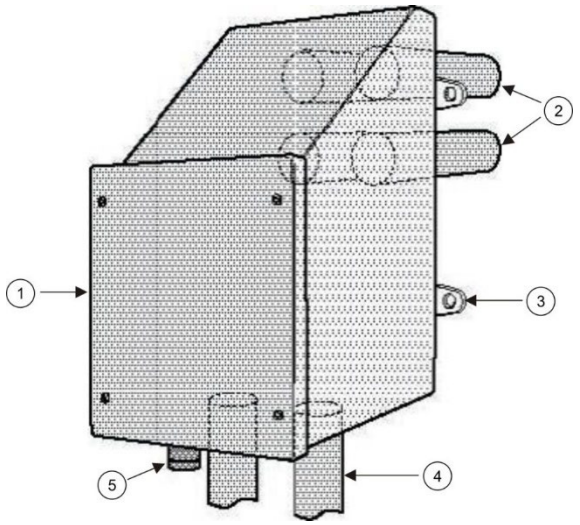
Heater Box Installation Sheet



Figures

Figure 1: Heater box

(1) Access plate
(2) Air inlets
(3) Mounting lugs
(4) Outlet to detector
(5) Cable gland

Notes:

- Inlets: 4 x 3/4 inch male ABS tank connectors (25 mm optional). If metal sampling pipe is to be used, these can be changed to the appropriate connectors.
- Outlets: 2 x 3/4 inch male ABS tank connectors.

Description

The Stratos™ range of High Sensitivity Aspirating Smoke Detectors are suitable for installation within an area only if the ambient temperature is expected to be above 0°C (the minimum operating temperature of a Stratos™ detector is typically -10°C: check the specification of the particular detector in question). Where the air temperature in the protected area is consistently below this temperature, it is imperative that the detector is mounted outside the protected area, in an environment where the temperature meets that specified for the detector. However, the sampled air from the protected area must be conditioned before it is passed into the detector.

The Air Heater Box is designed to raise the temperature of the air drawn from a very cold environment by passing it across a heating element before it passes into the detector. In this manner, the problem of condensation on sampling pipework external to the protected area is minimised. Warming the air sample will also ensure the components of the detector operate within the specified temperature tolerances, and it reduces the possibility of surface condensation.

Installation

WARNING: Electrocution hazard. To avoid personal injury or death from electrocution, remove all sources of power and allow stored energy to discharge before installing or removing equipment.

Installation notes:

- The heater box must be used with any of the Stratos range of high sensitivity aspirating smoke detectors.
- Ensure the temperature of the selected location for the detector is within the specified limits (typically -10 to 60°C. Check the specification of the particular detector in question)
- The heater box should ideally be mounted approximately 900 mm above the detector. To simplify interconnection, threaded socket unions should be used.
- Once the position of the heater box has been determined, access between the Heater Box sampling pipe inlets and the sampling pipes inside the protected area should be prepared. This penetration should be no more than 105 x 105 mm. Care must be taken to restore any intumescent sealing, thermal insulation and air path sealing.
- If the mounting surface is corrugated or uneven, fix a suitable metal mounting plate.
- Offer the unit up to the opening and mark the position of the four fixing holes, using the mounting lugs as drill position guides.
- Connect ABS sampling pipes to the inlets, using joining sockets (when using sampling pipes in other materials, it may be necessary to fit stubs prior to fitting the heater box).
- Cap or plug and unused inlets and outlets, ensuring that an airtight seal is achieved.
- Fix the unit to the selected location with appropriate fasteners.

P/N 10-3534-501-HTBX-03 • ISS 21JUN22

- Connect the Heater Box to a suitable electrical supply using insulated cable with a temperature rating of 105°C or better. Ensure that the individual wires are not under stress, and make sure that the cable is securely fixed in the cable gland with an airtight seal.
- The electrical supply should be from a 230V.AC unswitched spur fused at 3A.
- The heater box must be earthed.
- A conduit is required to protect the mains cable
- Mains power should be sourced directly from a separate circuit breaker in the building electrical supply distribution board. This circuit should be clearly marked, should have a bipolar disconnect device, and should only be used for fire detection equipment.

