

## Ex d, Intrinsically Safe (Ex ia), Weatherproof



### Features

- Zone 0, Zone 1 and Zone 2 use\*.
- Ex d IIC T5/T6 or Ex ia IIC T4.
- ATEX approved, Ex II 1G (Ex ia) Ex II 2GD (Ex d).
- BASEEFA certified.
- UL listed for USA and Canada (PB only), Class I, Div 1, Groups C & D.
- ULC certified for Class I, Zone 1 Groups C & D.
- CSA certified.
- IECEx certified Gb, Db.
- CUTR certified.
- Chinese (CQST) certified.
- Brazilian (Inmetro) certified.
- SIL 2 pending. (Contact MEDC for details).
- IP66 and IP67.
- Certified temperature:  $-55^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ \*.
- Stainless steel or marine grade alloy.
- Robust yet lightweight.
- Easy to maintain.

\*Model dependent.

### Introduction

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.

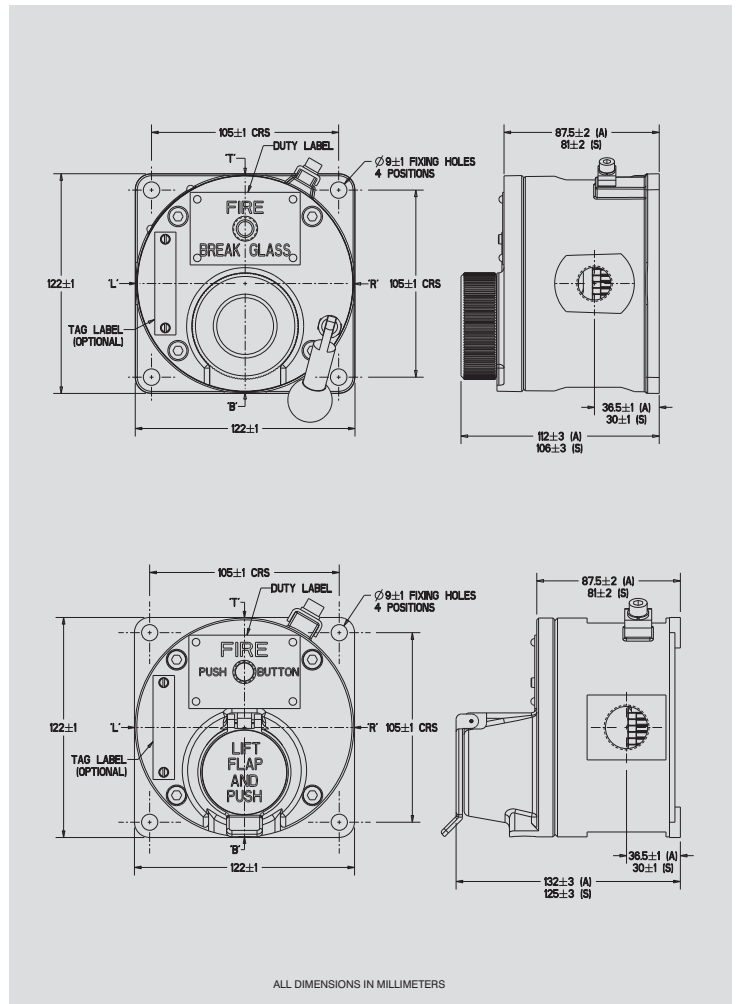
A choice of either stainless steel or alloy makes the range suitable for either the offshore or onshore industries. Stainless steel, one of the most durable materials available on the market, is both hard wearing and corrosion resistant, increasing the life of products in harsh environments and therefore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

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.



