

PRODUCT NAME: CP/ PB-125- EXPLOSIONPROOF-MANUAL CALL POINT/ PUSH BOTTON

DOC NO.: EX-TECH-SIG-SAS-12-CP-PB125-150-TM-EN-REV03

EXPLOSION-PROOF MANUAL CALL POINT/ PUSH BUTTON



II 2GD

EPL Gb, Db

Ex d IIC T6, IP66

Ex tb IIIC T85°C

EX-TECH SIGNALLING SAS

CP/PB-125 EXPLOSIONPROOF MANUAL CALL POINT/ PUSH BUTTON

TECHNICAL MANUAL



Marking details

Type :			
CE 0470	II 2 GD	ATEX 13 NEMKO 1563X	
Ex d IIC T6 Gb	IP 66	IECEX, NEM 13.0033X	
Ex tb IIIC T85°C		CNEC 10.2122X	
T. amb: -40°C < Ta < +70°C		P	Watt max
		U	<input type="checkbox"/> VDC <input type="checkbox"/> AC50/60Hz
		Serial N° :	
WARNING - DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE IS PRESENT			
 Ex-tech Signalling SAS Ex-tech Signalling SAS, Champniers, France - www.ex-tech.no			

Please note that every care has been taken to ensure the accuracy of our technical manual. We do not, however, accept responsibility for damage, loss or expense resulting from any error or omission. We reserve the right to make alterations in line with technical advances and industry standards.

1.0 INTRODUCTION

CP/PB-125 series Explosion-proof Manual Call Point/ Push button is designed for use in according to Oil & Gas, Offshore Platform, Chemical, Petrochemical, Refinery and Marine Industries etc. Enclosure material is Stainless Steel. The design of two LED indicators (Green and/or Red) is unique. It is compatible with PLC, DCS and ESD system via 4-20 mA output. It is ideal to be used as an explosion-proof Manual Call Point for Fire Alarm System with Addressable Module fixed.

There are four different types of manual call point available –the one with the red LED, green LED, both red and green LED and none.

Insert “√” before the one chosen by customer.

With only red LED indicator- During normal operation, the red LED will not be on unless the glass is broken by the operator when the device fault or alarm status arises.

With only green LED indicator – During normal operation, the green LED will be on unless the glass is broken by the operator when the device fault or alarm status arises.

With both red and green LED indicator - During normal operation, the Green LED is on. When device fault or alarm status arises, the Green LED will be cut off and Red LED will be on.

No LED indicator

2.0 EXPLOSION-PROOF LABELING

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

Product order no.:

e.g. **CP125SNNNNARD**

(Refer to the datasheet for product order selection)

Input voltage: <30 Vdc/ 6 amp or <250 Vac/ 11amp

Code:

Exd IIC T6 Gb

Ex tb IIIC T85°C

T.amb -40°C to +70°C

ATEX Marking:

Gas Group and Category: II 2GD

CE Mark: 

Warning: DO NOT OPEN WHEN AN EXPLOSIVE GAS ATMOSPHERE IS PRESENT

Finish product serial no.

Note : exact information is given on the actual label, ref also example on page 1.

3.0 TYPE APPROVAL STANDARD

The CP/ PB 125 series products have been approved according the following standards:

IEC/EN 60079 General Requirements

IEC/ EN 60079-1 Flameproof Enclosure ‘d’

IEC/ EN 60079-31 Dust atmosphere “

4.0 ZONES, GASGROUP, CATEGORY AND TEMPERATURE CLASSIFICATION

The CP/ PB 125 series products have been certified Ex d IIC T6. This means that the units can be installed in locations with the following conditions:

Area Classification:

Zone 1: Explosive gas air mixture likely to occur in normal operation.

Zone 2: Explosive gas air mixture not likely to occur, and if it does, it will only exist for a short time.

