



G002018

# IS Heat Detector IP67

## Salwico HC 100

### A2-IS IP67

Part no. 5200047-00A

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

## 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<br>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



2531/yyyy

yyyy = year of production

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



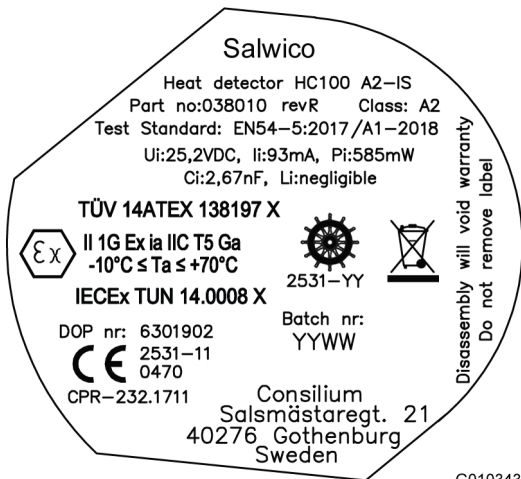
II 1G Ex ia IIC T5 Ga  
-10 °C ≤ T<sub>a</sub> ≤ +70 °C



### WARNING!

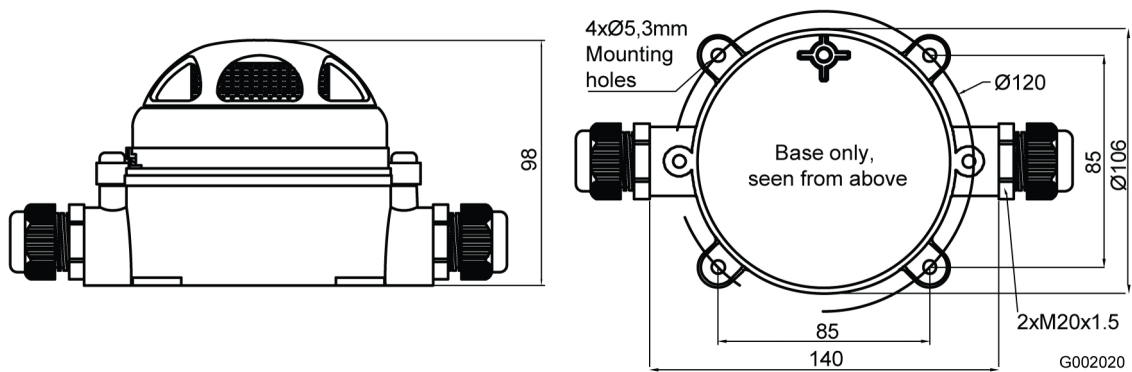
#### Potential electrostatic charging hazard

- 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

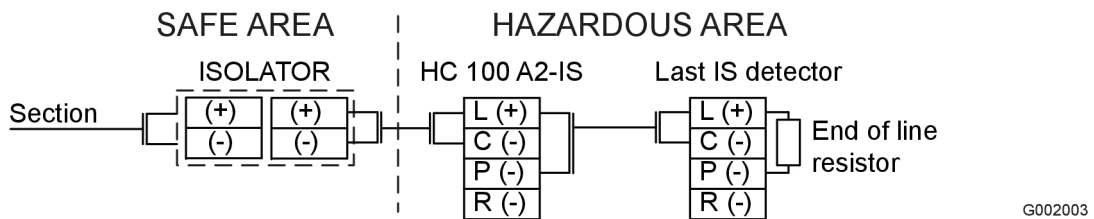


Figure 1. General connection

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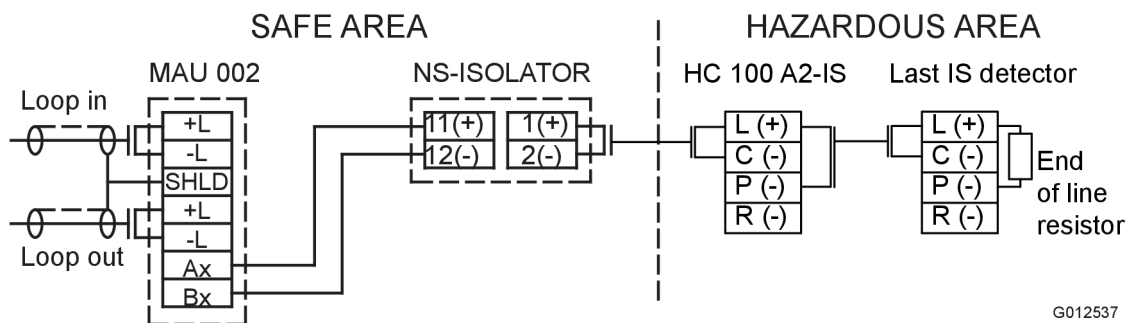


Figure 2. ServoMaster MAU 002 connection

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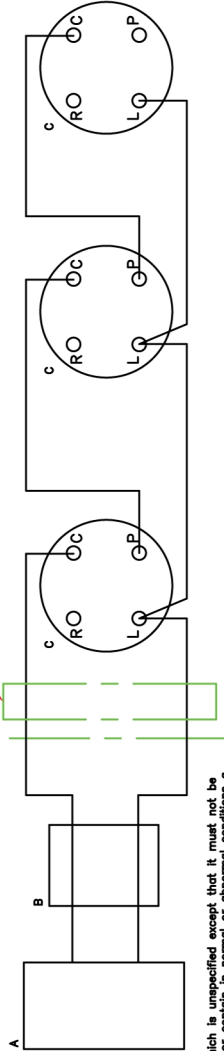


NOTE!

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.

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
- Co = 53µF
- Cp = 53µF
- L = negligible

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

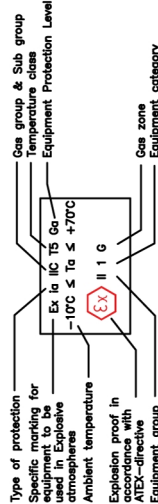
E. The installation must comply with the European Harmonised Standard, EN 60079: Part 14: 2014.

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 |
|-------|---------------------|--------------------|----|-------------------|
| IC    | 0.06                | 0.06               |    | 1.0               |
| 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 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 |  |
|-------------------------------|--|
| Project:                      | HC100 A2-IS SERIES and HC100 A2-IS IP67 SERIES |
| Drawing no.                   | S-4-011.851                                    |
| Date:                         | 2021-02-24                                     |
| Rev.                          | D  |
| Page                          | 1 / 1  |

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