# SM87BG & SM87PB
# manual call point range

## Ex d, Ex ia, weatherproof

## Overview

These manual fire alarm, emergency shutdown break-glass and pushbutton units have been designed for the most arduous environmental conditions.

The units are both easy to install and maintain. Intrinsically safe Ex ia and flameproof Ex d versions of each model are available.

A choice of either stainless steel or alloy makes the range suitable for either the offshore or onshore industries. Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore reducing maintenance costs.

## Features

- Zone 0, Zone 1 and Zone 2 use*
- ATEX certified
- UL listed for USA and Canada (SM87PBL only). Class I, Div 1, Groups C & D
- ULC certified (SM87PBL only) for Class I, Zone 1 Groups C & D
- CSA certified
- IECEx certified
- Brazilian (INMETRO) certified
- Russian Fire certified

- PESO certified (Ex d only)
- SIL 2 certified (SM87PB only)
- IP66 and IP67
- DNV type approval (IEC 60945) (SM87PB only)
- Certified temperature: –55ºC to +70ºC*
- Stainless steel or marine grade alloy
- Robust yet lightweight
- Easy to maintain

  *Model dependent

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## Certifications

| | |
|---|---|
| **ATEX Ex d** | Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD<br>Certified to: EN60079-0, EN60079-1, EN60079-31<br>Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67 |
| **ATEX Ex ia** | Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD<br>Certified to: EN60079-0, EN60079-11<br>Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da |
| **IECEx Ex d** | Cert. no. IECEx BAS 09.0060<br>Certified to: EN60079-0, EN60079-1, EN60079-31<br>Ex d IIC T5/T6 Gb, Ex tb IIIC T85°/T100°C Db. IP66/IP67 |
| **IECEx Ex ia** | Cert. no. IECEx BAS 10.0033X<br>Certified to: IEC60079-0, IEC60079-11,<br>Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da |
| **UL** | Listing no. E186629<br>UL listed to Class 1, Div 1. Groups C & D. (SM87PBL) |
| **ULC** | Cert. no. 20091023-E320282<br>ULC certified for Class I, Zone 1 Groups C & D (SM87PBL) |
| **CSA Explosion proof** | Class 1, Div 1 & 2. Group D<br>Ex d IIC T5/T6 Gb |
| **CSA Intrinsically safe** | Class 1, Div 1 & 2. Groups A-D |
| **INMETRO Ex d** | Ex db IIC T5/T6 Gb |
| **Type Approvals** | DNV (IEC 60945) (Stainless Steel SM87PB only) |
| **SIL** | SM87PB only - SIL2 Certification to IEC61508. Cert no. 20151118-4786827453 |
| **CCC** | Ex d IIC T5/T6 Gb, Ex tD A21 IP66/IP67 T85°C/T100°C |

## Specifications

| | |
|---|---|
| **Material** | Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy |
| **Finish** | Paint finish as standard or to customer specification |
| **Voltage** | Ex d 24V a.c./d.c. Ex ia 28V |
| **Rating** | 2A |
| **Switches** | 2 pole c/o, wired to terminals<br>Optional up to 4 pole (UL version 2 pole only) |
| **Optional indicator** | A red high intensity LED can be fitted for alarm indication<br>As standard the LED is not provided with over current protection. The forward current (If) should be limited to 20mA |
| **Certified temp** | Ex d*                –55°C to +70°C.<br>Ex ia*              –55°C to +60°C<br>                        –20°C to +55°C (LED version only)<br>UL                  –40°C to +70°C,<br>                        –20°C to +55°C (LED version only)<br>CSA Explosion proof - Class 1, Div 1 & 2.   –50°C to +55°C<br>CSA - Ex d IIC             –55°C to +70°C<br>CSA Intrinsically safe - Class 1, Div 1 & 2   –50°C to +40°C<br><br>*Note: includes ATEX, IECEx & INMETRO versions |
| **Weight** | 3·8 kg. steel (approx.) or 2.5 kg. alloy (approx) |
| **Ingress protection** | IP66 & IP67. SM87PB IP68 (35m for 40 hours) |
| **Entries** | Up to 4 x M20 or M25 ISO Ex d/Ex ia<br>Up to 4 x ½″ or ¾″ NPT UL<br>Stainless steel version comes with two entries as standard.<br>Units ordered with a single entry ordering code are supplied with 2x entries inc. plug on the opposite side |
| **Terminals** | Will accept up to 1·5mm² cable |
| **Resistor values** | 470R minimum (d.c. & I.S. units only) |

