Ex-tech® SIGNALLING

Datasheet > Audible & visual signalling equipment

SB 150 Series combined products

SIL2 compliant as IEC 61508 & IEC 61511



The flameproof SB150 sounder and beacon combination is ATEX / IECEx / UKEX certified for use in potentially explosive atmospheres and provides clear visual and audible status indication (can be labelled accordingly). It is constructed from GRP.

ATEX / IECEx / UKEX Certification: ATEX Zone 1 and Zone 2 Certified for gas / vapour and Zone 21 and Zone 22 compliant for dust / powder applications. SIL2 compliant as IEC 61508 & IEC 61511.

Application: Oil and gas, chemical, petrochemical, pharmaceutical, marine and offshore applications.

Key features: The explosion proof set is provided with a combination of sounder and beacons. Robust and highly reliable, the Ex assembly is designed for corrosive environments and hazardous areas. The housing is moulded in glass reinforced polyester GRP and protected with UV resistant paint and the lens is made of borosilicate glass. The set is assembled on a stainless steel 316L backplate.

Options: The explosion proof sounder (horn) can be set with up to three tones among 59 prerecorded tones (according to user control system). Pausing of the signal can be done by an external switch. The explosion proof assembly can be delivered with two different light sources:

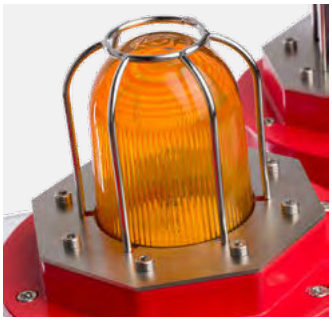
- LED with steady, rotary or flashing of different intensity.
- Flashing with XENON tube of different intensity.
- Four flashing frequencies are selectable.
- One of the status lights can be replaced by a push button or a junction box if required.
- The sounder and beacons can be triggered either jointly or independently.

A range of accessories is available to customise this ATEX / IECEx / UKEX status light package. These include pipe mounting brackets, sunshades, tag and duty labels and other accessories.

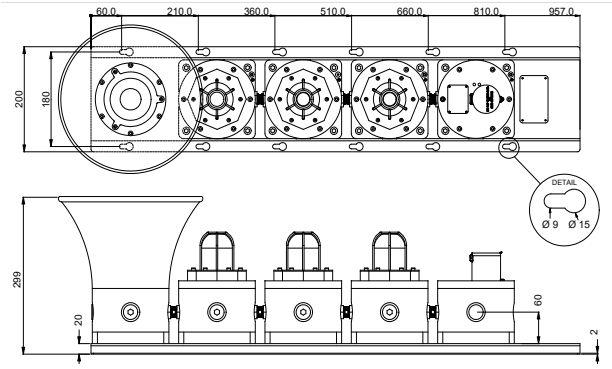












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MATERIAL	• **Enclosure:** Glass reinforced plastic (GRP)	• **Lens:** Tempered borosilicate glass 3.3			
COLOUR	• RED : RAL3001/3028 • BLACK : RAL9005 • ORANGE : RAL2010	• YELLOW : RAL1018 • GREEN : RAL6032	• BLUE : RAL5005 • GREY : RAL7033		
INGRESS PROTECTION	• IP66/67				
AMBIENT TEMPERATURE FOR OPERATION	• **Xenon (5 / 10 / 15 / 21 J):** T5 = + 45°C, T4 = + 70°C • **LED (5W / 10W):** T5 = + 40°C, T4 = + 70°C (Ta min - 40°C)				
CERTIFICATION	• **ExVeritas** 25ATEX2275X, IECEx EXV 25.0071X, 26UKEX2394X				
EX CODE	• II 2 GD Ex db IIC T5 / T4 Gb • Ex tb IIIC T100 / T135°C Db				
STANDARD	• EN IEC 60079-0:2018, EN 60079-1:2014, EN IEC 60079-31:2024				
ATEX AREA ZONE	• **Gas zone:** 1 & 2 **Dust zone:** 21 & 22				
CANDELA LENS COLOUR	• Red: 0.15 • Amber: 0.51 • Blue: 0.12 • Green: 0.49 • Yellow: 0.85 • Clear: 1				
LIGHT TYPE	**Flash tube (XENON)**			**LED**	
TRUE LIGHT INTENSITY	• **5 joules** = 109 Cd • **15 joules** = 395 Cd	• **10 joules** = 293 Cd • **21 joules** = 424 Cd		• **5 W** = 128 Cd	• **10W** = 312 Cd
PEAK LIGHT INTENSITY	• **5 joules** = 35970 Cd • **15 joules** = 83345 Cd	• **10 joules** = 66804 Cd • **21 joules** = 95824 Cd			
LIFETIME	• Emissions are reduced to 70% after 8 million flashes			• >50 000 hours without luminosity decreasing	
FLASHING OR ROTARY FREQUENCY (0 = steady status)	• 60/80/120 times/min • 100/120/150 times/min • 120/150/180 times/min			• 60/75/0 times/min • 60/75/100 times/min • 75/95/0 times/min • 75/95/120 times/min	
CONSUMPTION	• **5 joules** = 10W • **15 joules** = 20W	• **10 joules** = 15W • **21 joules** = 25W		• **5W**	• **10W**
AMBIENT HUMIDITY*	• Up to 95%*				
POWER SUPPLY	• 12-48V DC • 115-230V AC NOMINAL (100 - 240V AC Range)				
RATED IMPULSE WITHSTAND VOLTAGE	• 1kV following IEC 61000-4-5				

