



G007423

# IS Heat Detector

## Salwico HC100 A2-IS

Part no. 038010

System: C300, C308, C316, CS3000, CS3004, CS4000,  
NSAC-1, Salwico Cargo, Salwico Cruise, Salwico Workboat,  
Salwico Yacht


### Description

The HC100 A2-IS is an intrinsically safe conventional heat detector for use with all Salwico Fire Alarm Systems.

The detector is designed for use in areas with high explosion risk. It is connected via an intrinsically safe interface.

The heat sensing element is of thermistor type with a short response time to changes in the ambient temperature. Alarms are optically indicated until they are reset on the central.


### Data

Function	Conventional
Working voltage	12–28 V DC
Alarm temperature	57 °C
Classification	A2, EN54-5:2017
Cert. TÜV	14ATEX 138197 X IECEX TUN 14.008 X
Working current	< 25 µA
Alarm current	Max 54 mA
Ingress protection	IP55
Ambient humidity	95% RH at 55 °C
Temperature range	-10 °C to +70 °C
Material	PC/ABS
Colour	White
Weight	95 g ± 5%
Certified according to	 2531/yyyy yyyy = year of production

Only suitable base is IS SPB Base, part no 5201044-00A

For installation issues, refer to System Connection data (S-4-011 851 System Connection)

### Safety data

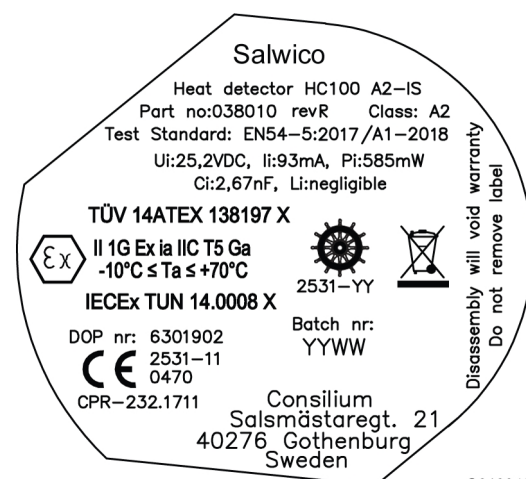
Max input voltage ( $U_i$ )	25.2 V DC
Max input current ( $I_i$ )	93 mA
Max input power ( $P_i$ )	585 mW
Max internal capacitance ( $C_i$ )	2.67 nF
Max internal inductance ( $L_i$ )	Negligible
EX-class	 II 1G Ex ia IIC T5 Ga -10 °C ≤ T <sub>a</sub> ≤ +70 °C



### WARNING!

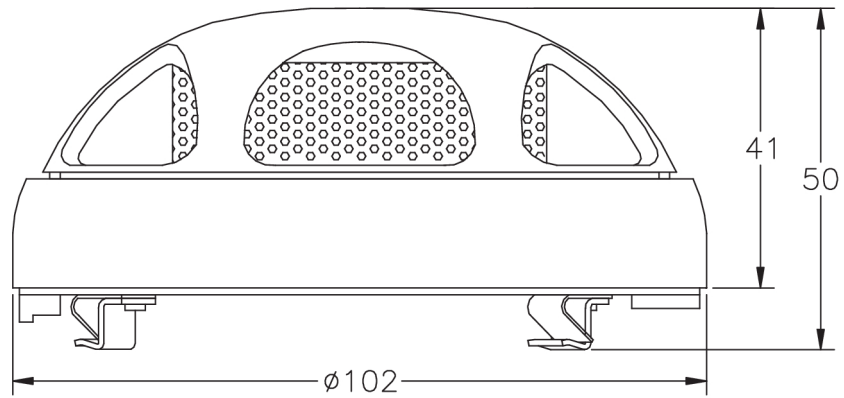
#### Potential electrostatic charging hazard

- Do NOT clean with solvents.
- Do NOT charge by rubbing.
- Clean ONLY with a damp cloth.



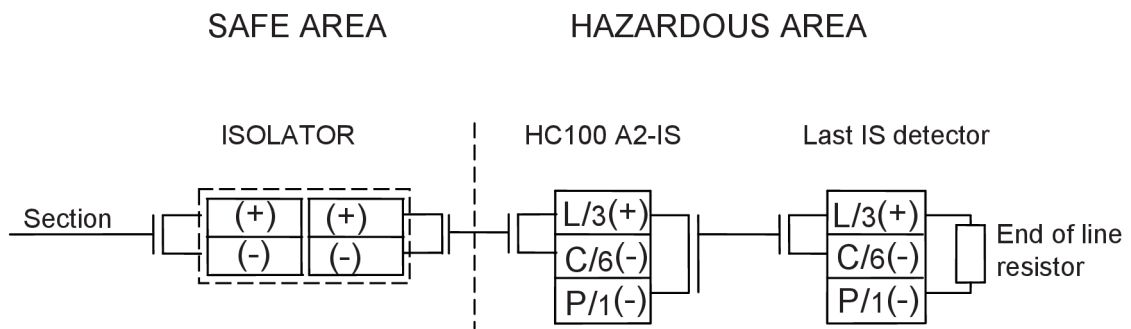
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Dimensions (mm)



