

# SM87HXB and SM87XBT 5 joule xenon and SM87LED high intensity LED beacon range

Ex d, weatherproof



## Overview

These certified beacons have been designed for use in harsh environmental conditions. The stainless steel or marine grade alloy enclosures are suitable for use offshore or onshore, where lightweight combined with corrosion resistance and strength is required. Units can be painted to customer specification and fitted with identification labels.

LED version available, offering extended lifetimes.

A high temperature version is available.

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 1 and Zone 2 use
- Ex d IIC T4/T5/T6
- ATEX approved, Ex II 2GD
- IECEx certified Gb, Db
- UL listed for USA and Canada
  - Class I, Div 1, Groups C & D
  - Class I, Zone 1, AExd IIB
- CSA certified
- TR CU certified
- CQST certified\*
- INMETRO certified\*
- SIL 2 certified
- CCOE certified
- IP66 and IP67
- Certified temperature: -55°C to +70°C\*
- High temperature version (up to 85°C) available†
- Stainless steel or marine grade alloy
- Xenon or LED versions
- Various lens colours
- Optional lens guard
- Telephone or relay initiated

\*Depending on version

†Please contact MEDC technical team



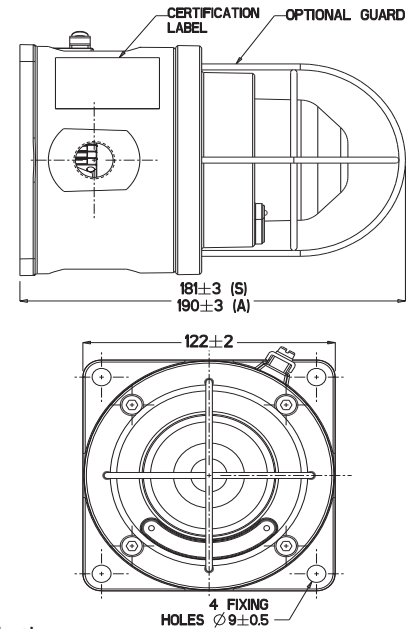
## Certifications

<b>ATEX Ex d</b>	Cert. no. Baseefa 03ATEX0222 Certified to: EN60079-0, EN60079-1, EN60079-31 SM87HXB: Ex II 2GD, Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/T80°C/T95°C Db SM87LED: Ex II 2GD, Ex d IIC T6 Gb, Ex tb IIIC T55°C/T70°C Db SM87XBT: Ex II 2GD, Ex d IIC T4 Gb, Ex tb IIIC T110°C Db
<b>IECEX Ex d</b>	Cert. no. IECEX BAS 09.0059 Certified to: IEC60079-0, IEC60079-1, IEC60079-31 SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/T80°C/T95°C Db SM87LED: Ex d IIC T6 Gb, Ex tb IIIC T55°C/T70°C Db SM87XBT: Ex d IIC T4 Gb, Ex tb IIIC T110°C Db
<b>UL</b>	Listing no. E187894 Class I, Div 1, Groups C & D Class I, Zones 1. (SM87HXB & SM87XBT only)
<b>CSA</b>	Cert no. 96406. (SM87HXB only) Certified to: C22.2 Nos 0, 0.4, 0.5, 9, 30-M1986, 94-M91, 137-M1981 Class I, Div 1. Group D
<b>TR CU Ex d</b>	SM87HXB: 1Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/T80°C/T95°C Db SM87LED: 1Ex d IIC T6 Gb, Ex tb IIIC T55°C/T70°C Db SM87XBT: 1Ex d IIC T4 Gb, Ex tb IIIC T110°C Db Russian Fire Alarm approved
<b>INMETRO Ex d</b>	SM87HXB: Ex db IIC T5/T6 Gb, Ex tb IIIC T80°C/T95°C Db SM87LED: Ex db IIC T6 Gb, Ex tb IIIC T70°C Db
<b>CQST Ex d</b>	SM87HXB: Ex d IIC T5/T6 Gb, Ex tb IIIC T65°C/T80°C/T95°C Db
<b>SIL</b>	SIL2 certification to IEC61508. Cert. No. 20151119-4786827453 (SM87HXB and SM87LED only)

