -  -	
C	• • • • •	R	Y B						
		4 5 1	2 3 4 5 6	7   8		•	2 4	• 5	Γ
	+ +	L_L				+	- +	-	L
			+ + M/S 1			a.			
D	Circuit shown in Unoperated condition					Circuit shown in Unoperated condition Unoperated condition			
	Unoperated co						ass Intact / Standby	Condition)	
	-	Standby Condition)					minal +(1) & (3) minal +(4) & (6)		
	Terminal +(2,3) of switch contacts of						tch contacts closed		
E	Terminals +(2,3)	Terminals +(2,3) & -(4,5) switch contacts open			Terminals+ (1) &- (2) Terminals +(4) & -(5)				
							tch contacts open erated Condition		
	Operated Cond (Glass Broken /	lition / Button pushed in)				-	ass Broken / Button	pushed in)	
	Terminal +(2,3)						minal +(1) & (3) minal +(4) & (6)		
F	F switch contacts open				switch contacts open				
	Terminals +(2,3) switch contacts of					Ter	minals +(1) & -(2) minals +(4) & -(5)		
						SW	tch contacts closed		
	DRAWING TO BS8888:2000 GEOMETRIC TOLERANCES TO ISO1101:1983 LINEAR DIMENSIONAL TOLS	DRAWN DATE D.HOWGILL 07-02-2	SURFACE FINISH	WEIGHT (Kg)	MATTER	RAWING AND ANY INFORMATION OR DE THEREIN IS COMMUNICATED IN CONF.	DENCE AND	2S warning signals	ALL DI IF IN D DO NO
G	ANGULAR DIMENSIONAL TOLS	CHECKED DATE			SYSTEMS	E COPYRIGHT PROPERTY OF EUROPEA! S LTD. NEITHER THE WHOLE OR ANY EX E DISCLOSED, LOANED, COPIED OR USEI CTURING OR TENDERING PURPOSES WIT	TRACT MAY DFOR UNDUE THEID EUROPEAN	N SAFETY SYSTEMS LTD	TITLE
	STANDARDS R.N.POTTS 07-02-20				WRITTEN CONSENT. MANSEI				
	GNExCP6A CALL POINTS	APPROVED DATE R.N.POTTS 07-02-2	ALTERNATIVE MATE	RIAL	C A	EUROPEAN SAFETY SYSTEMS LTD. S PER LATEST DATE OF ISSUE SHOWN A	DOVE	ACTON ONDON W3 7QH WWW.E2S.COM	scale NTS



# EU Declaration of Conformity



Manufacturer:	European Safety Systems Ltd. Impress House, Mansell Road, Acton London, W3 7QH United Kingdom
Authorised Representative:	E2S Warnsignaltechnik UG Charlottenstrasse 45-51 72764 Reutlingen Germany
Equipment Type:	GNExCP6A-BG, GNExCP6A-PB, GNExCP6A-PT GNExCP6B-BG, GNExCP6B-PB, GNExCP6B-PT, GNExCP6C-BG, GNExCP6C-PB, GNExCP6C-PT GNExCP6D-BG, GNExCP6D-PB, GNExCP6D-PT GNExCP6E-BG, GNExCP6E-PB, GNExCP6E-PT

Directive 2014/34/EU: Equipment and Protective Systems for use in Potentially Explosive Atmospheres (ATEX)

Notified Body for EU type Examination (Module B):		Sira Certification Service Notified Body No.: 2813 CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands			
EU-type Examination Certificate (Module B): Notified Body for Quality Assurance Notification / Conformity to EU-type based on quality assurance of the production process (Module D): Quality Assurance Notification (Module D):		Sira 09ATEX3286X			
		Sira Certification Service Notified Body No.: 2813 CSA Group Netherlands B.V, Utrechtseweg 310, 6812 AR, Arnhem, Netherlands SIRA 05 ATEX M342			
					Provisions fulfilled by the equipment:
	GNExCP6B:	II 2G Ex db eb mb IIC T4 Gb (-40°C ≤ Ta ≤ +50°C) II 2D Ex tb IIIC T80°C Db (-40°C ≤ Ta ≤ +50°C) or			
	GNExCP6C:	Il 2G Ex db eb mb IIC T4 Gb (-40°C $\leq$ Ta $\leq$ +65°C) Il 2D Ex tb IIIC T75°C Db (-40°C $\leq$ Ta $\leq$ +65°C) or			
	GNExCP6D:	Il 2G Ex db eb mb IIC T4 Gb (-40°C $\leq$ Ta $\leq$ +70°C) Il 2D Ex tb IIIC T80°C Db (-40°C $\leq$ Ta $\leq$ +70°C)			
	GNExCP6E:	or II 2G Ex db eb mb IIC T4 Gb (-40°C ≤ Ta ≤ +65°C) II 2D Ex tb IIIC T75°C Db (-40°C ≤ Ta ≤ +65°C)			
Standards applied:		EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015/A1:2108 IEC 60079-18:2015/AC:2018 EN 60079-31: 2014 IP6X Dust Protection to EN60079-0 / EN 60079-31			
Directive 2014/30/EU: Electromagnetic Compatibility Di	rective (EMC)				
Standards applied:		EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012 EN 61000-6-4:2007 / A1: 2011			

# **EU Declaration of Conformity**



Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product and all the components contained within it are free from substances of very high concern.

## Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) - enclosure rated IP66

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

Conten Her

Martin Streetz Quality Assurance Manager

Document No.: DC-043\_Issue\_J Date and Place of Issue: London, 23/12/2020

E2S Telephone: +44 (0)20 8743 8880 Fax: +44 (0)20 8740 4200 Email: sales@e2s.com www.e2s.com DC-043\_Issue\_J (GNExPC6) - Page 2 of 2 - QAF\_252\_Issue\_5

# **UKCA** Declaration of Conformity



Manufacturer:	European Safety Systems Ltd. Impress House, Mansell Road, Acton London, W3 7QH United Kingdom
Equipment Type:	GNExCP6A-BG, GNExCP6A-PB, GNExCP6A-PT GNExCP6B-BG, GNExCP6B-PB, GNExCP6B-PT, GNExCP6C-BG, GNExCP6C-PB, GNExCP6C-PT GNExCP6D-BG, GNExCP6D-PB, GNExCP6D-PT GNExCP6E-BG, GNExCP6E-PB, GNExCP6E-PT

Directive UKSI 2016:1107 (as amended by UKSI 2019:696) – Schedule 3A, Part 1 : Product or Protective System Intended for use in Potentially Explosive Atmospheres (UKCA)

Notified Body for UK type Examination (Module B):		Sira Certification Service Notified Body No.: 0518 Rake Lane, Eccleston, Chester CH4 9JN, UK
UK-type Examination Certificate (Module B):		CSAE 21UKEX3556X
Notified Body for Quality Assurance Notification / Con based on quality assurance of the production process (Module I	ody for Quality Assurance Notification / Conformity to EU-type surance of the production process (Module D):	
Quality Assurance Notification (Module D):		CSAE 22UKQAN0046
Provisions fulfilled by the equipment:	GNExCP6A:	II 2G Ex db eb IIC T6 Gb (-40°C ≤ Ta ≤ +70°C) II 2D Ex tb IIIC T75°C Db (-40°C ≤ Ta ≤ +70°C) or
	GNExCP6B:	II 2G Ex db eb mb IIC T4 Gb (-40°C $\leq$ Ta $\leq$ +50°C) II 2D Ex tb IIIC T80°C Db (-40°C $\leq$ Ta $\leq$ +50°C) or
	GNExCP6C:	II 2G Ex db eb mb IIC T4 Gb (-40°C $\leq$ Ta $\leq$ +65°C) II 2D Ex tb IIIC T75°C Db (-40°C $\leq$ Ta $\leq$ +65°C) or
	GNExCP6D:	II 2G Ex db eb mb IIC T4 Gb (-40°C ≤ Ta ≤ +70°C) II 2D Ex tb IIIC T80°C Db (-40°C ≤ Ta ≤ +70°C) or
	GNExCP6E:	ll 2G Ex db eb mb IIC T4 Gb (-40°C ≤ Ta ≤ +65°C) Il 2D Ex tb IIIC T75°C Db (-40°C ≤ Ta ≤ +65°C)
Standards applied:		EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-7:2015/A1:2108 IEC 60079-18:2015/AC:2018 EN 60079-31: 2014 IP6X Dust Protection to EN60079-0 / EN 60079-31
Directive 2014/30/EU: Electromagnetic Compatibility Di	rective (EMC)	
Standards applied:		EN 61000-6-1:2007 EN 61000-6-2:2005 EN 61000-6-3:2007 / A1:2011 / AC: 2012

Directive 2011/65/EU: Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

The product and all the components contained within it are in accordance with the restriction of the use of hazardous substances in electrical and electronic equipment, including amendment by Directive 2015/863/EU.

EN 61000-6-4:2007 / A1: 2011

<u>Regulation (EC) 1907/2006: Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)</u> The product and all the components contained within it are free from substances of very high concern.



Other Standards and Regulations

EN 60529:1992+A2:2013 - Degrees of protection provided by enclosures (IP code) – enclosure rated IP66

On behalf of European Safety Systems Ltd., I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives, regulations and standards.

This Declaration is issued under the sole responsibility of the manufacturer.

at in the

Martin Streetz Quality Assurance Manager

Document No.: DC-094\_Issue\_A Date and Place of Issue: London, 04/02/2022

E2S Telephone: +44 (0)20 8743 8880 Fax: +44 (0)20 8740 4200 Email: sales@e2s.com www.e2s.com DC-094\_Issue\_A (GNExCP6) - Page 2 of 2 - QAF\_252\_Issue\_5