Data and Installation

S4 Mains Powered Interface

(S4-34440-02 & S4-34440-12)

042bp/01
042bp/02

The S4 Mains powered interface units (Part No's: S4-34440-02 and S4-34440-12) are EN54-4 compliant battery backed power supplies that can be directly connected to the Vigilon and Nano loop and having highly flexible interfacing capability.

The 4 channels can be individually configured to provide Output and Input interface in various configuration modes, to control external equipment and receive input to allow the fire system to make decisions and take actions. It is now possible to have combined inputs and outputs giving a total of 8 external circuits connected (e.g. 4 sector outputs and 4 confirmation inputs). The units have room to accommodate optional modules on to DIN rails. It has a configurable auxiliary power output that is derived from its self contained mains power supply unit, which is battery backed to continue to deliver power in the event of mains supply failure.

Note a Nano system loop can only accept S4-34440-02.

Symbols on product

DANGER	*Electric shock hazard.*
	Protective Earth connection terminal.
	The WEEE symbol. It indicates the product is to be recycled and not thrown away.
CE	*The CE compliance logo. This product is in conformity with the relevant European Union harmonisation legislation.*
RoHS	*The RoHS compliance logo. The RoHS directive restricts the use of certain hazardous substances commonly used in electronic and electronic equipment.*

Technical Data

Standards - designed to meet	*EN54:part 4:1998* *EN54:part 17:2005* *EN54:part 18:2005*		
Overall dimensions	*478mm x 322mm x 145mm*		
Assembled weight (approx.)	*5.25Kg (excluding batteries and optional components fitted)*		
Enclosure	*Steel*		
Colour	*RAL7024 Graphite Grey (fine textured)*		
Storage temperature	*-20ºC to +70ºC*		
Ambient operating temperature	*-10ºC to +45°C*		
Relative Humidity (Non condensing)	*up to 95%* *Temperature +5ºC to +45°C*		
Ingress Protection	*IP31(estimated)*		
Mains voltage *Rated current*	*230V -15% +10% 50Hz/60Hz* *0.7A*		
Input modes	*Input can be fault monitored, voltage free contacts or conventional detection zone. Refer to the commissioning information for more details.*		
Zone *Nominal voltage* *Quiescent current*	 *16V or 22.5V (default) ±15%* *20mA per zone (default)* *Zone short circuit current limited to < 30mA* **EN54 compliance limitation:** **32 devices OR Maximum of** **20 diode bases per zone**		
Output modes	*Outputs are monitored 24V (nominal) 0.5A or LED drive. Refer to the commissioning information for details*		
Confirmation modes	*It is possible to configure all Inputs and Outputs as confirmation channels*		
Batteries two types:	*2 x 12V 2.1Ahr (1Kg each) for S4-34440-02* *2 x 12V 12Ahr (4.31Kg each) for S4-34440-12*		
Compatible # Backward compatibility is possible, refer to your supplier	*Vigilon# :MCC ≥ V4.43* / V3.97* *:LPC ≥ V4.41 / V3.97* ** V4.48 for door release applications* *Commissioning tool ≥ V1.29* *Nano :MC ≥ V2.50* *Commissioning tool ≥ 2.x*		
Operating Voltage	*35V - 48V*		
EN54-4 : 1997 data	*Imaxa*	*Imaxb*	*Ri max*
S4-34440-02	*1.5A*	*1.5A*	*2.5R*
S4-34440-12	*1.5A*	*2.5A*	*1.3R*
Imin	*80 µA*		
UVLo	*18.5Vdc ±5%*		
Vbatt min (with no mains)	*22.5Vdc ±5%*		
EN54-17 : 2005 (section 4.8) data:	*Vmax 48V* *Vnom 40V* *Vmin 24V* *VSO max 16V* *VSO min 8V*	*IC max 0.8A* *IS max 1.25A* *IL max 50µA* *ZC max 0.35Ω*	

EN54-18 : 2005 data	*Vmax 42V* *Vmin 24V*
Sector and Auxiliary Outputs	**Sector outputs:** *0.5A max. each at 24V ± 3V, electronically current limited to approximately 1A at 25ºC* **Auxiliary power output:** **(S4-34440-02)** *0.5A max. at 24V ± 3V, electronically current limited to approximately 1A at 25ºC* **(S4-34440-12)** *Regulation:* *0 to 0.5A with* *12V ±0.5V or 24V ±0.5V* *0.5A to 0.65A max. with* *12V ±2V or 24V ±2V* **Max. total output current:** *S4-34440-02 = 1.5A* *S4-34440-12 = 2.5A*
Terminals	*Terminals for spur circuit off main loop*
Emission	*BS EN 61000-6-3:2007 A1:2011 EMC for residential, commercial & light Industry.*
Immunity	*BS EN50130-4:2011 for alarm systems*
Terminals	*2.5mm²*

Repetitive switching of capacitive loads greater than 1500uF is not possible and will result in the thermal protection circuit automatically reducing the output voltage.

Features

Fail-safe operation

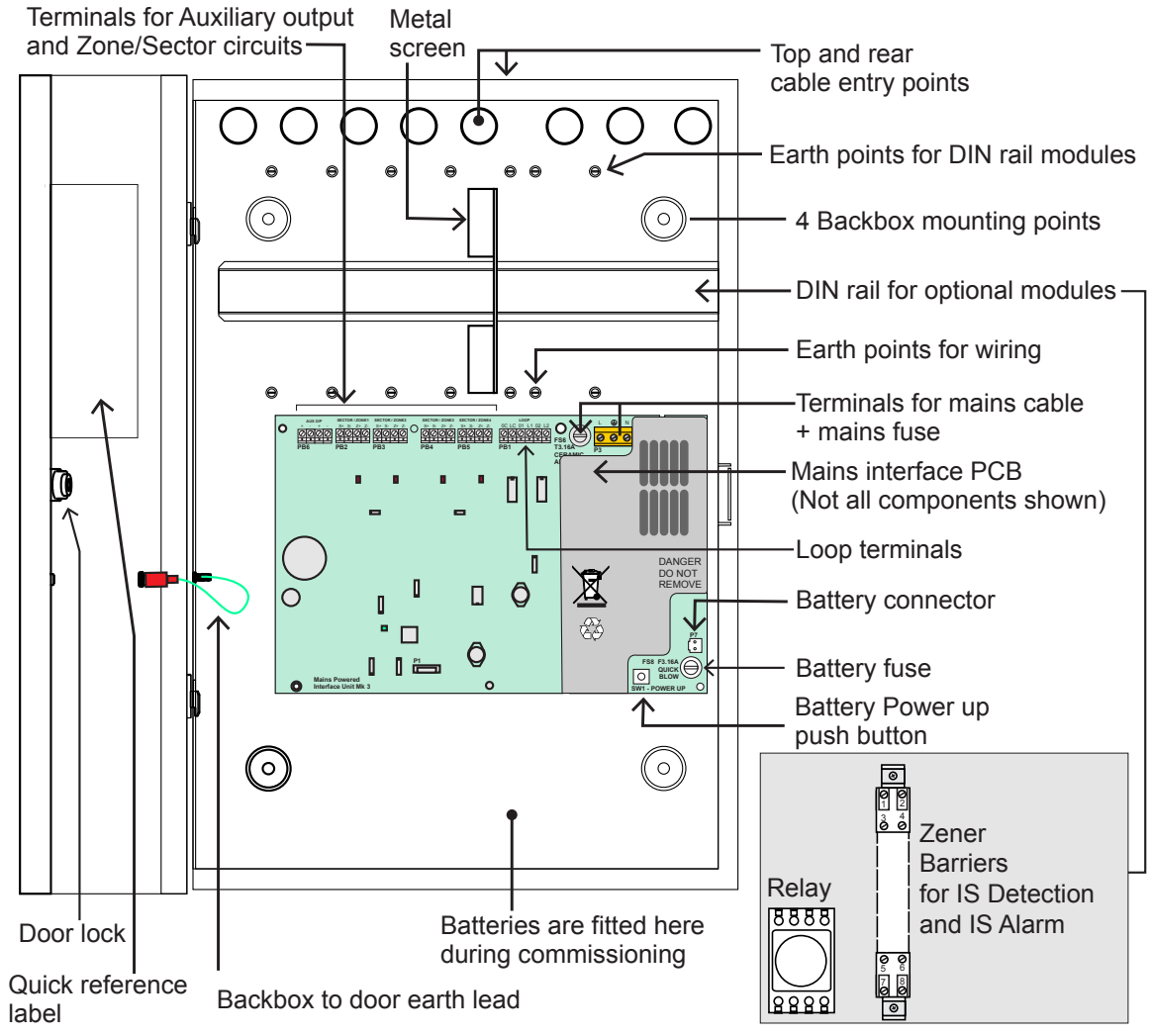
A fail-safe operation is available on all sectored outputs, if loop communications are lost for a defined duration then the sector outputs will be turned ON. Sector outputs will turn OFF immediately when communication is restored.

Synchronisation

Adjustable synchronisation pulses can be selected for all sector outputs to synchronise the operation of devices such as xenon strobes or speech sounders.

Auxiliary Output

The Auxiliary output can be programmed to automatically turn OFF when a mains failure occurs to preserve battery capacity. The output can also be programmed to provide a reset pulse when a fire reset occurs, (this requires other line(s) on the interface to be programmed as inputs).