Gas Groupings: Group IIA Propane Group

IIB Ethylene Group

IIC Hydrogen and Acetylene

Equipment Category: 2GD

Temperature Range: -40 °C <Ta < 70 °C

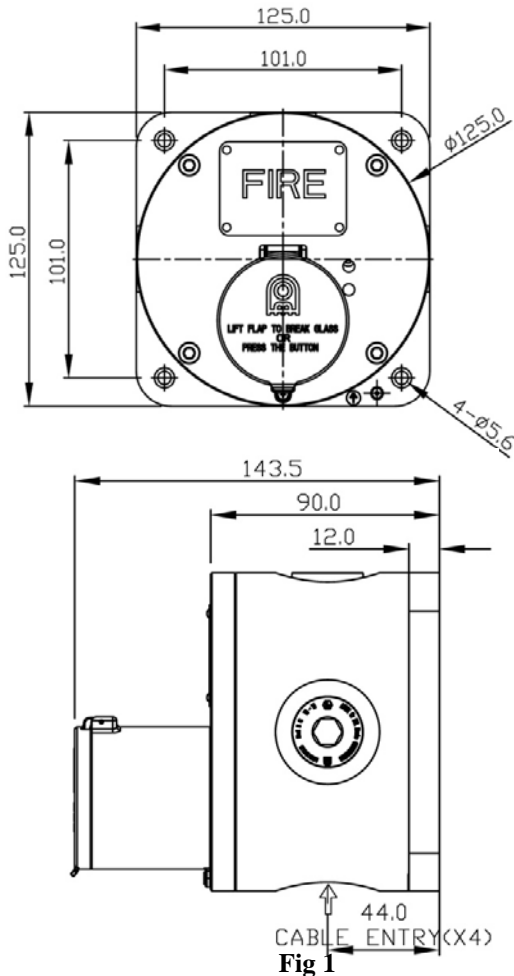
5.0 INSTALLATION

General Requirement

Selection, Installation, Maintenance and repair of electrical apparatus for use in potentially explosive atmosphere should be done in according to IEC/ EN 6079-14/ -17/ -19 . Product installation must be carried out in accordance with any local codes that may apply and should only be carried out by a competent electrical engineer.

Location

The location of the unit should be made with due regard to the area where the unit is visible and can be easily operated. The unit should only be fixed to services that can carry the weight of the unit.



Mounting

The product should be mounted on a vertical surface using four (4) fixing holes in the base. The fixing holes are designed to fit M5 Allen Screw only. Use of stainless steel fastener is recommended by EX TECH SIGNALLING SAS.

If you need mounting plate, please contact EX TECH SIGNALLING SAS to ask the installation drawing of the mounting plate. (See Fig 1)

6.0 WIRING

General Requirement

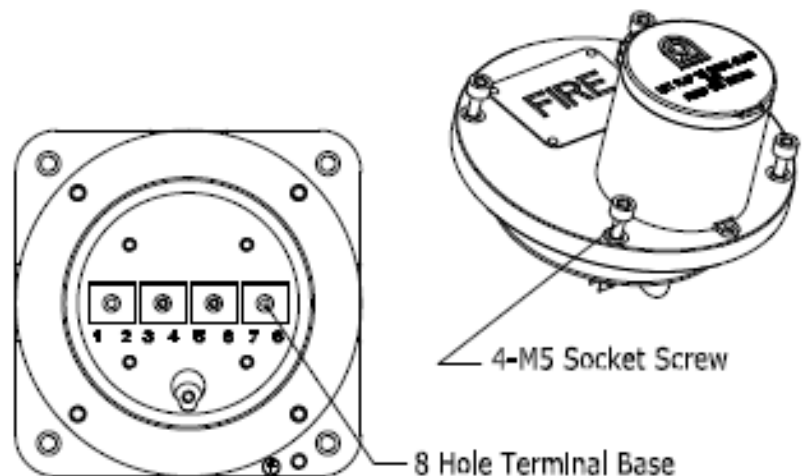
EX TECH SIGNALLING SAS recommends that all cables and cores should be fully identified (suggest using cable from 2.0 to 2.5 mm²). Ensure that all nuts, bolts and screws are secured. Ensure that only the right and certified cable glands are used and earthed correctly. Ensure that only the right and certified stopping plugs are used to blank off unused gland entry points. In order to maintain the IP rating of the product, we recommend SS316L for this application.