## General arrangement drawing (all dimensions in mm)

Break glass



Push button



Both the Ex ia units and the Ex d units have the same external appearance. Also the internal components are identical throughout the range. Each unit can be wired for either NO, NC or CO contacts to customer specification
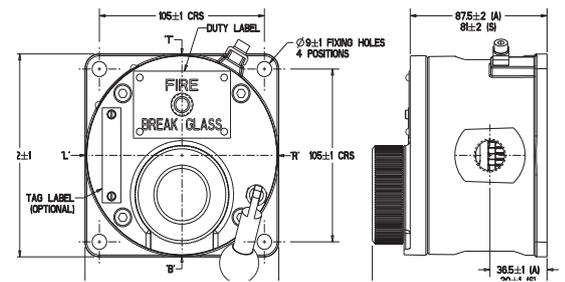
# Ordering requirements

The following code is designed to help in selection of the correct unit. Build up the reference number by inserting the code for each component into the appropriate box
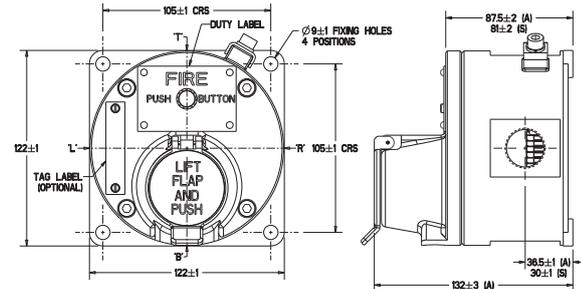
| Unit | Model | Material | Certification | Entries | Duty label | Tag label | Options | Finish |
|---|---|---|---|---|---|---|---|---|
| **SM87** | | | | | | | | |

| Material* | Code |
|---|---|
| Stainless steel | S |
| Alloy | A |

*UL version only available in alloy

| Model* | Code |
|---|---|
| Breakglass latching | BGL |
| Lift flap breakglass latching | LBGL |
| Push button latching key reset | PBL |
| Push button only momentary action | PBM |

*UL and ULC versions only available in PBL model

| Certification | Code |
|---|---|
| Ex ia | I |
| Ex d | D |
| IECEx - Ex ia | IJ |
| IECEx - Ex d | DJ |
| UL | UL |
| ULC | UC |
| CSA - Intrinsically Safe | IC |
| CSA - Ex proof | DC |
| INMETRO - Ex d | DM |
| CCC | DQ |

| Entries | Code |
|---|---|
| M20 | 1 |
| M25 | 2 |
| ½″ NPT | 3 |
| ¾″ NPT | 4 |
| Other | 5 |
| **Position** | |
| Top | *T |
| Bottom | *B |
| RHS | *R |
| LHS | *L |

*Prefix position with size code i.e. 1T1B = M20 Top and Bottom

| Duty label | Code |
|---|---|
| Fire breakglass | 1 |
| Push button | 2 |
| Fire push button | 3 |
| ESDO abandon | 4 |
| Burning house logo | 5 |
| Fire/FEU | 6† |
| Other | O* |
| None | N |

*Please specify
†This option must be used when ordering a red callpoint for ULC Fire Alarm applications

| Tag label | Code |
|---|---|
| Required | Y* |
| Not required | N |

*Please specify

| Options | Code |
|---|---|
| Not required | N |
| LED | A |
| Resistor series | G* |
| Resistor EOL | H* |
| Diode | D* |
| 3 pole c/o switch | T |
| 4 pole c/o switch | F |

*Please specify

| Finish | Code |
|---|---|
| Red | R |
| Blue | B |
| Yellow | Y |
| Yellow/black stripes | X |
| Special | S* |

*Please specify