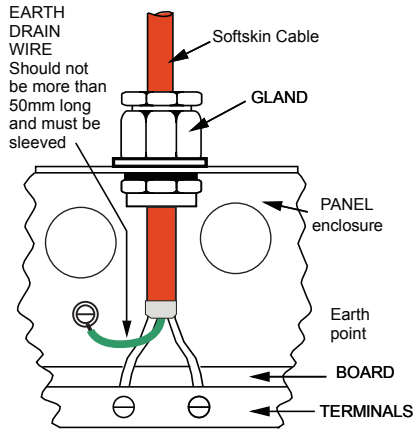


Installation

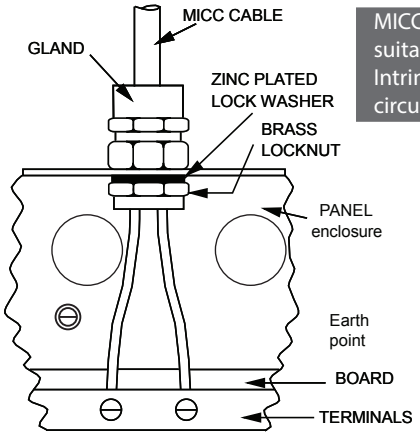
	Spare Parts	Qty
	Fuse 3.15A AS Ceramic (20mm x 5mm)	*1*
	Fuse 3.15A QB Glass (20mm x 5mm)	*1*
	Resistor 3.3K 0.6W	*4*
	Resistor 470R 0.6W	*8*
	Sector EOL	*4*
	Battery Link	*1*
	Battery Lead	*1*
	Capacitor 22uF 35V	*4*
	Instructions	*1*
	Keys fitted to the enclosure.	*1 pair*
	Battery supplied in separate packages *12V 2.1Ah for S4-34440-02* *12V 12Ah for S4-34440-12*	*2*

Cable termination

Softskin (Fire Tuf)
CABLE TERMINATION



MICC
CABLE TERMINATION



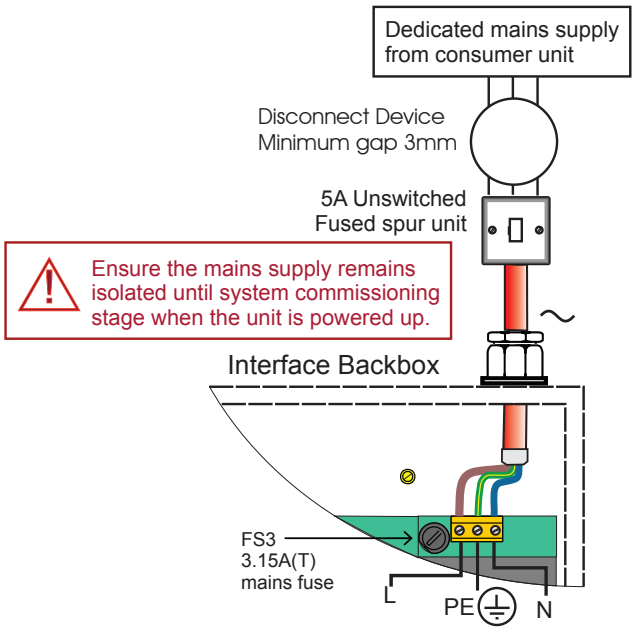
MICC cable is not suitable for wiring Intrinsically Safe circuits.

Mains supply

The mains supply cable must be a standard fire resisting type and should meet PH30 classification, such as any of the standard and enhanced loop cable. Requires a minimum conductor cross sectional area of 0.75mm².

Ensure that the mains supply cable enters the enclosure through a dedicated cable entry, located adjacent to the mains terminal block and that is also segregated from loop wiring.

These fire alarm system products are not designed to be powered from IT Power systems.



All mains powered equipment must be earthed. Mains supply to any fire alarm control and indicating equipment must be via an unswitched 5A fused spur unit. A disconnect device must be provided to disconnect both poles and must have a minimum gap of 3mm. The disconnect device should be available as part of the building installation and must be easily accessible after installation is complete.

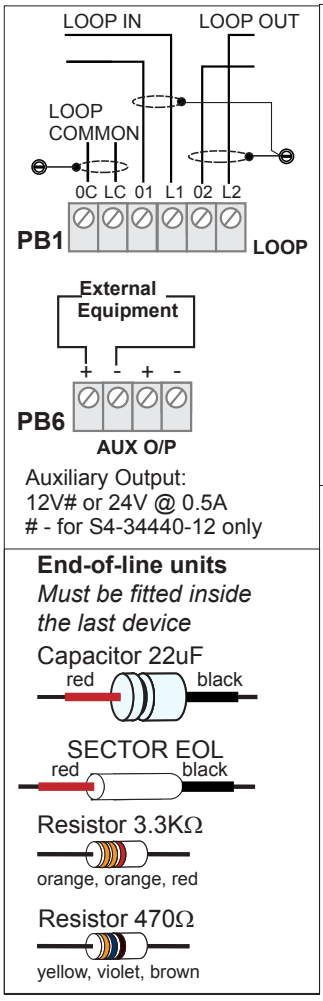
Wiring test

DO NOT undertake high voltage insulation tests WITH THE CABLES CONNECTED to the Interface unit and external equipment. Such a test may damage the electronics circuitry in external equipment and in the Interface unit.

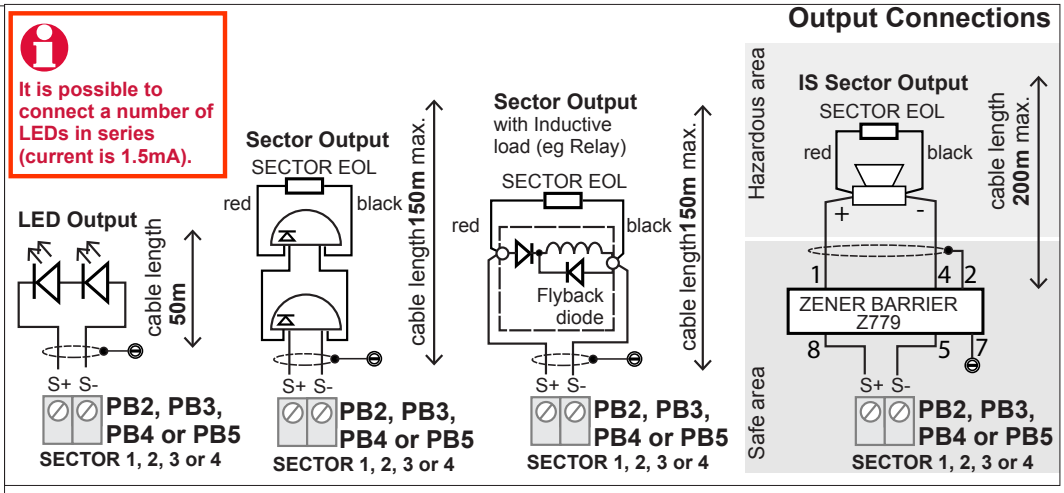
Intrinsically Safe and relay products

764744	Z969 Zener Barrier for IS detectors
764746	Z779 Zener Barrier to drive IS alarms
803271.EX	Rate-of-rise heat detector
803371.EX	Optical smoke detector
803374.EX	O2T-multisensor detector
805590	Detector Base
SOUNDER-EX	Banshee Excel IS28 MK6 ATEX sounder
VID-EX	IS Flashdome ATEX Approved VID
19104-52	Low voltage power relay

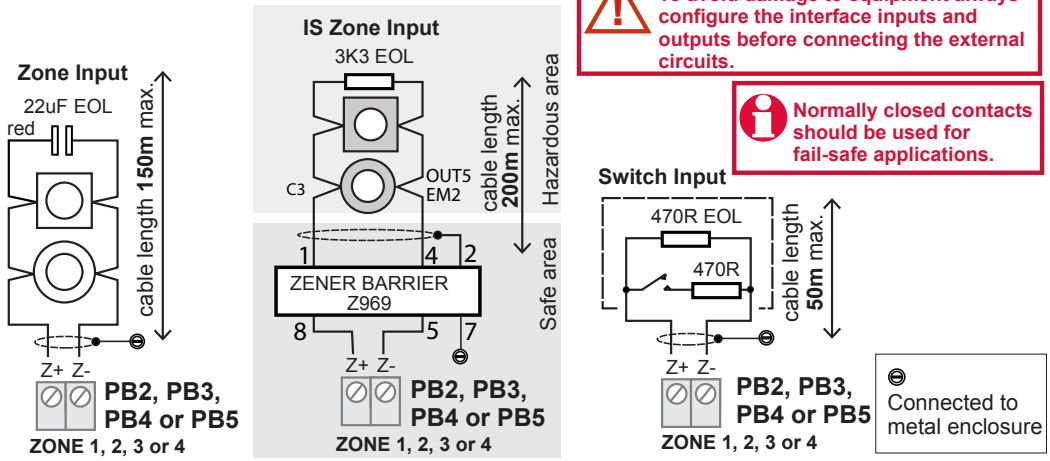
External wiring



It is possible to connect a number of LEDs in series (current is 1.5mA).



Input Connections



To avoid damage to equipment always configure the interface inputs and outputs before connecting the external circuits.

Normally closed contacts should be used for fail-safe applications.

Connected to metal enclosure

The Zener barriers and Power relays should be mounted on the DIN rail and apart using the metal screen provided inside the enclosure.