WORKING CURRENT LED	• **Power**	**12V DC**	**24V DC**	**48V DC**	**110V AC**	**220V AC**
	• **5W**	530 mA	260 mA	120 mA	80 mA	40 mA
	• **10W**	1100 mA	530 mA	240 mA	160 mA	80 mA

* = without runoff - ** = optional (cable gland and blanking plugs can be supplied if required)

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WORKING CURRENT XENON	• **Energy**	**12V DC**	**24V DC**	**48V DC**	**110V AC**	**220V AC**
	• **5J**	460 mA	280 mA	140 mA	60 mA	35 mA
	• **10J**	850 mA	490 mA	250 mA	100 mA	60 mA
	• **15J**	1200 mA	700 mA	360 mA	140 mA	80 mA
	• **21J**	NA	960 mA	480 mA	180 mA	110 mA
CONSUMPTION SOUNDER	• Adjustable from 5 to 25W (factory setting 20W)					
CURRENT CONSUMPTION	• 0.5 to 1 A					
SIGNALLING TYPE	• 59 tones siren					
NOISE LEVEL	• Until 115 dB at 1m					
CABLES ENTRY	• 3 x M20, 1 x M25 + 2 x M20, 1 x 1/2" NPT + 2 x M20, 1 x 3/4" NPT + 2 x M20					
TERMINAL	• From 22 to 14 AWG - from 0.50 mm² to 2.5 mm²					
NET WEIGHT	• SB150-2: 10.70 Kg, SB150-3: 15.35 Kg, SB150-4: 19.40 Kg, SB150-23.50 Kg					

* = without runoff - ** = optional (cable gland and blanking plugs can be supplied if required)

Meaning of lens colour usage in the international standard (IEC 60073)

Colour	Meaning	Action	Example
● RED	EMERGENCY	Dangerous state. Take immediate action.	Pressure/Temperature beyond the safe state - Shutdown due to the action of protective devices - Fire alarm - Equipment failure alarm
● AMBER ● YELLOW	ABNORMAL	Abnormal state, near the critical status	Pressure/Temperature above the normal range - Protective device released - Toxic and harmful gases release alarm
● GREEN	SAFE	Normal state	Pressure/Temperature in normal state - Automatic control system is operating normally
● BLUE	MANDATORY	Requires operator's action	Emergency evacuation - Abandon rescue and escape - Abandon platform or abandon ship - Enter the command
○ CLEAR	NO SPECIAL SIGNIFICANCE	If uncertainty for other colors, clear is allowed to be used	General information - Can't exactly use red, yellow, green or blue - Used for the implementation of command - Indicate the measured values

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Product	Certification	Combintion	Lens colour	Light type	Power	Supply	Duty label	Tag label	Lens guard	Connection	Housing	Standard
SB	150	4B	YRGB	X	05	DC	N	Y	Y	A	RD	N

SB = COMBINED PRODUCT

150 = HAZARDOUS AREA
151 = NON-CERTIFIED

1J = SOUNDER + JUNCTION BOX
1B = SOUNDER + BEACON
2J = SOUNDER + BEACON + JUNCTION BOX
2B = SOUNDER + 2 BEACONS
2P = SOUNDER + BEACON + PUSH BUTTON
2D = SOUNDER + PUSH BUTTON + JUNCTION BOX
3J = SOUNDER + 2 BEACONS + JUNCTION BOX
3B = SOUNDER + 3 BEACONS
3P = SOUNDER + 2 BEACONS + PUSH BUTTON
3D = SOUNDER + BEACON + PUSH BUTTON + JUNCTION BOX
4J = SOUNDER + 3 BEACONS + JUNCTION BOX
4B = SOUNDER + 4 BEACONS
4P = SOUNDER + 3 BEACONS + PUSH BUTTON
4D = SOUNDER + 2 BEACONS + PUSH BUTTON + JUNCTION BOX

R = RED
A = AMBER
B = BLUE
G = GREEN
Y = YELLOW
C = CLEAR

X = XENON
L = LED
M = MIXED

05 = XENON 5J / LED 5W
10 = XENON 10J / LED 10W
15 = XENON 15J
21 = XENON 21J
99 = MIXED

DC = 12 - 48V DC
AC = 100 - 240V AC

Y = YES (SEE LIST)
N = NO

Y = YES
N = NO

Y = YES
N = NO

A = 3 x M20 x 1.5
B = 1 x M25 x 1.5 + 2 x M20 x 1.5
C = 1 x 1/2" NPT + 2 x M20 x 1.5
D = 1 x 3/4" NPT + 2 x M20 x 1.5

Additional adaptors can be supplied as well as blanking plugs and cable glands, see below.

RD = RED (STD)
YW = YELLOW
BU = BLUE
BL = BLACK
GN = GREEN
GY = GREY
OJ = ORANGE
OR = OTHER

N/A

CONDUIT ACCESSORIES	
M20 316L St. St Exd conduit plug	SPARE3060009
M25 St. St. conduit adaptor	SPARE3060105
½" NPT St. St. conduit adaptor	SPARE3060108
¾" NPT St. St. conduit adaptor	SPARE3060107
St. St Exd cable gland 7-12mm	SPARE3060108
St. St Exd cable gland 10-16mm	SPARE3060109

CONDUIT ACCESSORIES	
M20 NPB Exd conduit plug	SPARE3060008
M25 NPB conduit adaptor	SPARE3060003
½" NPT NPB conduit adaptor	SPARE3060001
¾" NPT NPB conduit adaptor	SPARE3060002
NPB Exd cable gland 7-12mm	SPARE3060019
NPB Exd cable gland 10-16mm	SPARE3060018