Cable Connection

The cable connection is connected with the 8-hole terminal blocks marked T1-T8 located in the flameproof enclosure (See Fig 2). Cable connection should be carried out in accordance with relevant technical requirement.

Remove End Cover

Unscrew the four (4) M5 retained hex socket head screws. This will release the cover from the base and allow the cover to hang on the retaining wire strap. Before replacing the cover, check that the flameproof joints are clean and not damaged, the gasket is still retained in its groove. (See Fig 2)



CAUTION: Before removing the cover, ensure the power to the product is isolated. Remove the four pieces of M5

socket screws to open the cover. Twist the cover gently clockwise and anti-clockwise, whilst pulling away from the base, until it comes off. Replace the cover in similar way, but operate in reverse manner as above.

7.0 OPERATION

There are two types of Manual Call Point available-with/without flap. The product is operated by breaking of the glass using a hammer supplied by the manufacturer. For the one with the flap just lift it up first before breaking the glass. (See Fig 3)

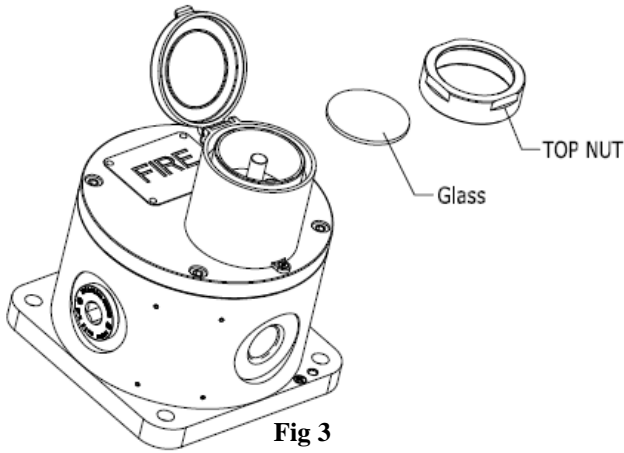


Fig 3

Replacement of Glass

To replace the glass after operation of the unit, unscrew the nut which fixes the glass. Take out the glass and remove any broken fragments from the unit. Check and make sure the gasket is in the nut. Place a new glass into the unit and replace the nut. (See Fig 3)

CAUTION: The glass and any broken fragments should be removed carefully by wearing protective gloves to avoid any injury.

8.0 CABLE GLAND

The CP125 series product has four (4) cable gland entries. Only cable glands approved for Ex 'd' applications can be used, which must be suitable for the type of cable being used and also meet the requirements of the Ex 'd' flameproof installation standard EN 60079-14.

SAFETY WARNING: If the CP/ PB 125 is used at high ambient temperatures, i.e. over +40°C, then the cable entry temperature may exceed +70°C and therefore

suitable heat resisting cable glands must be used, with a rated service temperature of at least 95°C.

If a high IP (Ingress Protection) rating is required, a suitable sealing washer must be fitted under the cable gland.

When only one cable entry is used, the other one must be closed with an Ex 'd' flameproof blanking plug, which must be suitably approved for the installation requirements.

9.0 END OF LINE MONITORING

An end of line monitoring diode or an end of line monitoring resistor can be connected across the 24V+ and 0 terminals. If an end of line monitoring resistor is used, it must have a maximum resistance value of 3k ohms and a minimum wattage of 0.5 Watts; or a minimum resistance value of 1.2k ohms and a maximum wattage of 2 Watts.

10.0 MAINTENANCE

During working life of the product, little or no maintenance is required. Stainless Steel is resistant to most of the acids, alkalis and chemicals.

If abnormal or unusual environmental conditions occur due to accident etc., visual inspection is recommended.

To avoid electrostatic charge build-up, only exterior of the product can be cleaned with a damp cloth.

If spare parts are required, these can be supplied by EX TECH SIGNALLING SAS Company.

If any failure occurs but not caused by human factor, the product can be returned to EX TECH SIGNALLING SAS for free repair or replacement during warranty period.