CE
0832

Gent by Honeywell (Novar Systems Limited)
Manufactured by: Honeywell Gent (Novar Systems Limited),
140 Waterside Road, Hamilton Industrial Park,
Leicester, LE5 1TN, United Kingdom

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DoP	Product No.
052-CPR-2013	S4-34440-02
052-CPR-2013	S4-34440-12

EN54-4: 1997 +A1:2002,A2:2006, EN54-17:2005, EN54-18:2005

S4-34440-02 (EN54-4-17 & 18)
S4-34440-12 (EN54-4-17 & 18)

Intended for use in fire detection and fire alarm systems in and around buildings

Refer to DOP 052-CPR-2013 for level or class of performance declared, for details see website www.gent.co.uk

At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre and in accordance with national or local legislation.

WEEE Directive:
At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre.
Do not dispose of with your normal household waste.
Do not burn.

Honeywell Gent reserves the right to revise this publication from time to time and make changes to the content hereof without obligation to notify any person of such revisions of changes.

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Intrinsically Safe (IS) Application Information

S4 Mains Powered Interface

(S4-34440-02 & S4-34440-12)

Intrinsically Safe (IS) system design

The intrinsically safe detection and alarm devices for use in hazardous area should be wired and tested by trained engineers familiar with the relavent code of practice, these are:

- BS EN 60079-14:2014 Explosive atmospheres. Electrical installations design, selection and erection
- BS5839-1 Fire detection and fire alarm systems for buildings. Code of practice for design, installation, commissioning and maintenance of systems in non-domestic premises

Zener Barriers

There are two types of Zener Barriers recommended for use with the Mains powered interface units (S4-34440-02 and S4-34440-12) and these are:

- Z969 for wiring of IS Detectors (764744)
- Z779 for driving of IS Alarms (764746)

The Zener barrier recommended do not impose restrictions and permit monitoring of each IS circuit with an end of line component.

Loading of IS Circuit

There is a limit to the number of IS detectors and IS Alarm devices that can be connected to the respective Zener barrier.

It is also important to restrict the number of devices on IS circuits to ensure correct operation of the detection zone and alarm circuits and to ensure the circuits can be provided by the S4 Mains powered interface unit.

Wiring IS circuits

Where more than one type of IS circuits go into hazardous area then each circuit must be connected to its own independent Zener barrier. An IS circuit may not be connected to other electrical circuit.

Cable used to wire IS circuits

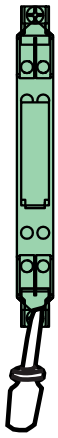
The recommended cable for wiring IS circuits is the **FireTuf**, refer to the cable manufacturers data sheet for further information when using it for wiring Fire protection system.

The FireTuf FT120 Fire alarm cable 2 x 1.5mm^2 has typical electrical characteristic as shown below:

- Loop resistance of : 24 ohm/km
- Loop inductance of : 0.67 mH/km
- Capacitance core/core of : 82 nF/km
- Capacitance core/screen of : 144 nF/km
- and L / R ratio of : 28µH/ohms

How to fit a Zener Barrier on to the DIN rail in a Mains Powered Interface

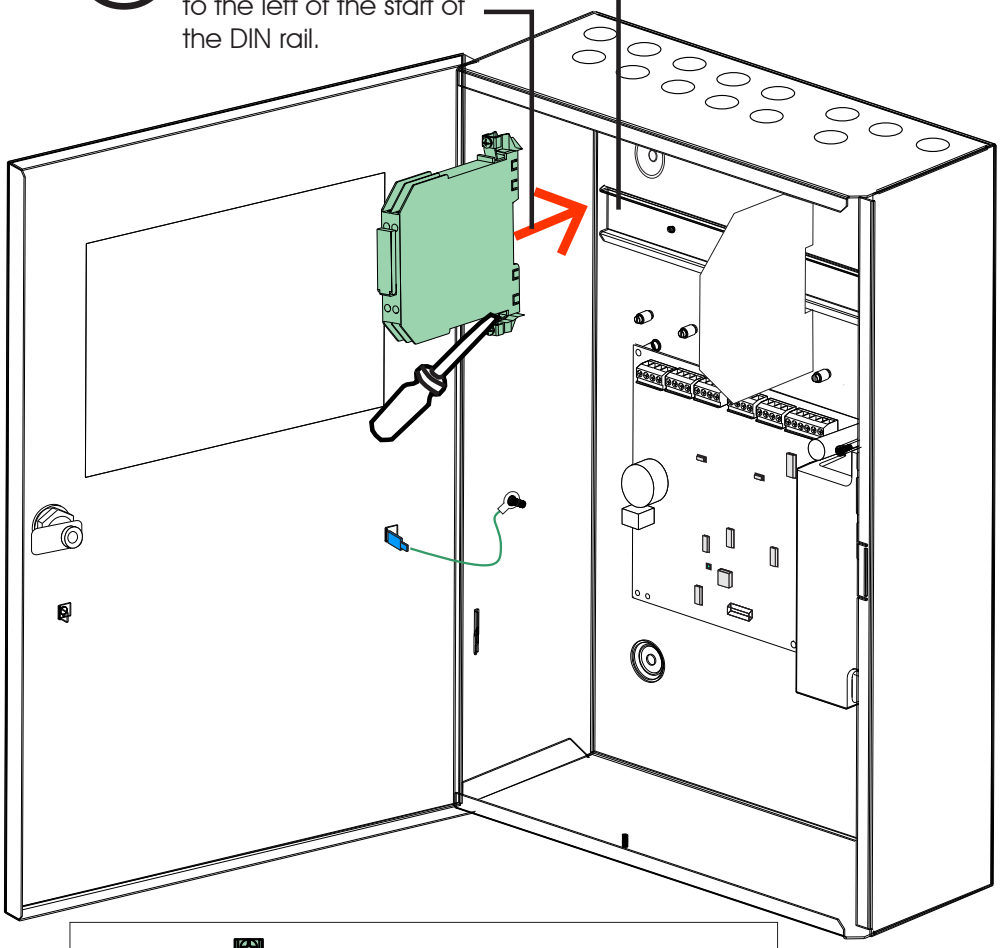
Ensure the DIN Rail is able to accomodate Zener Barriers.

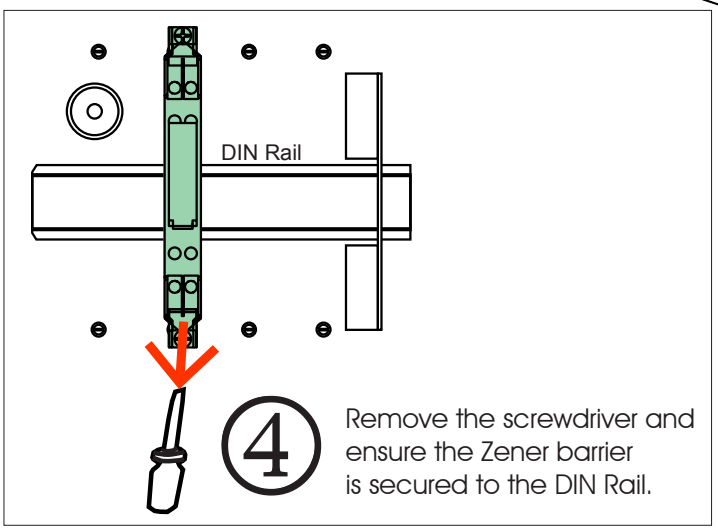


1 Carefully insert a terminal screwdriver to open out DIN rail fitment on the Zener Barrier. See markings on the Zener Barrier enclosure to identify exactly where the screwdriver is to be inserted.