# Certification and Specification

<b>ATEX Ex d:</b>	Cert. no. Baseefa03ATEX0075. ATEX Approved Ex II 2GD. Certified to: EN60079-0, EN60079-1, EN60079-31. Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67.
<b>ATEX Ex ia:</b>	Cert. no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1G. Certified to: EN60079-0, EN60079-11, EN60079-26. Ex ia IIC T4 Ga.
<b>IECEX Ex d:</b>	Cert. no. IECEX BAS 09.0060. Certified to: EN60079-0, EN60079-1, EN60079-31. Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67.
<b>IECEX Ex ia:</b>	Cert. no. IECEX BAS 10.0033X. Certified to: IEC60079-0, IEC60079-11, IEC60079-26. Ex ia IIC T4 Ga.
<b>UL:</b>	Listing no. E186629. UL listed to Class 1, Div 1. Groups C & D. (SM87PBL).
<b>ULC:</b>	Cert. no. 20091023-E320282. ULC certified for Class I, Zone 1 Groups C & D.
<b>CSA Ex d:</b>	Class 1, Div 1 & 2. Group D.
<b>CSA Ex ia:</b>	Class 1, Div 1 & 2. Groups A-D.
<b>CUTR Ex d: ‡</b>	1Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67. Russian Fire Approved.
<b>CUTR Ex ia: †</b>	0Ex ia IIC T4 Ga. Russian Fire Approved.
<b>Inmetro Ex d:</b>	Ex d IIC T5/T6 Gb.
<b>Inmetro Ex ia:</b>	Ex ia IIC T4 Ga.
<b>CQST Exd:</b>	Exd IICT85°C/T100°C.
<b>CQST Exia:</b>	Exia IIC T4.
<b>SIL:</b>	SIL2 certification pending. Please contact MEDC for details.
<b>Material:</b>	Grade 316 ANC4B Stainless Steel or LM 25 TF Marine Grade Alloy.
<b>Finish:</b>	Paint finish as standard or to customer specification.
<b>Voltage:</b>	Exd 24V a.c./d.c. Exia 28V.
<b>Rating:</b>	2 amp.
<b>Switches</b>	2 pole c/o, wired to terminals. Optional up to 4 pole (UL version 2 pole only).
<b>Optional Indicator:</b>	A red high intensity LED can be fitted for alarm indication.
<b>Certified Temp:</b>	Exd* -55°C to +70°C. Exi* -55°C to +60°C. -20°C to +55°C (LED version only). UL -40°C to +70°C, -20°C to +55°C (LED version only). CSA -50°C to +55°C (Exd), -50°C to +40°C (Exi). *Note: includes ATEX, IECEX, CUTR, Brazilian & Chinese versions.
<b>Weight:</b>	3-8 kg. steel (approx.) or 2.5 kg. alloy (approx).
<b>Ingress Protection:</b>	IP66 and IP67. SM87 PB IP68 (40m for 8 hours).
<b>Entries:</b>	Up to 4 x M20 or M25 ISO Ex d/Ex ia. Up to 4 x 1/2" or 3/4" NPT UL.
<b>Terminals:</b>	Will accept up to 2-5mm <sup>2</sup> cable.
<b>Resistor Values:</b>	470R minimum (d.c. & I.S. units only).



