

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
 - TR CU certified
 - Brazilian (INMETRO) certified
 - Russian Fire certified
 - CCOE certified
 - SIL 2 certified (SM87PB only)
 - IP66 and IP67
 - DNV type approval (IEC 60945) (SM87PB only)
 - Certified temperature: -55°C to +70°C*
 - Stainless steel or marine grade alloy
 - Robust yet lightweight
 - Easy to maintain
- *Model dependent



Certifications

ATEX Ex d	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
ATEX Ex ia	Cert no. Baseefa 02ATEX0152X. ATEX Approved Ex II 1GD Certified to: EN60079-0, EN60079-11 Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da
IECEX Ex d	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
IECEX Ex ia	Cert. no. IECEX BAS 10.0033X Certified to: IEC60079-0, IEC60079-11, Ex ia IIC T4 Ga, Ex ia IIIC T135°C Da
UL	Listing no. E186629 UL listed to Class 1, Div 1. Groups C & D. (SM87PBL)
ULC	Cert. no. 20091023-E320282 ULC certified for Class I, Zone 1 Groups C & D (SM87PBL)
CSA Explosion proof	Class 1, Div 1 & 2. Group D Ex d IIC T5/T6 Gb
CSA Intrinsically safe	Class 1, Div 1 & 2. Groups A-D
TR CU Ex d	1Ex d IIC T5/T6 Gb, Ex tb IIIC T85°C/T100°C Db. IP66/IP67 Russian Fire Approved
TR CU Ex ia	0Ex ia IIC T4 Ga. Russian Fire Approved
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 d A21 IP66/IP67 T85°C/T100°C

Specifications

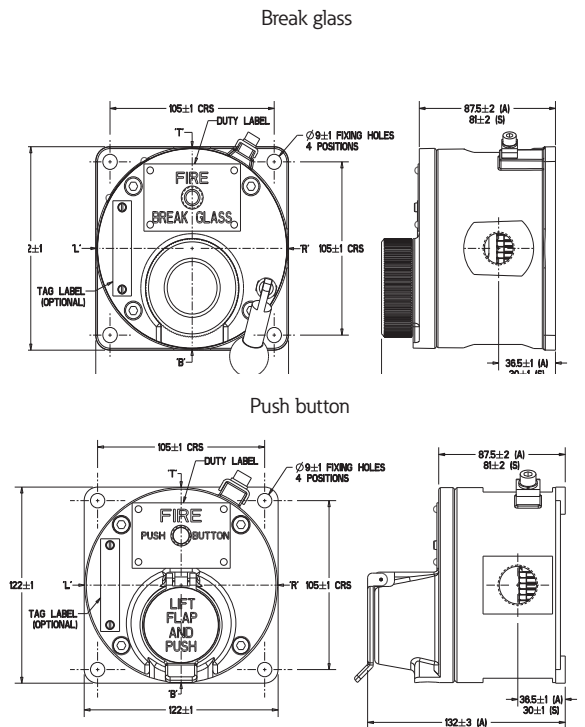
Material	Grade 316 ANC4B stainless steel or LM 25 TF marine grade alloy	
Finish	Paint finish as standard or to customer specification	
Voltage	Ex d 24V a.c./d.c. Ex ia 28V	
Rating	2A	
Switches	2 pole c/o, wired to terminals Optional up to 4 pole (UL version 2 pole only)	
Optional indicator	A red high intensity LED can be fitted for alarm indication 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.
	Ex ia*	-55°C to +60°C
	UL	-20°C to +55°C (LED version only)
	UL	-40°C to +70°C,
	UL	-20°C to +55°C (LED version only)
	CSA Explosion proof - Class 1, Div 1 & 2.	-50°C to +55°C
	CSA - Ex d IIC	-55°C to +70°C
	CSA Intrinsically safe - Class 1, Div 1 & 2	-50°C to +40°C
	*Note: includes ATEX, IECEX, TR CU & 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 Up to 4 x ½" or ¾" NPT UL Stainless steel version comes with two entries as standard. 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)	