2 Position the Zener Barrier with screwdriver engaged to the left of the start of the DIN rail.

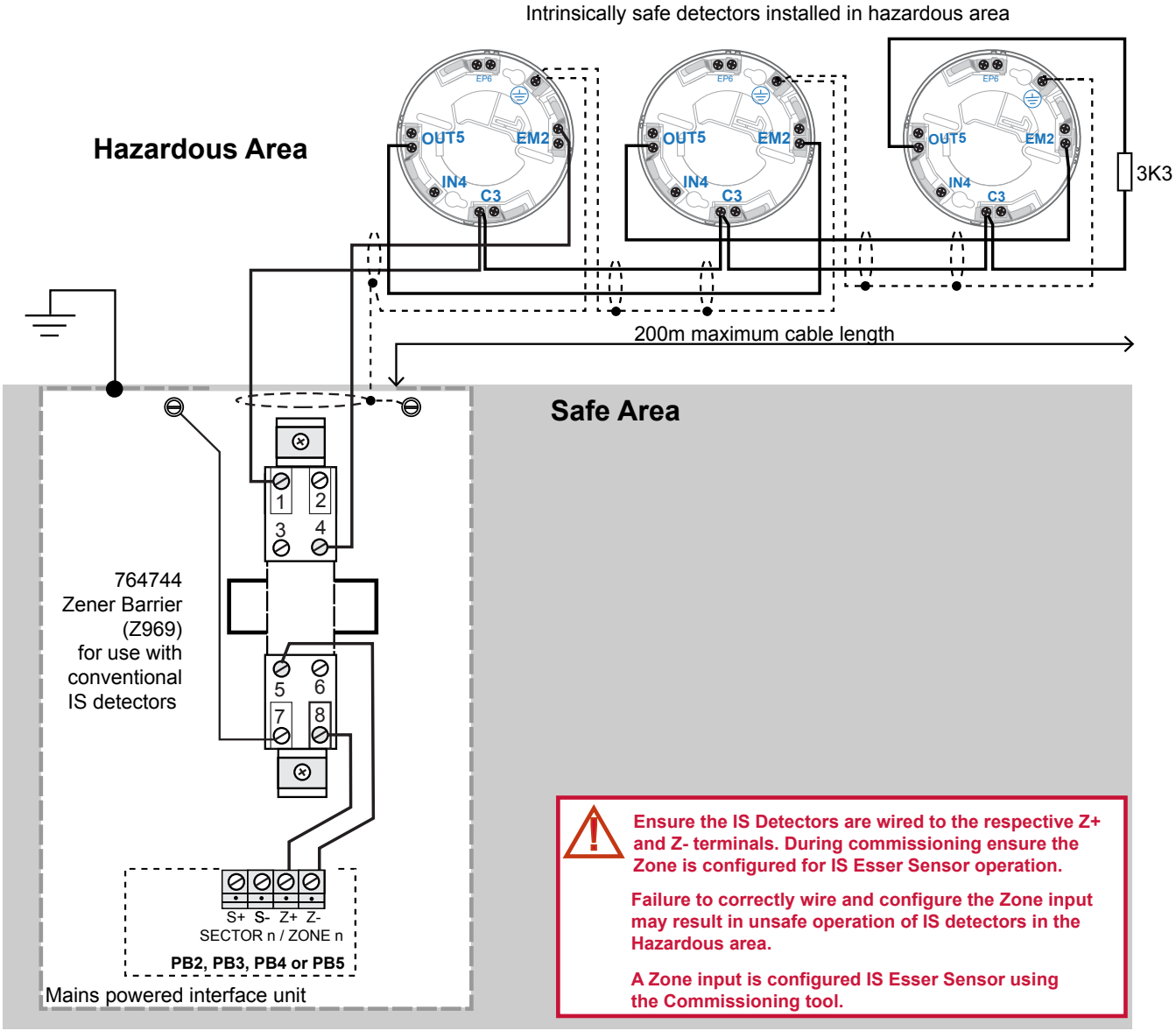
3 Slide the Zener Barrier on to the DIN Rail to the right to a desired position.





4 Remove the screwdriver and ensure the Zener barrier is secured to the DIN Rail.

How to wire up an IS Zone circuit with IS detectors

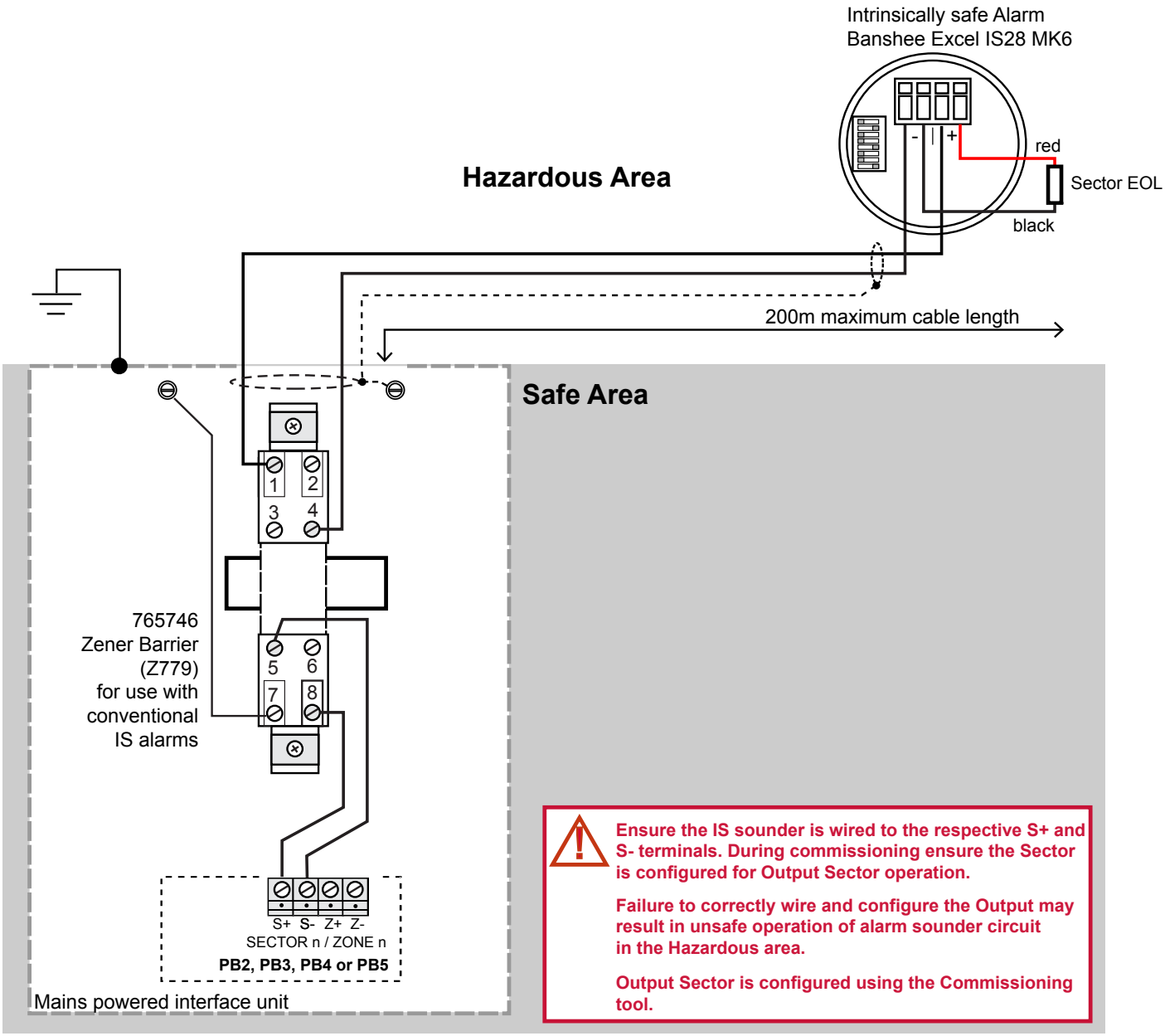


Recommended IS detection devices

- Rate-of-rise heat detector (803271.EX)
- Optical smoke detector (803371.EX)
- O2T-multisensor detector (803374.EX)
- Base (805590)
- a maximum of up to **15** IS detectors are allowed per circuit over a **200m** cable length using FireTuf, which is the approved cable for wiring of IS Detectors

For information on IS Detectors see Website Esser by Honeywell and search for the above products and their data sheets and for information on 764744 (Z969) see “Zener Barriers” on page 7.