## Specifications

<b>Material</b>	SM87HXBS, SM87XBTS and SM87LEDS: Grade 316 ANC4B stainless steel SM87HXBA, SM87XBTA and SM87LEDA: LM25 TF marine grade alloy Lens: glass UL version available only in marine grade alloy
<b>Finish</b>	Epoxy paint finish as standard
<b>Certified temp</b>	SM87HXB: ATEX, IECEX, TR CU, CQST, INMETRO UL CSA SM87LED: ATEX, IECEX, TR CU, CQST, INMETRO SM87XBT: ATEX, IECEX, TR CU, CQST UL * Operating temperature is -20°C to +55°C
<b>Weight</b>	SM87HXBS & SM87LEDS: 3.8kg each (approx) SM87HXBA & SM87LEDA: 2kg. each (approx)
<b>Ingress protection</b>	IP66 & IP67
<b>Entries</b>	Up to 4 x M20 / M25 ISO or 1/2" / 3/4" NPT
<b>Terminals</b>	SM87HXB & SM87XBT: 6 off suitable for up to 1.5mm <sup>2</sup> cable SM87LED: 6 off suitable for up to 1.5mm <sup>2</sup> cable

## General arrangement drawing (all dimensions in mm)



## Electrical ratings

	d.c.		a.c. 50/60Hz				
	24	48	110	120	220	240	254
<b>Voltage</b>							
<b>Tube energy (Joules) SM87HXB, SM87XBT</b>	5	5	6	7	6	7	8
<b>Current consumption SM87HXB</b>	393	175	250	275	120	135	153
<b>Current consumption SM87LED (mA)</b>	165	85	N/A	N/A	N/A	N/A	N/A
<b>Effective intensity (Cd)</b>	29	29	32	39	32	39	44
<b>Peak intensity (Cd)</b>	22213	22213	25061	30187	25061	30187	34174

NOTE: The above figures (Cd) are for a clear lens @ 1Hz flash rate

## Multiplying factor for coloured lenses

Red	Blue	Amber	Green	Yellow
0.15	0.12	0.51	0.49	0.86

The photometric data given above has been verified by BSI. Reports are available if required

## LED light output - steady or flashing (customer selectable)

	Red	Blue	Amber	Green
<b>Total LED output (candela)</b>	192	64	64	17

LED/lens colour: red, blue, green, amber, yellow (not LED) or clear  
Flash rate: 90fpm as standard, other flash rates available on request