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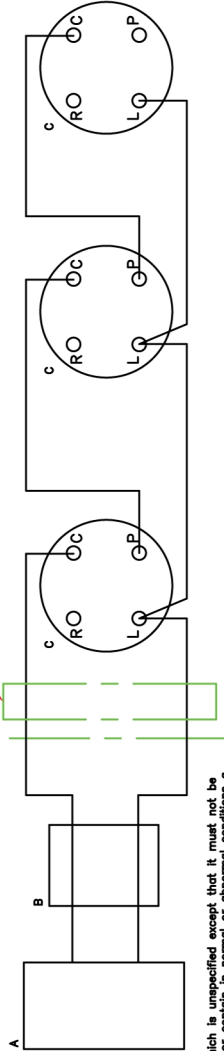
Connection



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HAZARDOUS AREA

SAFE AREA



CABLE, SEE NOTE F

A. Apparatus which is unspecified except that it must not be supplied from nor contain in normal or abnormal conditions a source of potential with respect to earth in excess of 250 volts r.m.s. or 250 volts d.c.

B. Any single channel shunt zener diode safety barrier or single channel of a dual channel shunt zener diode safety barrier certified by an EEC Approved Certification Body to (Ex ia) IIC having the following or lower output parameters:

- Uo = 25.2V
- Io = 93mA
- Po = 585mW

In any safety barrier used the output current must be limited by a resistor R such that  $I_o < 50/R$ .

OR

One of the following isolation barriers:

- 1/ MTL 5061 BAS91ATEX7160
- 2/ MTL 4081 Two Channel Fire and Smoke Detector Interface BAS91ATEX7176
- 3/ KFD0-CS-Ex1.51 Isolator
- 4/ KFD0-CS-E2.151 Isolator

OR

Any single channel isolated safety barrier certified by an EEC Approved Certification Body to (Ex ia) IIC having the following or lower output parameters.

- Uo = 25.2VDC
- Io = 93mA
- Po = 585mW
- Cp = 53nF
- Lj = negligible

\* 20 heat detectors units can be connected together on one barrier => Cf = 20x2,97nF = 59.4nF

C. Up to 20 Type HC100 A2-IS Series Heat Detectors and Type IS-S98 Base.

D. Terminal are fitted to position B. This terminal has no electrical connection and is for mechanical fixing purpose only.

SCHEDULE DRAWING.  
NO MODIFICATIONS PERMITTED WITHOUT REFERENCE TO THE NOTIFIED BODY.

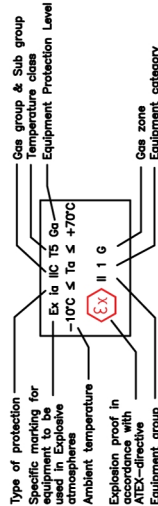
E. The installation must comply with the European Harmonised Standard, EN 60079: Part 14: 2014.

F. The hazardous area cable must be at least AWG20 / 0.5mm<sup>2</sup>. The capacitance and inductance or inductance to resistance (L/R) ratio of the hazardous area cable must not exceed the values shown in Table 1 below:

TABLE 1

GROUP	CAPACITANCE in pF/m	INDUCTANCE in μH/m	OR	L/R RATIO in μH/m
IIC	0.06	0.06		1.05
IB	0.65	17.0		189
IIA	2.15	35.0		431

G. A durable label, as shown below, to be affixed at the interface of the IS and non IS circuits.



H. The electrical circuit in the Hazardous area must be capable of withstanding an A.C. test voltage of 500V r.m.s. to earth or frame of the apparatus, for 1 minute.

I. WARNING: POTENTIAL ELECTROSTATIC CHARGING HAZARD.

- Do NOT clean with solvents.
- Do NOT clean by Rubbing.
- Clean ONLY with a damp Cloth

Rev.	Revision note	Date	Sign.	Appr.
D	Added SERIES, updated sec. B & E	2021.02.23	ASM	SHE
C	Temperature range changed	2019.04.02	PWI	TBS
B	Revision changed to A area format.	2018.04.23	PWI	TBS
R3	Added label information	2014.02.19	TBS	RO
R2	Added alt. isolator, Updated section B & F	2013.01.26	ONO	RO
R1	Changed detector name references.			

Step	AA	Scale	Approved
Drawn	ASM	SHE	

SYSTEM CONNECTION INFORMATION  
HC100 A2-IS SERIES and HC100 A2-IS IP67 SERIES  
Drawing no. S-4-011.851  
Date: 2021-02-24  
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