How to wire up an IS Sector circuit with an IS Sounder



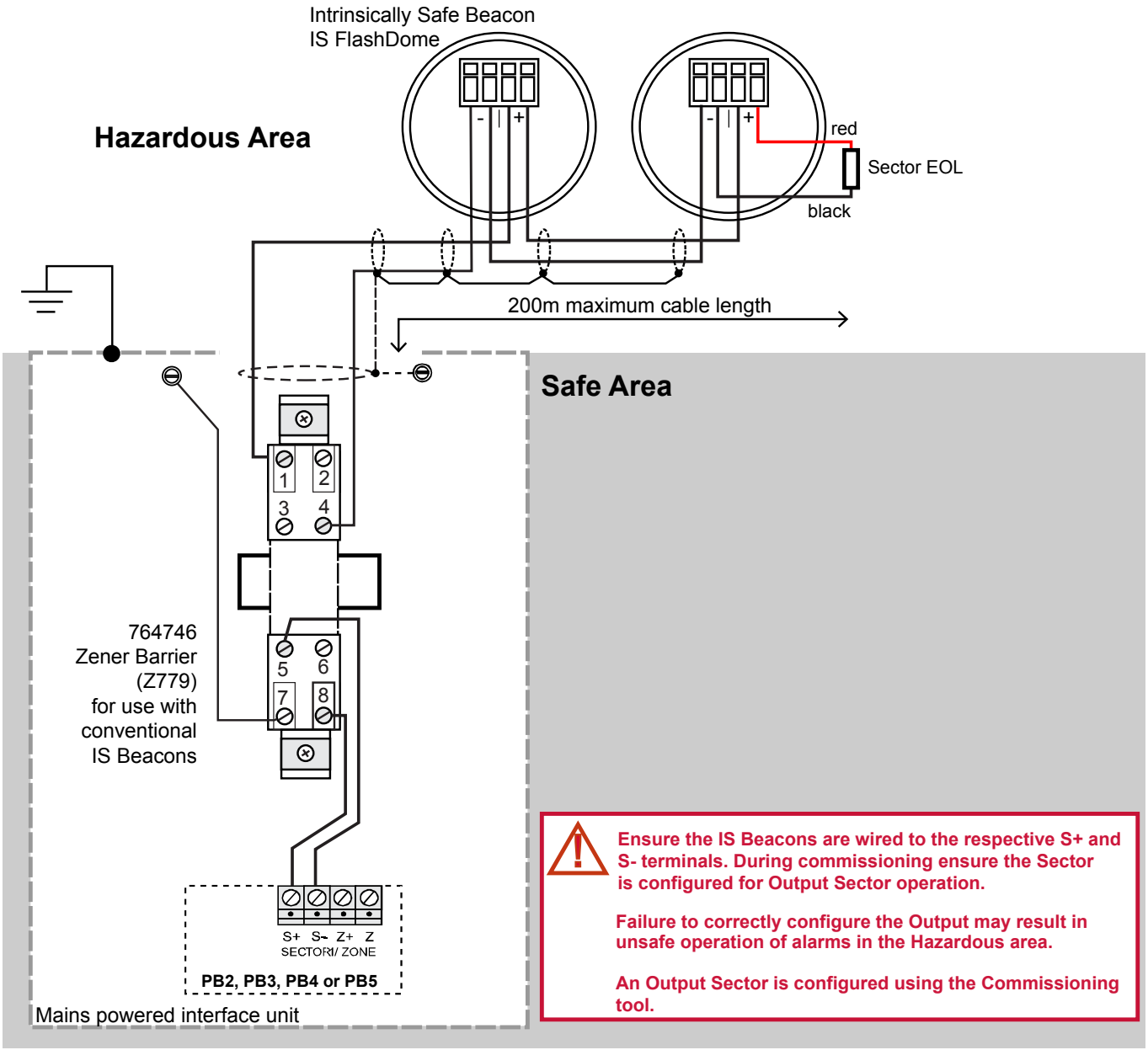
Recommended IS Alarm device

- SOUNDER-EX Banshee Excel IS28 MK6 ATEX sounder

- A maximum of up to **1** Banshee Excel IS28 Mk 6 is allowed per circuit over a **200m** cable lenght using **FireTuf,** which is the approved cable for wiring of IS Sounders.

For information on IS Sounder see the data sheet supplied with the product and for information on 764746 (Z779) see “Zener Barriers” on page 7.

How to wire up an IS Sector circuit with IS Beacons



Recommended IS Beacon

- VID-EX IS Flashdome ATEX Approved VID

- A maximum of up to **2** Banshee IS FlashDome are allowed per circuit over a **200m** cable length using **FireTuf,** which is the approved cable for wiring of IS Beacons.

For information on IS Beacon see the data sheet supplied with the product and for information on 764746 (Z779) see “Zener Barriers” on page 7.

Specification for IS Detectors

These automatic fire detectors and detector base may not be installed in areas with atmosphere containing bensene, acetic acid or esters as the ABS plastic of the housing is not resistant to these chemicals.

General detector data according to ATEX

Maximum Input voltage (Ui) : 21 V DC

Maximum Input current (Ii) : 252 mA

Maximum Output current (Io) : 10 mA

Maximum internal Capacity (Ci) : 1 nF

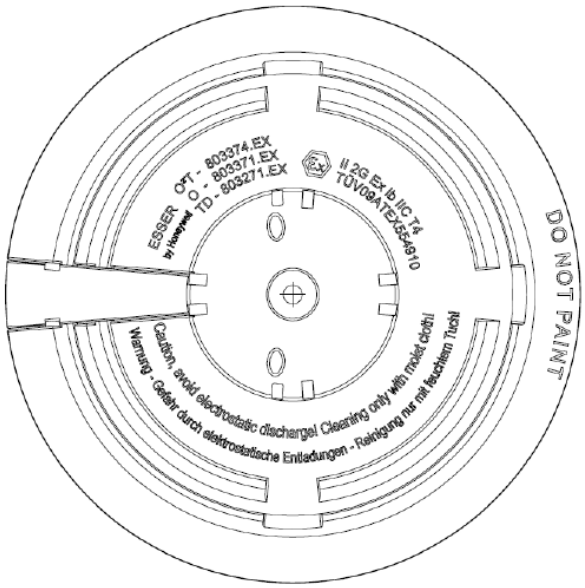
Ambient temperature (Ta) : - 20 °C to + 70 °C (Ambient temperature according to ATEX)

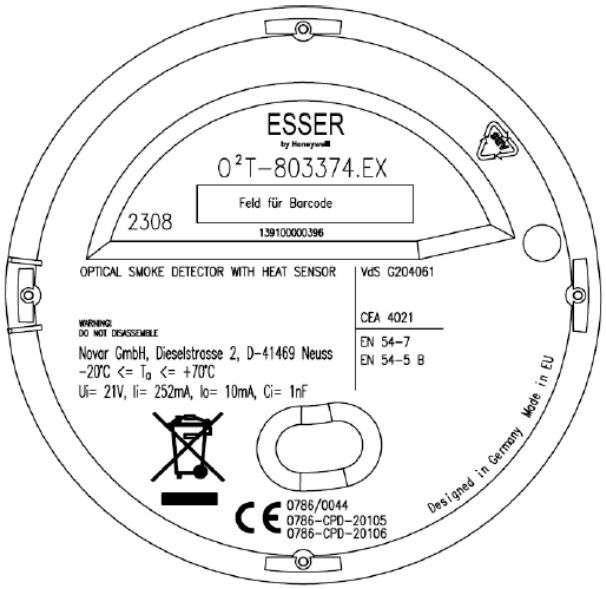
Examination Certificate No. : TÜV 09 ATEX 554910

Category : II 2G (with safety barrier Part No. 764744)

Ex-protection : Ex ib IIC T4

Detector identification according to ATEX





General Specifications

Operating voltage : 8 V DC to 42 V DC (21V DC for Atex)

Type of sensor Heat and Smoke*

Air velocity range : 0 to 5.000 ft/min.

Quiescent current for

Rate-of-rise heat detector 803271.EX *1 : @ 19 V DC is 40 µA

Quiescent current for Optical smoke detector 803371.EX *2 : @ 19 V DC is 50 µA

Quiescent current for O2T-multisensor detector 803374.EX *2 : @ 19 V DC is 60 µA

Temperature, storage : -25 °C to +75 °C

Ambient humidity : ≤ 95% relative humidity non-condensing

IP rating : IP 43 (with base + option)

Housing : ABS

Colour : white (similar to RAL 9010)

Weight : approx. 110 g

Dimensions (with base) : Ø 117 mm, H = 62 mm

Zener Barriers

Specification for Z 969 Zener Barrier (764744)

Examination certificate No. : BAS 01 ATEX 7005

Operating voltage : UN = 19,24 V

Complete internal resistance : R_i = 86,13 Ω

Maximum Voltage Ex (i) circuit : U_0 = 19,24 V

Maximum short circuit current Ex (i) circuit : I_0 = 224 mA

Maximum load Ex (i) circuit : P_0 = 1.08 W

Maximum capacity Ex (i) circuit : II C / C_0 = 250 nF

Maximum inductivity Ex (i) circuit : II C / L_0 = 650 µH

Maximum voltage non- Ex (i) circuit : Um = 250 V

Fuse : 80 mA

Degree of protection : IP 20 in accordance to IEC 144

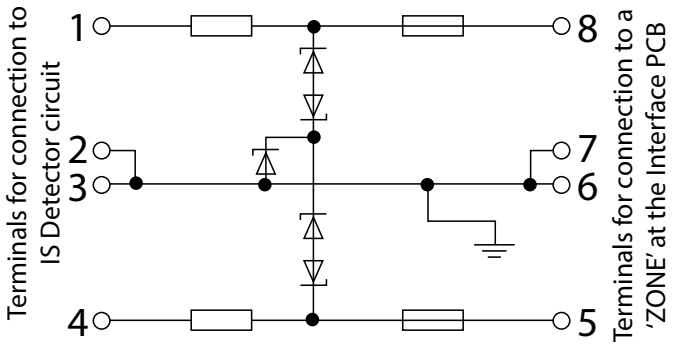
Ambient temperature : - 20 °C to + 60 °C

Storage temperature : - 40 °C to + 80 °C

Weight : approx. 150 g

Dimensions (w x h x d) : 12.5 x 110 x 115 (mm)

Zener Barrier 764744 (Z969) internal wiring



Specification for Z 779 Zener Barrier (764746)

For full information refer to Pepperl+Fuchs data sheet

Examination certificate No. : BAS 01 ATEX 7005

Working voltage : 26.5 V at 10 µA

Series resistance maximum : 327 Ω

Maximum Voltage Ex (i) circuit : U_0 = 28 V

Maximum short circuit current Ex (i) circuit : I_0 = 93 mA

Maximum load Ex (i) circuit : P_0 = 0.65 W

Maximum capacity Ex (i) circuit : II C / C_0 = nF

Maximum inductivity Ex (i) circuit : II C / L_0 = mH

Maximum safe voltage non - Ex (i) circuit : U_m = 250 V

Fuse : 50 mA

Degree of protection : IP 20

Ambient temperature : - 20 °C to + 60 °C

Storage temperature : - 25 °C to + 70 °C

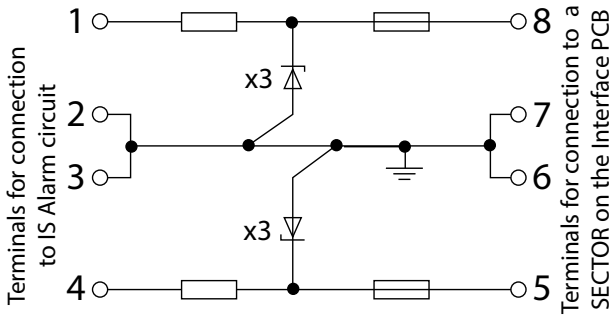
Relative humidity : maximum 75 %, without condensation

Mount on a 35 mm DIN mounting rail

Weight : approx. 150 g

Dimensions (w x h x d) : 12.5 x 110 x 115 (mm)

Zener Barrier 764746 (Z779) internal wiring



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Commissioning Information

S4 Mains Powered Interface

(S4-34440-02 & S4-34440-12)

Pre commissioning checks

- Ensure the use of the Mains Powered Interface build and software is compatible for use in the system
- Check the wiring to the external equipment on I/O lines
- Ensure correct End of lines are fitted
- ENSURE IT IS SAFE TO POWER UP THE INTERFACE WITH EXTERNAL EQUIPMENT CONNECTED.