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"> <tr> <th>Material*</th> <th>Code</th> </tr> <tr> <td>Stainless steel</td> <td>S</td> </tr> <tr> <td>Alloy</td> <td>A</td> </tr> </table> <p>*UL version only available in alloy</p>	Material*	Code	Stainless steel	S	Alloy	A																																																				
Material*	Code																																																											
Stainless steel	S																																																											
Alloy	A																																																											
	<table border="1"> <tr> <th>Model*</th> <th>Code</th> </tr> <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 momentary action</td> <td>PBM</td> </tr> </table> <p>*UL and ULC versions only available in PBL model</p>	Model*	Code	Breakglass latching	BGL	Lift flap breakglass latching	LBGL	Push button latching key reset	PBL	Push button only momentary action	PBM																																																	
Model*	Code																																																											
Breakglass latching	BGL																																																											
Lift flap breakglass latching	LBGL																																																											
Push button latching key reset	PBL																																																											
Push button only momentary action	PBM																																																											
			<table border="1"> <tr> <th>Certification</th> <th>Code</th> </tr> <tr> <td>Ex ia</td> <td>I</td> </tr> <tr> <td>Ex d</td> <td>D</td> </tr> <tr> <td>IECEX - Ex ia</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 - Intrinsically Safe</td> <td>IC</td> </tr> <tr> <td>CSA - Ex proof</td> <td>DC</td> </tr> <tr> <td>TR CU - Ex ia</td> <td>IG</td> </tr> <tr> <td>TR CU - Ex d</td> <td>DG</td> </tr> <tr> <td>TR CU - Ex ia Russian Fire</td> <td>IGF*</td> </tr> <tr> <td>TR CU - Ex d Russian Fire</td> <td>DGF*</td> </tr> <tr> <td>INMETRO - Ex d</td> <td>DM</td> </tr> <tr> <td>CCC</td> <td>DQ</td> </tr> </table> <p>*For Russian Fire approval red housing and burning house duty label must be selected</p>	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	TR CU - Ex ia	IG	TR CU - Ex d	DG	TR CU - Ex ia Russian Fire	IGF*	TR CU - Ex d Russian Fire	DGF*	INMETRO - Ex d	DM	CCC	DQ	<table border="1"> <tr> <th>Entries</th> <th>Code</th> </tr> <tr> <td>M20</td> <td>1</td> </tr> <tr> <td>M25</td> <td>2</td> </tr> <tr> <td>½" NPT</td> <td>3</td> </tr> <tr> <td>¾" NPT</td> <td>4</td> </tr> <tr> <td>Other</td> <td>5</td> </tr> </table> <table border="1"> <tr> <th>Position</th> <th>Code</th> </tr> <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> </table> <p>*Prefix position with size code i.e. 1T1B = M20 Top and Bottom</p>	Entries	Code	M20	1	M25	2	½" NPT	3	¾" NPT	4	Other	5	Position	Code	Top	*T	Bottom	*B	RHS	*R	LHS	*L				
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																																																											
TR CU - Ex ia	IG																																																											
TR CU - Ex d	DG																																																											
TR CU - Ex ia Russian Fire	IGF*																																																											
TR CU - Ex d Russian Fire	DGF*																																																											
INMETRO - Ex d	DM																																																											
CCC	DQ																																																											
Entries	Code																																																											
M20	1																																																											
M25	2																																																											
½" NPT	3																																																											
¾" NPT	4																																																											
Other	5																																																											
Position	Code																																																											
Top	*T																																																											
Bottom	*B																																																											
RHS	*R																																																											
LHS	*L																																																											
					<table border="1"> <tr> <th>Duty label</th> <th>Code</th> </tr> <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>Burning house logo</td> <td>5†</td> </tr> <tr> <td>Fire/FEU</td> <td>6‡</td> </tr> <tr> <td>Other</td> <td>O*</td> </tr> <tr> <td>None</td> <td>N</td> </tr> </table> <p>*Please specify †Must be selected for Russian Fire approval ‡This option must be used when ordering a red callpoint for ULC Fire Alarm applications</p>	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																																					
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																																																											
						<table border="1"> <tr> <th>Tag label</th> <th>Code</th> </tr> <tr> <td>Required</td> <td>Y*</td> </tr> <tr> <td>Not required</td> <td>N</td> </tr> </table> <p>*Please specify</p>	Tag label	Code	Required	Y*	Not required	N																																																
Tag label	Code																																																											
Required	Y*																																																											
Not required	N																																																											
							<table border="1"> <tr> <th>Options</th> <th>Code</th> </tr> <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 c/o switch</td> <td>T</td> </tr> <tr> <td>4 pole c/o switch</td> <td>F</td> </tr> </table> <p>*Please specify</p>	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																																					
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																																																											
							<table border="1"> <tr> <th>Finish</th> <th>Code</th> </tr> <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/black stripes</td> <td>X</td> </tr> <tr> <td>Special</td> <td>S*</td> </tr> </table> <p>*Please specify †Must be selected for Russian Fire approval</p>	Finish	Code	Red	R†	Blue	B	Yellow	Y	Yellow/black stripes	X	Special	S*																																									
Finish	Code																																																											
Red	R†																																																											
Blue	B																																																											
Yellow	Y																																																											
Yellow/black stripes	X																																																											
Special	S*																																																											

General arrangement drawing (all dimensions in mm)



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