

7.0 Operation:

In this model series, the units either come with a hinged flap (to prevent accidental activation of the unit) or no hinged flap.

The unit is operated by pushing the button.

Testing the Unit:

To reset the unit after use, Insert the test key into the key hole located in the centre of the button. Turn the key clockwise 90 degrees and pull the button slightly towards you. Then turn the key anticlockwise 90 degrees to the set position & remove the key.

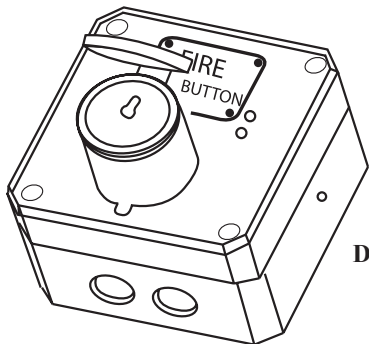


Diagram 3

8.0 Cable Gland:

The PB135 push button has two (2) pre-drilled conduit entries. Only cable glands & plugs that are certified for Ex 'd' applications and meet the requirements of IEC/EN 60079-14 can be used. Care should be taken in choosing the correct gland and plugs, based upon the cabling being used & the environmental conditions present.

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 2Watts.

10.0 Maintenance:

Little or no maintenance is required during the normal working life of the product. The 'GRP' enclosure is resistant to most acids, alkalis and chemicals and has been designed to withstand severe weather conditions.

However, it is suggested that to avoid the possibility of a potential electrostatic charge build up, the exterior of the product is periodically wiped down with a clean damp cloth. At this point, a visual inspection is recommended to ensure that the product is in good working order and no damage has been sustained during its normal operation.

11.0 Conditions for Safety Use

i) This apparatus is suitable to be used only in ambient temperature as stated below:

Type	Ambient Temp
PB135	-40°C to +70°C

ii) Do not paint or change the surface finish of the unit. The coating applied by the manufacturer is Anti Static & UV Stable.

Moflash part code PB135-S00592-Issue A

MOFLASH

SIGNALLING

INSTALLATION & TECHNICAL INFORMATION

PLEASE READ PRIOR TO INSTALLATION



PB135 Series - (Explosion Proof Push Button)

Glass Reinforced Polyester

APPROVALS AND
CONFORMITIES



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1.0 Introduction

The PB135 Explosion Proof push button is designed for use and installation in Zones 1, 2, 21 and 22 areas with gas groups of IIA, IIB plus H2 and temperature classification of T6. It especially applies to Oil & Gas, Offshore Platform, Chemical, Petrochemical, Refinery and Marine Industries etc. Enclosure material is UV and corrosion resistance GRP (Glass Reinforced Polyester). The push button has been designed for ease of installation and operation.

These push buttons are compatible for use with PLC, DCS & ESD systems via a 4-20mA output. They are intended for use in Fire Alarm Systems as a fixed addressable unit in potentially explosive atmospheres.


There are three types of Push Buttons available with LED indication.

- **Red LED Indicator Only:** During normal operation the LED will not be on. The LED will only come on when the push button is activated by breaking the glass.
- **Green LED Indicator Only:** During normal operation the LED will be on. The LED will go off when the push button is activated by breaking the glass.
- **Red & Green Indicators:** During normal operation the Green LED will be on. The Red LED will come on when the push button is activated by breaking the glass. At this point the Green LED will go off.

2.0 Explosion-Proof Labelling

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

Product order no: eg PB135SNNYKNNABR (Refer to the datasheet for product order selection)

Input voltage:	<30 Vdc/ 6 amp or <250 Vac/ 11amp
Code:	Exd IIB + H2 T6 Gb, Ex tb IIIC T85°C
Ambient Temperature:	-40°C to +70°C
ATEX Marking:	
Nemko ATEX Certificate No:	Nemko 14ATEX 5441X
IECEX Certificate No:	IECEX NEM 14.0014X
Gas Group and Category:	II 2GD
CE Mark:	Mark No: 0518

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

Finish product serial no. (Include date of construction) **Note: exact information is given on the actual label.**

3.0 Type Approval Standard

The PB135 series have an EC Type Examination Certificate issued by **Nemko** and have been approved to the following standards: EN 60079-0:2012 (IEC 60079-0:2011), EN-60079-1:2007 (IEC 60079-1:2007) and EN 60079-31:2009 (IEC 60079-31:2008).

4.0 Zones, Gas Group, Category and Temperature Classification

The PB135 series have been certified Ex d IIB+H² 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 + Hydrogen

Equipment Category: 2GD

Temperature Range: -40 °C <T_a < 70 °C

5.0 Installation:

General Requirement:

The unit must be installed in accordance with the latest issued relevant requirements in the EN60079-0 and EN60079-1 specification or the equivalent IEC specification- selection, installation and maintenance of electrical apparatus for use in potentially explosive atmosphere. 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 unit should be mounted on a vertical surface using two (2) fixing holes in the base of the unit. The fixing holes are designed to accept M5 Allen Screw only. The use of stainless steel fasteners is recommended by Moflash. The unit can be operated from any position. For mounting hole positions (see diagram 1).

6.0 Wiring:

General Requirement:

Moflash 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.

Cable Connection:

The cable connection is made to the 8-hole terminal block marked T1-T8 inside the enclosure (see diagram 2). Cable connection should be carried out in accordance with relevant technical requirements.

Removing Front Cover:

Unscrew the four (4) M5 retained Hex Head socket 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 and the gasket is still retained in its groove. (see diagram 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.

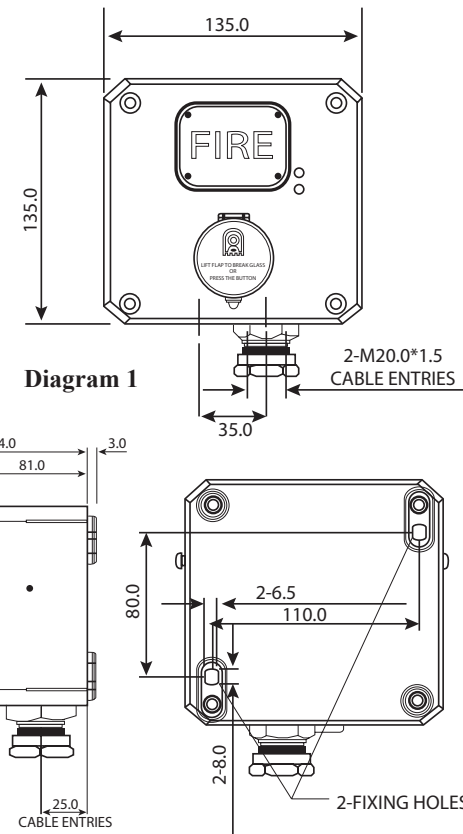


Diagram 1

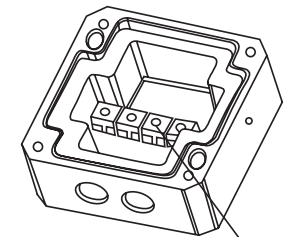


Diagram 2

4-M5 Socket Screw