Compatibility

Only an EN Vigilon panel based fire alarm system with compatible software can operate a Mains powered interface to drive a compliant BS7273 Part 4:2007 system. These Mains powered interface units MUST NEVER be used to drive a BS7273 part 4 compliant system where the fire alarm system has a BS Vigilon panel or a Nano panel.

Backward Compatibility

A S4 Mains powered interface unit can be converted to be a BACKWARD COMPATIBLE 34440 Mains powered interface unit for use on a Vigilon loop. The conversion is done using a S4 Interface programmer unit. For further information contact your supplier.

Panel firmware

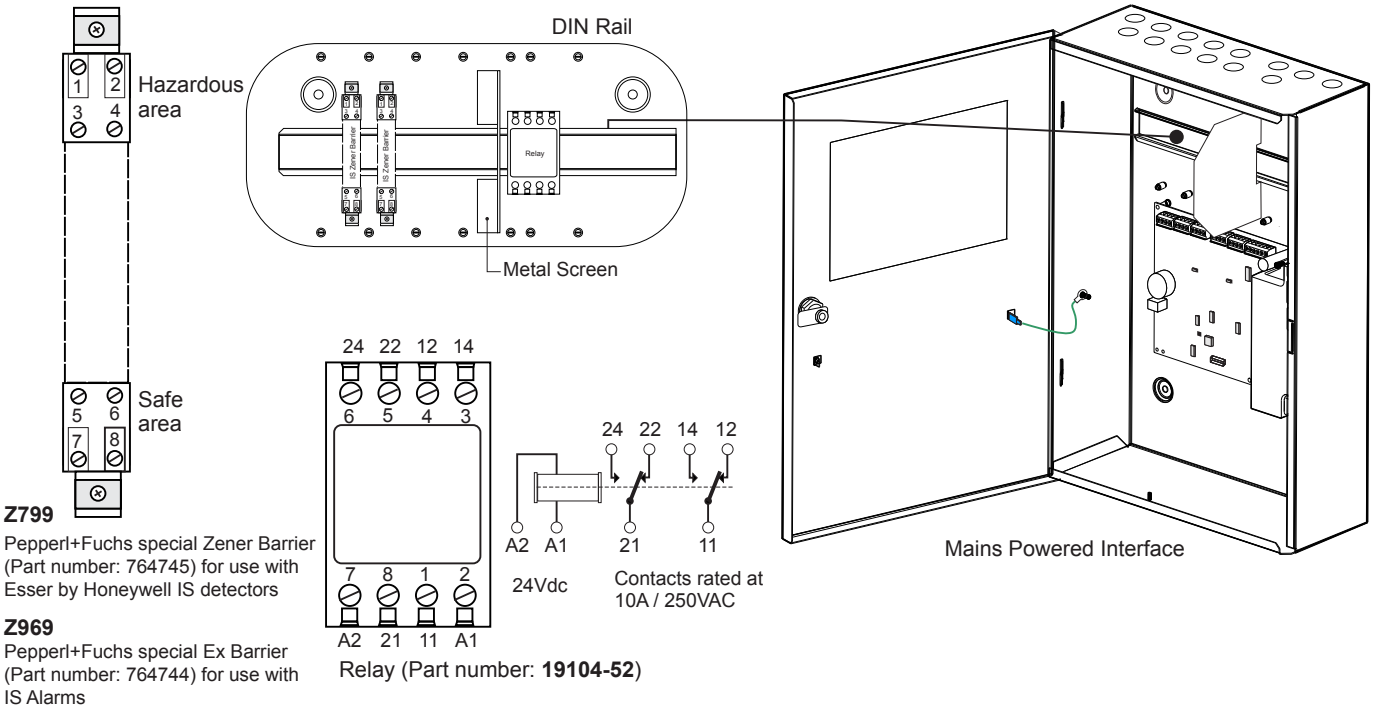
The S4 Mains powered interface unit is compatible for use in Vigilon and Nano systems having the following panel firmware.

Control Panel	*Having card and firmware*
Vigilon	*Main Controller Card V4.43 / V3.97*
	Loop Processor Card V4.41 / V3.97
	Vigilon Commissioning tool V1.27
Nano	*Main Controller V2.50*
	Nano Commissioning tool V2.x

Note a Nano loop can only accommodate Mains powered Interface S4-34440-02, so a S4-34440-12 is not allowed.

Factory settings

- The S4 Mains powered interface channels 1 - 4 are all set to UNUSED
- The Auxiliary output is set to OFF and is unaffected by mains failure or fire reset.



Z799
Pepperl+Fuchs special Zener Barrier (Part number: 764745) for use with Esser by Honeywell IS detectors

Z969
Pepperl+Fuchs special Ex Barrier (Part number: 764744) for use with IS Alarms

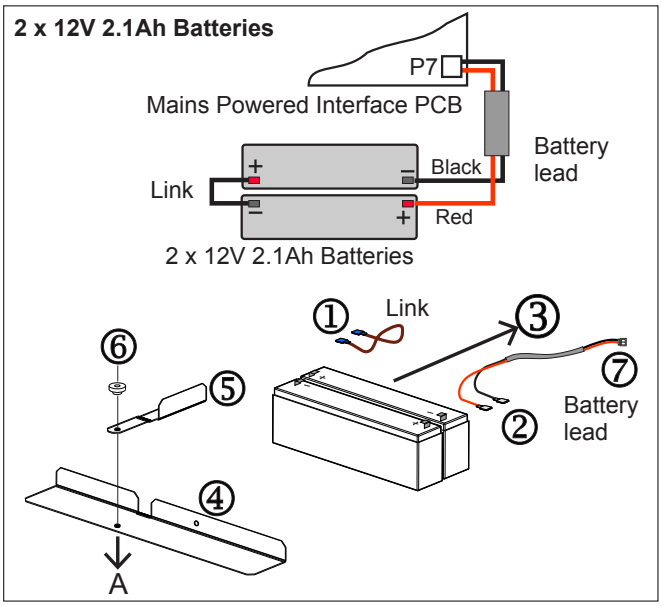
Relay (Part number: **19104-52**)

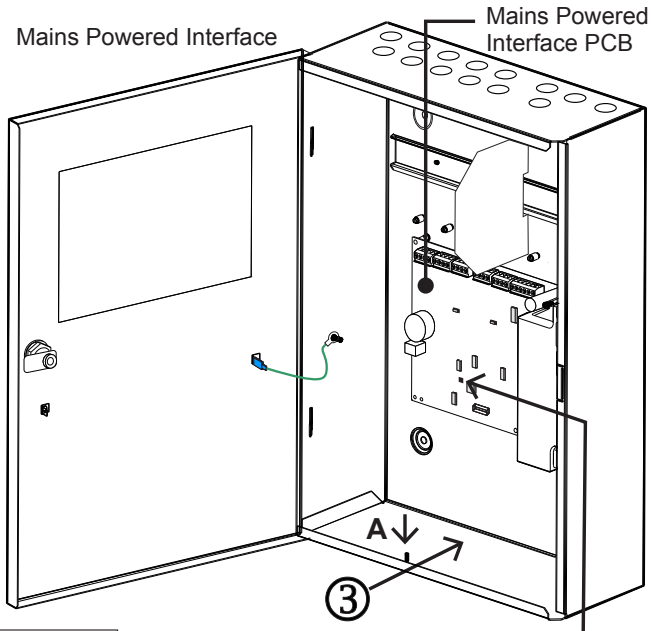
How to install batteries and Power up

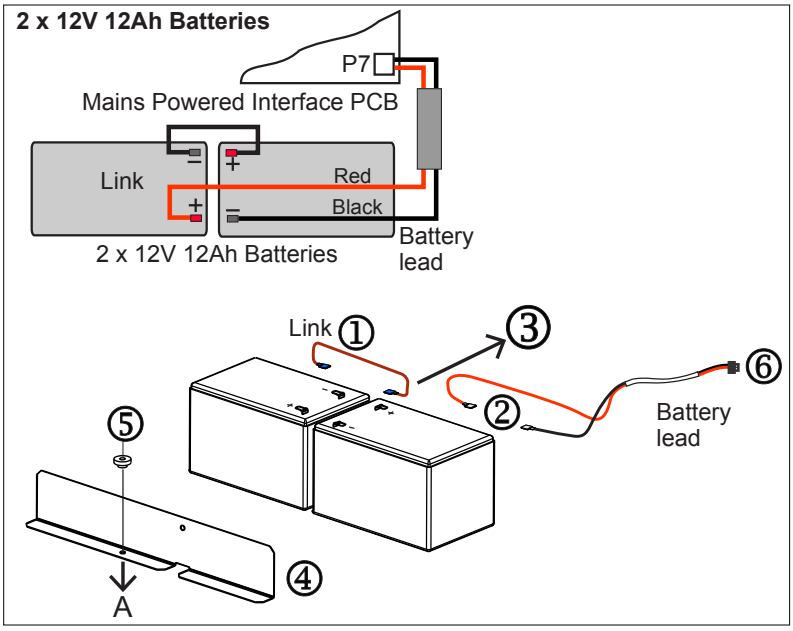
The following illustration shows how to prepare, position and connect a pair of 12V 12Ah batteries to a S4-34440-12 and 12V 2.1Ah to a S4-34440-02 S4 Mains powered interface unit.