Both the Exia units and the Exd 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																																																																																																																	
<table border="1"> <thead> <tr> <th>*Model</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Breakglass Latching</td> <td>BGL</td> </tr> <tr> <td>Lift Flap Breakglass Latching</td> <td>LBGL</td> </tr> <tr> <td>Push Button Latching key reset</td> <td>PBL</td> </tr> <tr> <td>Push Button Only</td> <td>PBM</td> </tr> <tr> <td>Momentary Action</td> <td></td> </tr> </tbody> </table>		*Model	Code	Breakglass Latching	BGL	Lift Flap Breakglass Latching	LBGL	Push Button Latching key reset	PBL	Push Button Only	PBM	Momentary Action		<table border="1"> <thead> <tr> <th>Certification</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Ex ia</td> <td>I</td> </tr> <tr> <td>Ex d</td> <td>D</td> </tr> <tr> <td>IECEX Ex i</td> <td>IJ</td> </tr> <tr> <td>IECEX Ex d</td> <td>DJ</td> </tr> <tr> <td>UL</td> <td>UL</td> </tr> <tr> <td>ULC</td> <td>UC</td> </tr> <tr> <td>CSA - Ex i</td> <td>IC</td> </tr> <tr> <td>CSA - Ex d</td> <td>DC</td> </tr> <tr> <td>CUTR Ex i</td> <td>IG</td> </tr> <tr> <td>CUTR Ex d</td> <td>DG</td> </tr> <tr> <td>Chinese Ex i</td> <td>IQ†</td> </tr> <tr> <td>Chinese Ex d</td> <td>DQ†</td> </tr> <tr> <td>Inmetro Ex i</td> <td>IM</td> </tr> <tr> <td>Inmetro Ex d</td> <td>DM</td> </tr> </tbody> </table>		Certification	Code	Ex ia	I	Ex d	D	IECEX Ex i	IJ	IECEX Ex d	DJ	UL	UL	ULC	UC	CSA - Ex i	IC	CSA - Ex d	DC	CUTR Ex i	IG	CUTR Ex d	DG	Chinese Ex i	IQ†	Chinese Ex d	DQ†	Inmetro Ex i	IM	Inmetro Ex d	DM	<table border="1"> <thead> <tr> <th>Entries</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>M20</td> <td>1</td> </tr> <tr> <td>M25</td> <td>2</td> </tr> <tr> <td>1/2" NPT</td> <td>3</td> </tr> <tr> <td>3/4" NPT</td> <td>4</td> </tr> <tr> <td>Other</td> <td>5</td> </tr> </tbody> </table>		Entries	Code	M20	1	M25	2	1/2" NPT	3	3/4" NPT	4	Other	5	<table border="1"> <thead> <tr> <th>Duty Label</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Fire-Breakglass</td> <td>1</td> </tr> <tr> <td>Push Button</td> <td>2</td> </tr> <tr> <td>Fire-Push Button</td> <td>3</td> </tr> <tr> <td>ESDO-Abandon</td> <td>4</td> </tr> <tr> <td>Other</td> <td>0*</td> </tr> <tr> <td>None</td> <td>N</td> </tr> </tbody> </table>		Duty Label	Code	Fire-Breakglass	1	Push Button	2	Fire-Push Button	3	ESDO-Abandon	4	Other	0*	None	N	<table border="1"> <thead> <tr> <th>Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Not required</td> <td>N</td> </tr> <tr> <td>LED</td> <td>A</td> </tr> <tr> <td>Resistor Series</td> <td>G*</td> </tr> <tr> <td>Resistor EOL</td> <td>H*</td> </tr> <tr> <td>Diode</td> <td>D*</td> </tr> <tr> <td>3 Pole</td> <td>T</td> </tr> <tr> <td>c/o Switch</td> <td></td> </tr> <tr> <td>4 Pole</td> <td>F</td> </tr> <tr> <td>c/o Switch</td> <td></td> </tr> </tbody> </table>		Options	Code	Not required	N	LED	A	Resistor Series	G*	Resistor EOL	H*	Diode	D*	3 Pole	T	c/o Switch		4 Pole	F	c/o Switch		<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Red</td> <td>R</td> </tr> <tr> <td>Blue</td> <td>B</td> </tr> <tr> <td>Yellow</td> <td>Y</td> </tr> <tr> <td>Yellow/</td> <td>X</td> </tr> <tr> <td>Black Stripes</td> <td></td> </tr> <tr> <td>Special</td> <td>S*</td> </tr> </tbody> </table>		Finish	Code	Red	R	Blue	B	Yellow	Y	Yellow/	X	Black Stripes		Special	S*
*Model	Code																																																																																																																
Breakglass Latching	BGL																																																																																																																
Lift Flap Breakglass Latching	LBGL																																																																																																																
Push Button Latching key reset	PBL																																																																																																																
Push Button Only	PBM																																																																																																																
Momentary Action																																																																																																																	
Certification	Code																																																																																																																
Ex ia	I																																																																																																																
Ex d	D																																																																																																																
IECEX Ex i	IJ																																																																																																																
IECEX Ex d	DJ																																																																																																																
UL	UL																																																																																																																
ULC	UC																																																																																																																
CSA - Ex i	IC																																																																																																																
CSA - Ex d	DC																																																																																																																
CUTR Ex i	IG																																																																																																																
CUTR Ex d	DG																																																																																																																
Chinese Ex i	IQ†																																																																																																																
Chinese Ex d	DQ†																																																																																																																
Inmetro Ex i	IM																																																																																																																
Inmetro Ex d	DM																																																																																																																
Entries	Code																																																																																																																
M20	1																																																																																																																
M25	2																																																																																																																
1/2" NPT	3																																																																																																																
3/4" NPT	4																																																																																																																
Other	5																																																																																																																
Duty Label	Code																																																																																																																
Fire-Breakglass	1																																																																																																																
Push Button	2																																																																																																																
Fire-Push Button	3																																																																																																																
ESDO-Abandon	4																																																																																																																
Other	0*																																																																																																																
None	N																																																																																																																