11.0 CONDITIONS FOR SAFETY USE

- i. This apparatus is suitable to be used only in ambient temperature as stated below:
- ii. Other than product manufacturer, painting and surface finishing are not permitted by the third party.
- iii. When used in dusty atmosphere, flameproof cable entry devices or stopping plugs have to be selected and installed carefully in order to maintain the IP rating (IP66/67) of the product.

Type	Ambient Temp.
CP/PB-125	-40 to +70 °C

Specific Condition for Use

Repairs of the flameproof joints must be made in compliance with the structural specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in tables 1 and 2 of EN/IEC 60079-1.

Please contact Ex-Tech Signalling for further details.

EX-TECH SIGNALLING SAS

**ZA Les Montagnes
355 rue de la Génoise
16430 CHAMPNIERS
(France)**

**Tel: +33 5 45 61 81 68
Fax: +33 5 45 23 29 46**

Website: www.ex-tech.no

E-mail : info@ex-tech.no

EX-TECH SIGNALLING SAS.

ZA Les Montagnes – 355 rue de la Génoise-

16430 CHAMPNIERS (France)

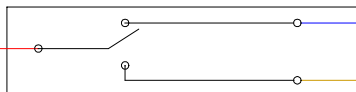
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Fax: +33 5 45 23 29 46

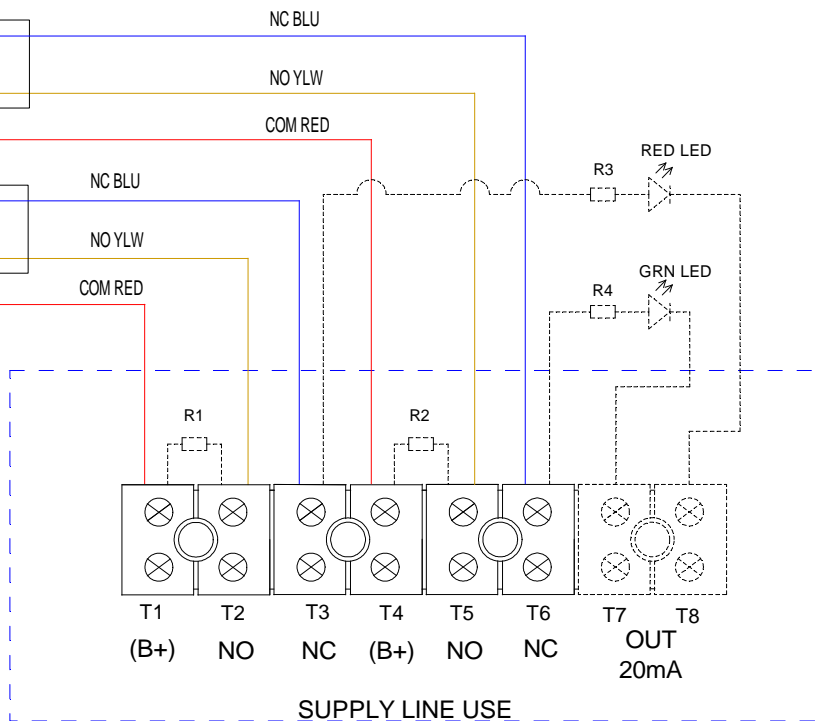
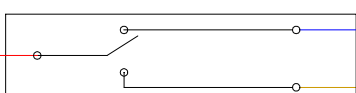
Website: www.ex-tech.no

E-mail: info@ex-tech.no

OMRON
V-154-1A5
Mini SWITCH



OMRON
V-154-1A5
Mini SWITCH




Attention Please:

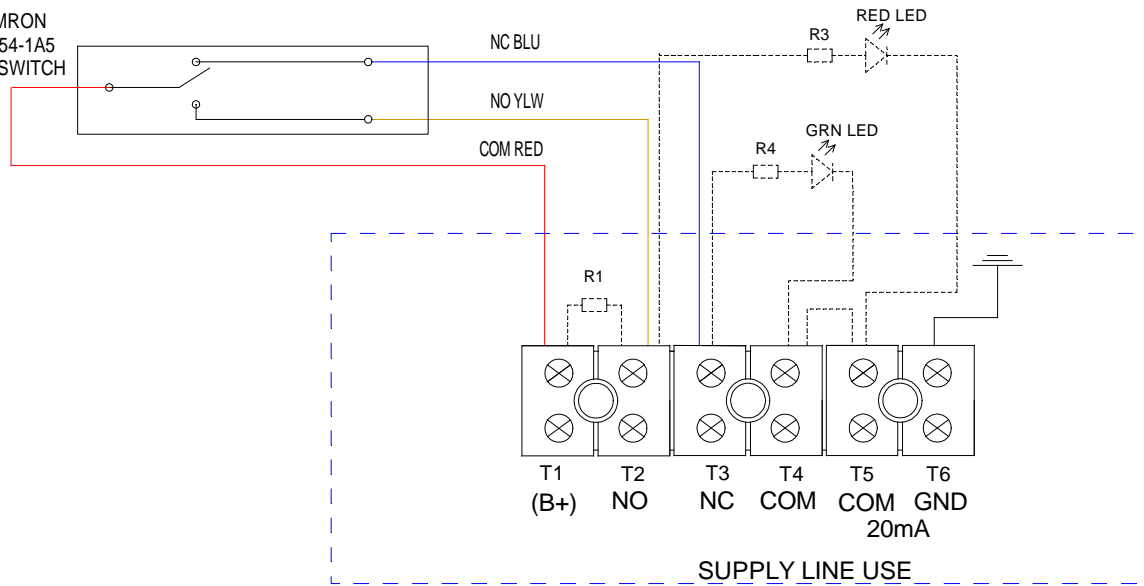
R3 = 1.2K Ohm / R4 : 2.4K Ohm

Customize Project :

- Resistor R1 & R2
- RED LED
- GRN LED

01-08/03/2016	Mise à jour				Size : A3
00-17/09/2015	Creation				
Revision - date	Reason				
Material					
Treatment					
Specifications					
Drawing part WIRING DIAGRAM CP 125_150 DOUBLE SWITCH WITH LED OR RESISTOR		Scale :	1 : 1	Project / N° PO	Dossier
		Drawn by :	P. TRAUMAT	-	-
		Date :	17/09/2015	N° Drawing	Index
				CP 125_150 DOUBLE SWITCH WITH LED OR RESISTOR	Folio
				01	1/1

OMRON
V-154-1A5
Mini SWITCH



Attention Please:

R3 = 1.2K Ohm / R4 : 2.4K Ohm

Customize Project :

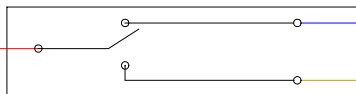
- Resistor R1
- RED LED
- GRN LED

01-08/03/2016	Mise à jour				
00-17/09/2015	Creation				
Revision - date	Reason				
Material					
Treatment					
Specifications					
Drawing part		Scale:	1 : 1	Project / N° PO	
WIRING DIAGRAM CP 125_150 SINGLE SWITCH WITH LED OR RESISTOR		Drawn by:	P. TRAUMAT	Dossier	
		Date:	17/09/2015	N° Drawing	-
		CP 125_150 SINGLE SWITCH WITH LED OR RESISTOR		Index	Folio
				01	1/1