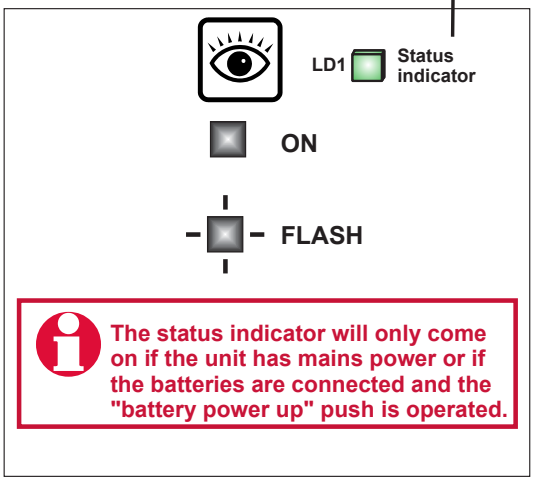
The numbers ①, ②, ③...shows the order in which to carry out the installation of batteries.

DO NOT fit use 12V 2.1Ah batteries inside a S4-34440-12 Mains powered interface unit .









The status indicator will only come on if the unit has mains power or if the batteries are connected and the "battery power up" push is operated.

Status Indicator LD1

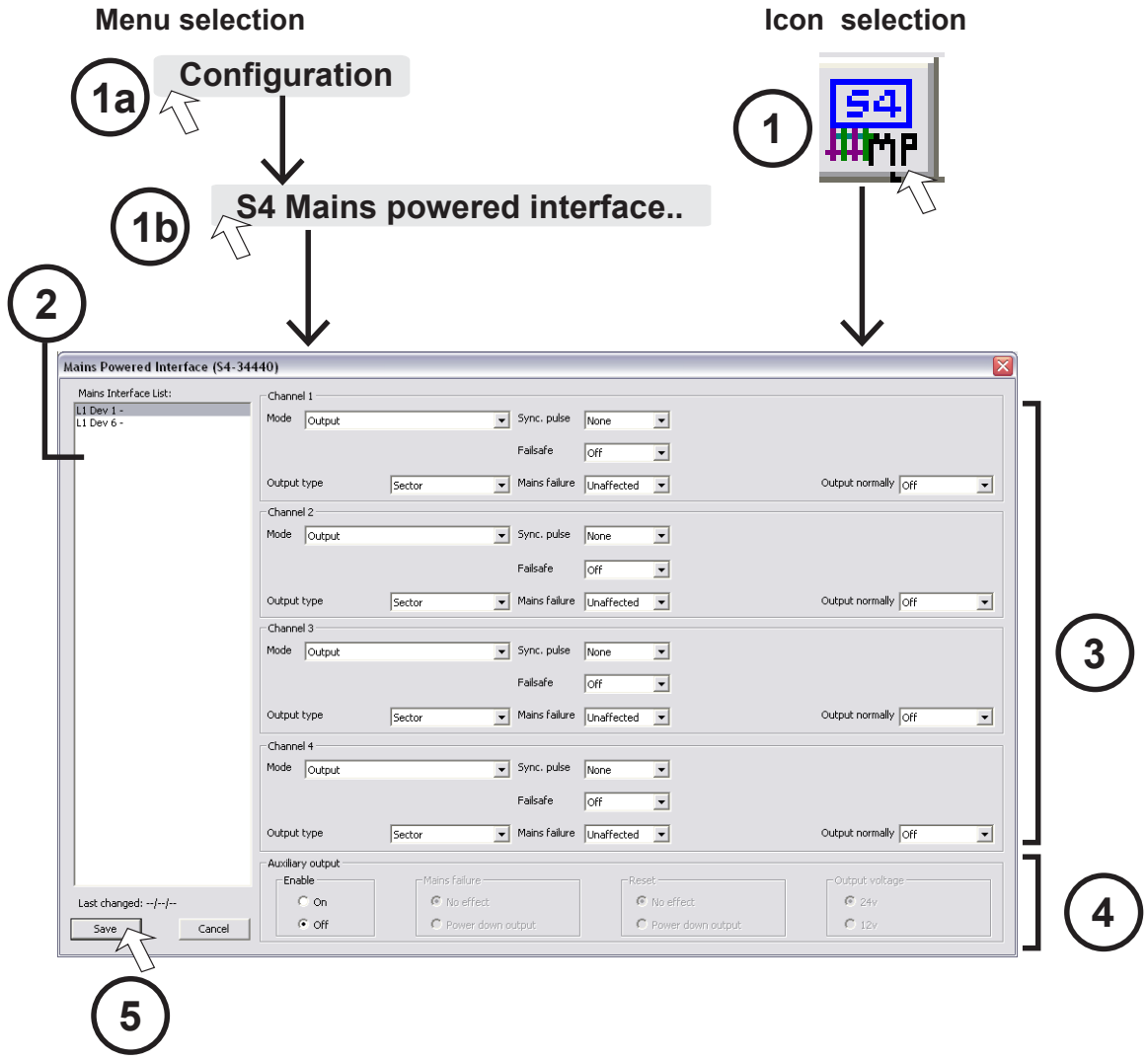
Indicator LD1	*Indicator colour*	*meaning...*
FLASH	*Green*	*OK - Interface replies to a loop communication sequence*
Long FLASH with loop communications	*Amber*	*There is a short circuit, open circuit or confirmation timeout on an interface zone / sector channel.*
Short FLASH	*Amber*	*The interface loses synchronisation with the loop communications sequence.*
ON continuously	*Amber*	*System error is detected (e.g. a configuration memory checksum / validity check error or a Flash / RAM error).*

Vigilon Commissioning Tool - S4 Mains Powered Interface - Config. menu

Menu option	*you can use this option to..*	*notes*
S4 Mains Powered Interface...	*...to configure the S4-34440-02 and S4-34440-12 Mains powered interface units.*	

Operation (The numbers ① ② ③ ④..shows the order in which to the make selections and enter appropriate data).

After opening the Mains Interface configuration window select the S4 Mains interface from the system tree to start configuration.



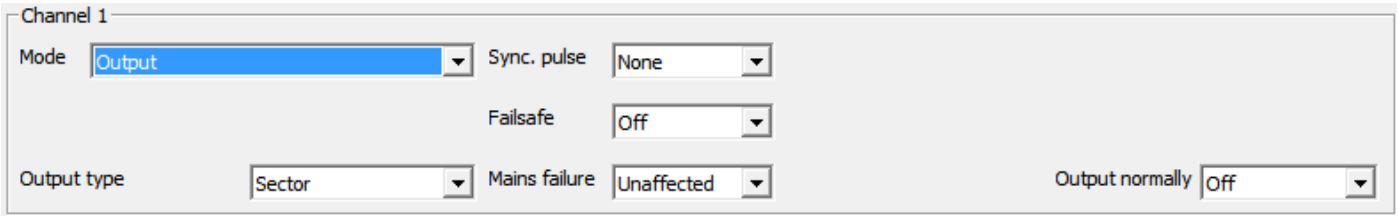
Unused Mode

When a channel is not being used it must be setup as an unused channel.

Mode	*settings*	*notes*
Unused	-	*Set the channel mode to unused if it is not required.*

Output mode

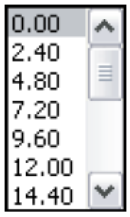
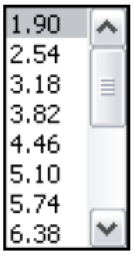
This example shows how to set a channel and configure it as an output. Note the channel input terminals are not used.



Mode	*settings*	*notes*
Output	*Output type* Sector LED UnMonitored Sector Door release cat.A Door release cat.B	*The **Sectored output** is used to power alarm products such as sounders, bells, door holders and relay. A series blocking diode must be used.* *The **LED** output drive of 1.5mA is available.* *The **Unmonitored sector** output is for use with legacy galvanic isolator, in this mode no end-of-line resistor or series diode is required. Unmonitored sector lines will have no associated analogue channels.* *The **Door release category A** option is used for controlling door release mechanisms that need to meet the requirement of BS7273 Part 4. With Category A the outputs are operated (doors released) from **fire, fault and disablement** events, see * below.* *The **Door release category B** option is used for controlling door release mechanisms that need to meet the requirement of BS7273 Part 4. With Category B the outputs are operated (doors released) from fire events, see * below.*
	Sync. pulse None 10ms 20ms 30ms	*The outputs sends a **synchronisation pulse** every 10s, the output is turned off for a short duration. The duration can be programmed to be approximately 10, 20 or 30ms for compatibility with a wide range of annunciation devices that require synchronisation such as strobes, sounders and voice sounders.*
	Failsafe Off On	*When On it allows the setting of **Fail safe periods** for all Mains powered interface outputs, where outputs are used for fire doors control applications. When set to 'On' the **Initial fail** safe period defaults to 120s and the **Final fail safe period** defaults to disabled. See page 15.*
	Mains failure Unaffected TurnOff	*To preserve battery capacity for essential functions it is possible to configure individual outputs to deactivate 'Turn Off' during a **mains power failure.***
	Output normally Off On	** This is when a sectored output is configured to work in an inverse manner. An ON setting will cause the output to turn OFF. Note that in this mode the sector wiring is effectively unmonitored, it is only monitored when the output is de-energised. This feature may be used with equipment such as magnetic door holders to ensure the fire door will release once a fire has been detected.*