## 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

Model	Certification	Voltage	Lens/LED colour	Guard	Entries	Tag/duty	Options	Finish																																																																																																																				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>																																																																																																																				
<table border="1"> <thead> <tr> <th>Voltage</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>Xenon (stainless steel)</td><td>SM87HXBS</td></tr> <tr><td>Xenon (alloy)</td><td>SM87HXBA</td></tr> <tr><td>Xenon high temp (alloy)</td><td>SM87XBTA*</td></tr> <tr><td>Xenon high temp (stainless steel)</td><td>SM87XBTS*</td></tr> <tr><td>LED Exd (stainless steel)</td><td>SM87LEDS</td></tr> <tr><td>LED Exd (alloy)</td><td>SM87LEDA</td></tr> </tbody> </table> <p>* Only available 24V d.c. Not available CQST or INMETRO</p>	Voltage	Code	Xenon (stainless steel)	SM87HXBS	Xenon (alloy)	SM87HXBA	Xenon high temp (alloy)	SM87XBTA*	Xenon high temp (stainless steel)	SM87XBTS*	LED Exd (stainless steel)	SM87LEDS	LED Exd (alloy)	SM87LEDA	<table border="1"> <thead> <tr> <th>Certification</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>ATEX</td><td>B</td></tr> <tr><td>IECEX</td><td>J</td></tr> <tr><td>UL</td><td>UL†</td></tr> <tr><td>CSA</td><td>C</td></tr> <tr><td>TR CU</td><td>G*</td></tr> <tr><td>Chinese(CQST)</td><td>Q</td></tr> <tr><td>INMETRO</td><td>DM</td></tr> </tbody> </table> <p>* Russian Fire Approval as standard † Only SM87HXBA &amp; SM87XBTA is available UL certified</p>	Certification	Code	ATEX	B	IECEX	J	UL	UL†	CSA	C	TR CU	G*	Chinese(CQST)	Q	INMETRO	DM	<table border="1"> <thead> <tr> <th>Voltage</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>24 V d.c.</td><td>024</td></tr> <tr><td>48 V d.c.</td><td>048</td></tr> <tr><td>110 V a.c. not LED</td><td>110</td></tr> <tr><td>120 V a.c. not LED</td><td>120</td></tr> <tr><td>220 V a.c. not LED</td><td>220</td></tr> <tr><td>240 V a.c. not LED</td><td>240</td></tr> <tr><td>254 V a.c. not LED</td><td>254</td></tr> </tbody> </table>	Voltage	Code	24 V d.c.	024	48 V d.c.	048	110 V a.c. not LED	110	120 V a.c. not LED	120	220 V a.c. not LED	220	240 V a.c. not LED	240	254 V a.c. not LED	254	<table border="1"> <thead> <tr> <th>Colour</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>Clear</td><td>C</td></tr> <tr><td>Red</td><td>R</td></tr> <tr><td>Blue</td><td>B</td></tr> <tr><td>Green</td><td>G</td></tr> <tr><td>Amber</td><td>A</td></tr> <tr><td>Yellow (not LED)</td><td>Y</td></tr> </tbody> </table>	Colour	Code	Clear	C	Red	R	Blue	B	Green	G	Amber	A	Yellow (not LED)	Y	<table border="1"> <thead> <tr> <th>Guard</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>None</td><td>N</td></tr> <tr><td>Yes</td><td>Y</td></tr> </tbody> </table>	Guard	Code	None	N	Yes	Y	<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>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>	Entries	Code	M20	1	M25	2	1/2" NPT	3	3/4" NPT	4	Top	*T	Bottom	*B	RHS	*R	LHS	*L	<table border="1"> <thead> <tr> <th>Label</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>None</td><td>N</td></tr> <tr><td>Yes</td><td>Y*</td></tr> </tbody> </table> <p>* Please specify wording (Note: 15 characters maximum)</p>	Label	Code	None	N	Yes	Y*	<table border="1"> <thead> <tr> <th>Options</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>Telephone</td><td>T*‡</td></tr> <tr><td>Relay</td><td>R*‡</td></tr> <tr><td>EOL resistor</td><td>E*†</td></tr> <tr><td>None</td><td>N</td></tr> </tbody> </table> <p>* Not available on UL versions † Please specify ‡ For SM87LED please specify if steady or flashing is required</p>	Options	Code	Telephone	T*‡	Relay	R*‡	EOL resistor	E*†	None	N	<table border="1"> <thead> <tr> <th>Colour</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/black stripe</td><td>X</td></tr> <tr><td>Grey</td><td>G</td></tr> <tr><td>White</td><td>W</td></tr> <tr><td>Special</td><td>S*</td></tr> </tbody> </table> <p>*Please specify</p>	Colour	Code	Red	R	Blue	B	Yellow	Y	Yellow/black stripe	X	Grey	G	White	W	Special	S*
Voltage	Code																																																																																																																											
Xenon (stainless steel)	SM87HXBS																																																																																																																											
Xenon (alloy)	SM87HXBA																																																																																																																											
Xenon high temp (alloy)	SM87XBTA*																																																																																																																											
Xenon high temp (stainless steel)	SM87XBTS*																																																																																																																											
LED Exd (stainless steel)	SM87LEDS																																																																																																																											
LED Exd (alloy)	SM87LEDA																																																																																																																											
Certification	Code																																																																																																																											
ATEX	B																																																																																																																											
IECEX	J																																																																																																																											
UL	UL†																																																																																																																											
CSA	C																																																																																																																											
TR CU	G*																																																																																																																											
Chinese(CQST)	Q																																																																																																																											
INMETRO	DM																																																																																																																											
Voltage	Code																																																																																																																											
24 V d.c.	024																																																																																																																											
48 V d.c.	048																																																																																																																											
110 V a.c. not LED	110																																																																																																																											
120 V a.c. not LED	120																																																																																																																											
220 V a.c. not LED	220																																																																																																																											
240 V a.c. not LED	240																																																																																																																											
254 V a.c. not LED	254																																																																																																																											
Colour	Code																																																																																																																											
Clear	C																																																																																																																											
Red	R																																																																																																																											
Blue	B																																																																																																																											
Green	G																																																																																																																											
Amber	A																																																																																																																											
Yellow (not LED)	Y																																																																																																																											
Guard	Code																																																																																																																											
None	N																																																																																																																											
Yes	Y																																																																																																																											
Entries	Code																																																																																																																											
M20	1																																																																																																																											
M25	2																																																																																																																											
1/2" NPT	3																																																																																																																											
3/4" NPT	4																																																																																																																											
Top	*T																																																																																																																											
Bottom	*B																																																																																																																											
RHS	*R																																																																																																																											
LHS	*L																																																																																																																											
Label	Code																																																																																																																											
None	N																																																																																																																											
Yes	Y*																																																																																																																											
Options	Code																																																																																																																											
Telephone	T*‡																																																																																																																											
Relay	R*‡																																																																																																																											
EOL resistor	E*†																																																																																																																											
None	N																																																																																																																											
Colour	Code																																																																																																																											
Red	R																																																																																																																											
Blue	B																																																																																																																											
Yellow	Y																																																																																																																											
Yellow/black stripe	X																																																																																																																											
Grey	G																																																																																																																											
White	W																																																																																																																											
Special	S*																																																																																																																											

\* Prefix position with entry size code  
e.g. 1T1B=M20 Top and Bottom entries