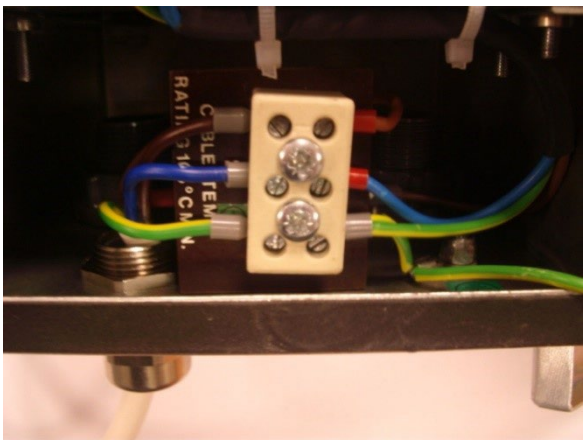
Installation procedure:

1. Before proceeding with installation, those inlet and outlet ports not being used should be plugged using the bungs provided.

   To simplify mechanical installation, a template is included on the last page of this installation sheet (see Figure 4).

2. The cable entry for the supply is located at the base of the unit. The supply connection terminals are accessed by removing the four posidrive-head screws on the front cover plate (see Figure 2).

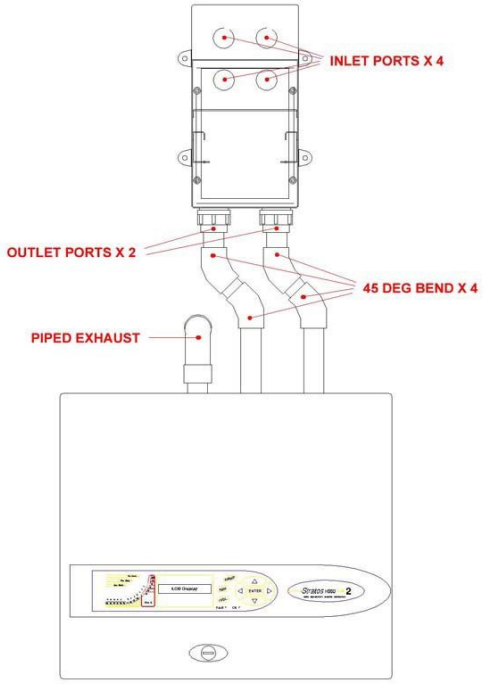
Figure 2: Supply connection terminals



1. The sampling pipe should enter the rear of the heater box using the appropriate number of inlet ports (four provided) immediately after exiting the cold area. The two pipes exiting the base of the heater box then enter the detector.

   To allow for the pipe work transition from the heater box to the detector, adequate space should be allowed for 2 x 45º bends per pipe (as shown in Figure 3).

Figure 3: Typical installation format

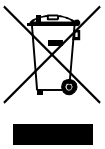


Caution: In order to avoid flow faults from being generated, the heater box should be switched on approximately 30 minutes before the detector, allowing the unit to pre-heat. The exhausted air may be moisture laden, upon re-entering the cold area condensation may form. Suitable precautions should be taken to ensure this condensate does not represent a safety hazard and / or does not obstruct the exhaust.

Specifications

Operating voltage	230 VAC (RMS)
Mains current	
Maximum	1.1 A
Average	0.8 A
Mains cable	3 x 1.5 mm2
Bipolar disconnect device	5 A
Environmental	
Operating temperature	−10 to +60°C
Relative humidity	0 to 90% (noncondensing)

Regulatory information

Conformity	CE UK CA
Manufacturer	Carrier Manufacturing Poland Spółka Z o.o., Ul. Kolejowa 24, 39-100 Ropczyce, Poland. Authorized EU manufacturing representative: Carrier Fire & Security B.V., Kelvinstraat 7, 6003 DH Weert, Netherlands.
EN	EN 61010-1:2011
	Hot surface
	Ground
	2012/19/EU (WEEE Directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: recyclethis.info.

Contact information and product documentation

For contact information or to download the latest product documentation, visit firesecurityproducts.com.

Product warnings and disclaimers

THESE PRODUCTS ARE INTENDED FOR SALE TO AND INSTALLATION BY QUALIFIED PROFESSIONALS. CARRIER FIRE & SECURITY B.V. CANNOT PROVIDE ANY ASSURANCE THAT ANY PERSON OR ENTITY BUYING ITS PRODUCTS, INCLUDING ANY “AUTHORIZED DEALER” OR “AUTHORIZED RESELLER”, IS PROPERLY TRAINED OR EXPERIENCED TO CORRECTLY INSTALL FIRE AND SECURITY RELATED PRODUCTS.

For more information on warranty disclaimers and product safety information, please check https://firesecurityproducts.com/policy/product-warning/ or scan the QR code:

Figure 4: Heater box template