Size :
A3

OMRON
V-154-1A5
Mini SWITCH

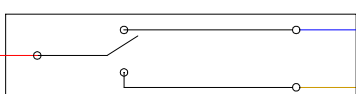


NC BLU

NO YLW

COM RED

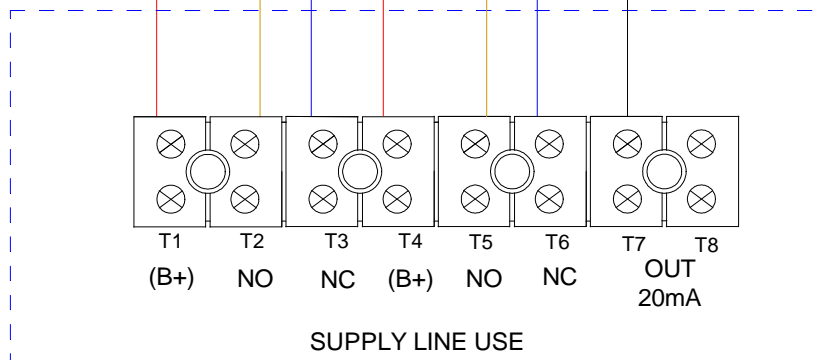
OMRON
V-154-1A5
Mini SWITCH



NC BLU

NO YLW

COM RED



01-08/03/2016

Mise à jour

00-28/09/2015

Creation

Revision - date

Reason

Material

Treatment

Specifications



Size :

A3

Drawing part

Scale :
1 : 1

Project / N° PO

Dossier

WIRING DIAGRAM
CP_PB 125-135-150 DOUBLE SWITCH
WITHOUT LED AND RESISTOR

Drawn by:
P. TRAUMAT

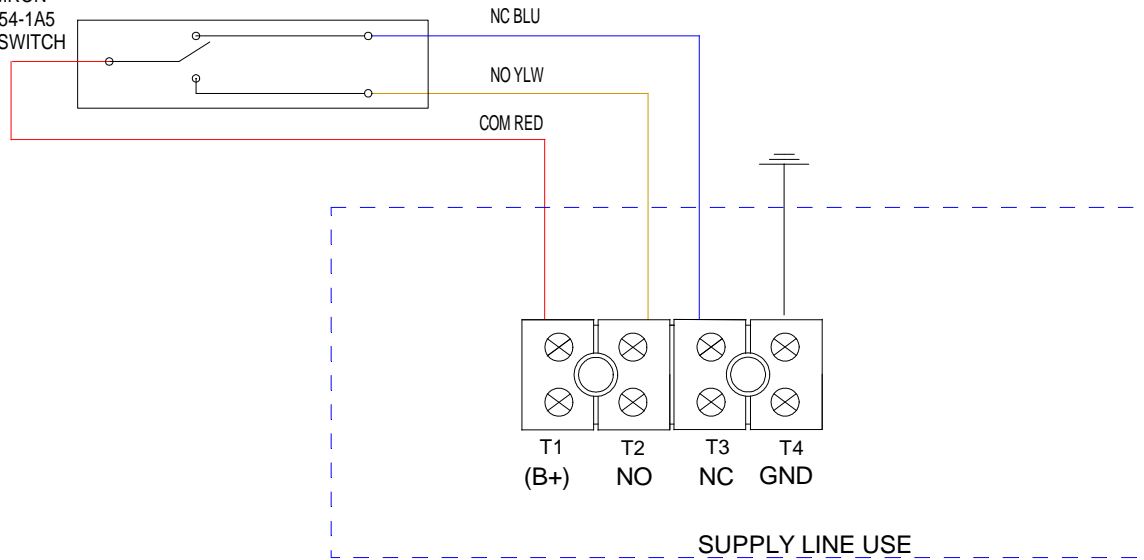
Date:
28/09/2015

N° Drawing
CP_PB 125-135-150 DOUBLE SWITCH
WITHOUT LED AND RESISTOR

Index
01

Folio
1/1

OMRON
V-154-1A5
Mini SWITCH



01-08/03/2016	Mise à jour				
00-28/09/2015	Creation				
Revision - date	Reason				
Material				Size : A3	
Treatment				Ex-tech Signalling	
Specifications					
Drawing part		Scale : 1 : 1	Project / N° PO		Dossier
WIRING DIAGRAM		Drawn by : P. TRAUMAT	-		-
CP_PB 125-135-150 SINGLE SWITCH WITHOUT LED AND RESISTOR		Date : 28/09/2015	N° Drawing		Index Folio
			CP_PB 125-135-150 SINGLE SWITCH WITHOUT LED AND RESISTOR		01 1/1