



G002018

System: All Salwico Fire Alarm Systems

IS Heat Detector IP67

HC 100 A2-IS IP67

Part no. 5200047-00A

General description

The HC 100 A2-IS IP67 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.

It is delivered complete with adapter and base. In this version of HC 100 the detector and adapter are moulded together and filled with a special moulding compound that gives it high resistance against humidity and vibrations. The detector can not be separated from the adapter. The HC 100 A2-IS IP67 is suitable for location in harsh environments.

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.

The detector is environmentally adapted in aspects of the selection of material and design.

The mesh is very easy to change and clean which simplifies maintenance.

Data

Function	Conventional
Nominal voltage	24 V DC
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	IP67, IEC60529:2001

Ambient humidity	95% RH at 55°C
Temperature range	-25 °C to +70 °C
Material	PC/ABS
Colour	White
Weight	420 g ± 5%
Certified according to	CE ₀₈

2531-11 0470
CPR-232.1711
DOP no. 6301902

The expected life time of the product is affected by the environment it is mounted in.

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

Safety data

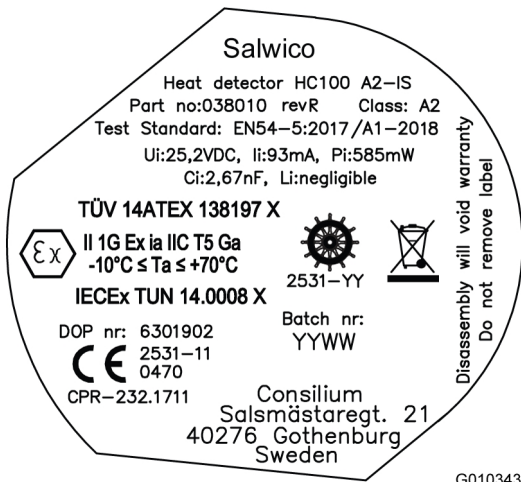
Max input voltage (U_i)	25.2 VDC
Max input current (I_i)	93 mA
Max input power (P_i)	585 mW
Max internal capacitance (C_i)	2.67 nF
Max internal inductance (L_i)	Negligible
EX-class	⚠ II 1G EEx ia IIC T5 Ta: 70°C
Responsible manufacturer	Consilium Fire & Gas, www.consilium.se



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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Connection

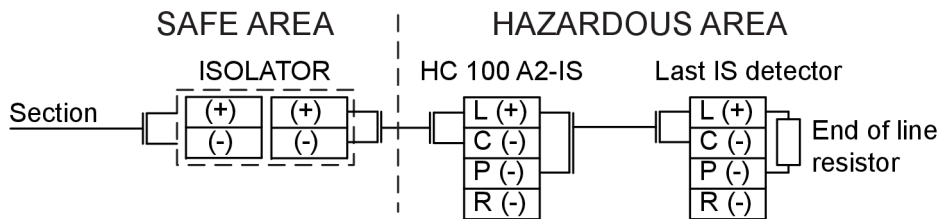


Figure 1. General connection

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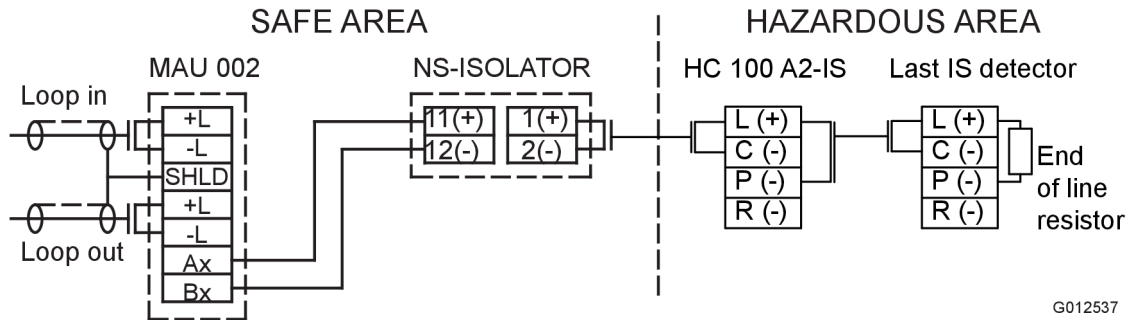


Figure 2. ServoMaster MAU 002 connection

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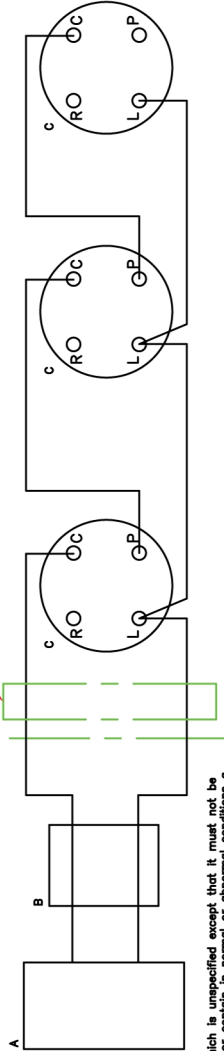


NOTE!

Use MAU 002 setting 4 and a 5.6 kOhm end of line resistor when HC100 A2-IS and a N1770 Isolator are connected to the collective loop.

SAFE AREA

HAZARDOUS AREA



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 ic) 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_o such that I_o ≤ 50/R_o.

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 ic) IIC having the following or lower output parameters.

- Uo = 25.2VDC
- Io = 93mA
- Po = 585mW
- C_o = 53.4nF
- L_o = negligible

* 20 heat detectors units can be connected together on one barrier => C_o = 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.

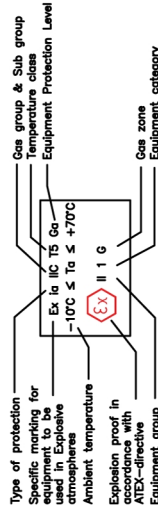
E. The installation must comply with the European Harmonised Standard, EN 60079: Part 14: 2014.

F. The hazardous area cable must be at least AWG20 / 0.5mm². 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
IC	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.	Added	Series	Updated sec. B & E	2021.02.23	ASM	SHE
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 Area format.	2018.04.23	PWI	TBS		
R3	Added label information	2014.02.19	TBS	RO	RO	
R2	Added alt. isolator, Updated section B & F	2013.01.26	ONO	RO		
R1	Changed detector name references.					
Rev.	Revision note	Date	Sign.	Appr.		

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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Dimensions (mm)