Options	Code																																																																																																																
Not required	N																																																																																																																
LED	A																																																																																																																
Resistor Series	G*																																																																																																																
Resistor EOL	H*																																																																																																																
Diode	D*																																																																																																																
3 Pole	T																																																																																																																
c/o Switch																																																																																																																	
4 Pole	F																																																																																																																
c/o Switch																																																																																																																	
Finish	Code																																																																																																																
Red	R																																																																																																																
Blue	B																																																																																																																
Yellow	Y																																																																																																																
Yellow/	X																																																																																																																
Black Stripes																																																																																																																	
Special	S*																																																																																																																
<table border="1"> <thead> <tr> <th>*Material</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Stainless Steel</td> <td>S</td> </tr> <tr> <td>Alloy</td> <td>A</td> </tr> </tbody> </table>		*Material	Code	Stainless Steel	S	Alloy	A	<table border="1"> <thead> <tr> <th>Position</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Top</td> <td>*T</td> </tr> <tr> <td>Bottom</td> <td>*B</td> </tr> <tr> <td>RHS</td> <td>*R</td> </tr> <tr> <td>LHS</td> <td>*L</td> </tr> </tbody> </table>		Position	Code	Top	*T	Bottom	*B	RHS	*R	LHS	*L	<table border="1"> <thead> <tr> <th>Label</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Required</td> <td>Y*</td> </tr> <tr> <td>Not Required</td> <td>N</td> </tr> </tbody> </table>		Label	Code	Required	Y*	Not Required	N	<table border="1"> <thead> <tr> <th>Options</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Not required</td> <td>N</td> </tr> <tr> <td>LED</td> <td>A</td> </tr> <tr> <td>Resistor Series</td> <td>G*</td> </tr> <tr> <td>Resistor EOL</td> <td>H*</td> </tr> <tr> <td>Diode</td> <td>D*</td> </tr> <tr> <td>3 Pole</td> <td>T</td> </tr> <tr> <td>c/o Switch</td> <td></td> </tr> <tr> <td>4 Pole</td> <td>F</td> </tr> <tr> <td>c/o Switch</td> <td></td> </tr> </tbody> </table>		Options	Code	Not required	N	LED	A	Resistor Series	G*	Resistor EOL	H*	Diode	D*	3 Pole	T	c/o Switch		4 Pole	F	c/o Switch		<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Red</td> <td>R</td> </tr> <tr> <td>Blue</td> <td>B</td> </tr> <tr> <td>Yellow</td> <td>Y</td> </tr> <tr> <td>Yellow/</td> <td>X</td> </tr> <tr> <td>Black Stripes</td> <td></td> </tr> <tr> <td>Special</td> <td>S*</td> </tr> </tbody> </table>		Finish	Code	Red	R	Blue	B	Yellow	Y	Yellow/	X	Black Stripes		Special	S*																																																
*Material	Code																																																																																																																
Stainless Steel	S																																																																																																																
Alloy	A																																																																																																																
Position	Code																																																																																																																
Top	*T																																																																																																																
Bottom	*B																																																																																																																
RHS	*R																																																																																																																
LHS	*L																																																																																																																
Label	Code																																																																																																																
Required	Y*																																																																																																																
Not Required	N																																																																																																																
Options	Code																																																																																																																
Not required	N																																																																																																																
LED	A																																																																																																																
Resistor Series	G*																																																																																																																
Resistor EOL	H*																																																																																																																
Diode	D*																																																																																																																
3 Pole	T																																																																																																																
c/o Switch																																																																																																																	
4 Pole	F																																																																																																																
c/o Switch																																																																																																																	
Finish	Code																																																																																																																
Red	R																																																																																																																
Blue	B																																																																																																																
Yellow	Y																																																																																																																
Yellow/	X																																																																																																																
Black Stripes																																																																																																																	
Special	S*																																																																																																																

\* UL version only available in PBL model.

\* UL version only available in Alloy.

\* Russian Fire Approval as standard.

† Not suitable for use in China on fire alarm systems.

\* Prefix position with size code i.e. 1T 1B = 20mm Top and Bottom.

\* Please specify.

\* Please specify.

\* Please specify.