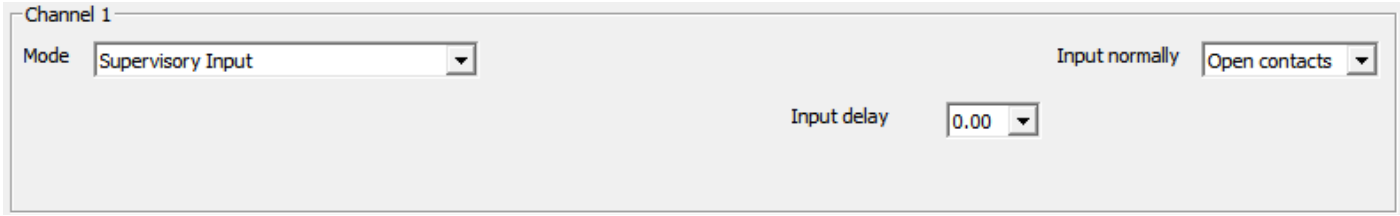
Zone Input mode

This example shows how to configure a Zone Input for specific detection devices.

Mode	***settings***	***notes***
Zone Input	*Zone Input Type* 	*The **Zone Input Type** monitors 'conventional' detectors and call points, with manual call points having 470 ohms resistor in series with Normally Open contacts. When Gent detectors operate they will draw a constant current of 30mA. A standard end-of-line capacitor must be fitted across the Z+ and Z- terminals.* *Each zone input can have up to 20 standard detectors connected with the diode base option.* *A Zone Input Type can accommodate a range of different products to operate at different zone input thresholds:* *Gent (**Type 0**)* *IS Esser Sensor (**Type 1**)* *Apollo/Nittan (**Type 2**)* *Tanlentum Flame (**Type 3**)* *Det-tronics Flame (**Type 4**)* *S/C Fire (**Type 5**)*
	Validation Delay 	*The purpose of the alarm **Validation Delay** is to minimise false alarms. The alarm validation timeout can be any value in the range 0 (off) to 37.5 seconds. During alarm validation delay timeout period the interface will suppress fire event by applying a reset to the zone circuit and then wait for a second confirming fire signal.*
	Reset Period 	*Other detector types may need a specific **Reset period** which can be set here in seconds.*

Supervisory Input mode

This example shows how to set the respective channel as a **Supervisory input.**



Mode	*settings*	*notes*
Supervisory input	*Input delay* 0.00 2.40 4.80 7.20 9.60 12.00 14.40	*The **Input Delay** is the time before the input is accepted by the interface, this will filter any noise or spurious signals, commonly know as 'bounce'. This time is the debounce period. The input delay timeout can be any value in the range 0 to 36 seconds.*
	Input normally Open contacts Closed contacts	*The input channel can be configured to operate with normally open or normally closed contacts. Note normally closed operation should be selected if fail safe contact monitoring is required.*

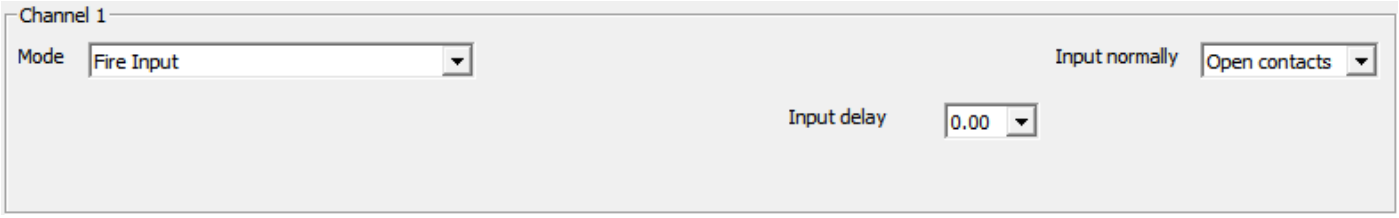
Fault Input mode

This example shows how to set a channel as a **Fault input**.

Mode	*settings*	*notes*
Fault input	*Input delay*	*As described for Supervisory input mode.*
	Input normally	*As described for Supervisory input mode.*

Fire Input mode

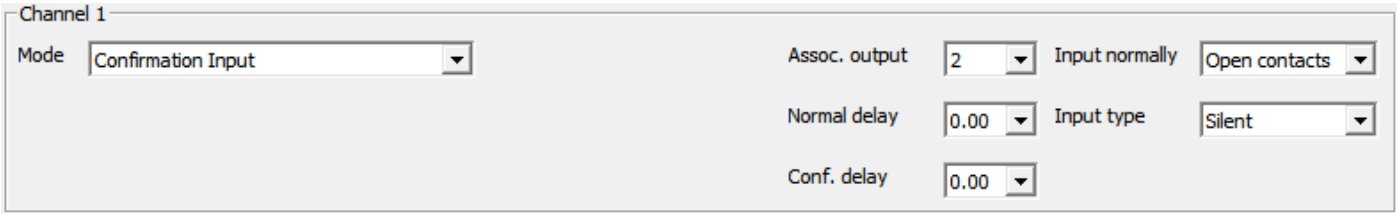
This example shows how to set a channel as a **Fire input**.



Mode	*settings*	*notes*
Fire Input	*Input delay*	*As described for Supervisory input mode.*
	Input normally	*As described for Supervisory input mode.*

Confirmation Input mode

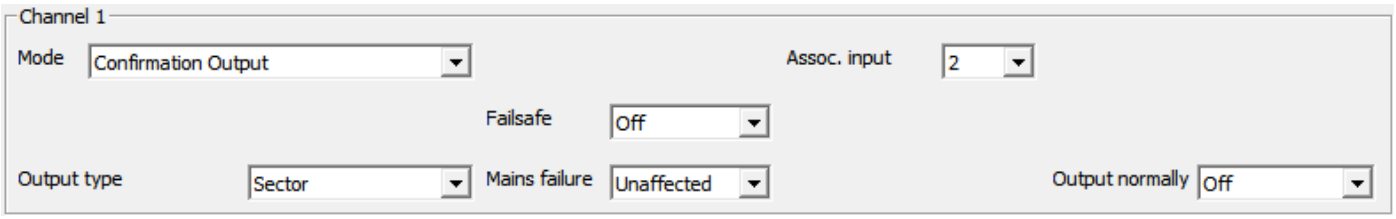
A **Confirmation Input mode** allows the system to monitor the correct operation of an output, which relies on external equipment sending back the correct signal. In this mode use a 470ohms end-of-line resistor with another 470ohms resistor being switched in parallel across the Z+ and Z- terminals to provide the feedback signal.



Mode	*settings*	*notes*
Confirmation Input	*Associated output* 2 3 4	*The selected output channel is associated with the confirmation input channel. Note channel 1 cannot be selected for associated output as it is already being used as an input, however this would be possible if the channel was configured as a combined input/output channel.*
	Normal delay 0.00 1.20 2.40 3.60 4.80 6.00 7.20	*The **Normal delay** is the time before a confirmation input is accepted by the interface, this will filter any noise or spurious signals, commonly know as 'bounce'. This time is the debounce period.*
	Confirmation delay 0.00 2.40 4.80 7.20 9.60 12.00 14.40 16.80	*This is the delay time before a confirmation input is accepted by the interface and is how long the interface waits for a confirmation signal before it brings up a fault message.*
	Input normally	*See page 6*
	Input type Silent Verbose	*The **verbose** setting will generate true/false supervisory messages whenever the input changes state, as well as generate timeout fault if the change does not occur before the delay has elapsed. The **silent** setting will only give a timeout fault.*

Confirmation Output mode

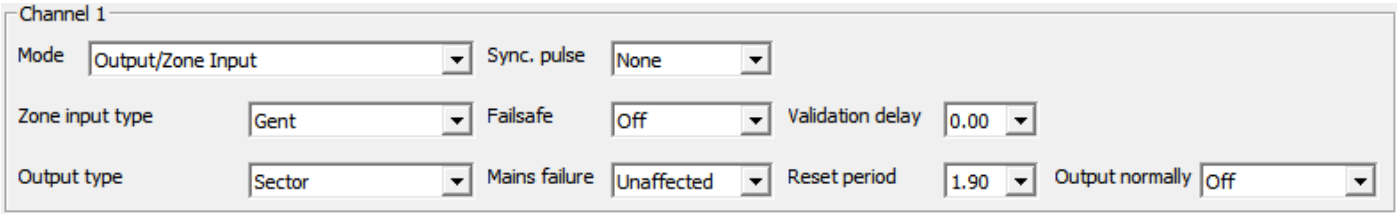
This is the setting of a channel configured as a confirmation output and is associated with an input at another channel, but not its own channel.



Mode	settings	notes
Confirmation Output	*Output type* Sector LED UnMonitored Sector	*See page 4*
	Fail safe	*See page 4*
	Mains Failure	*See page 4*
	Associated Input 2 3 4	*The selected input channel is associated with the confirmation output channel. Note channel 1 cannot be selected for associated confirmation output*
	Output Normally	*See page 4*

Output with Zone Input mode

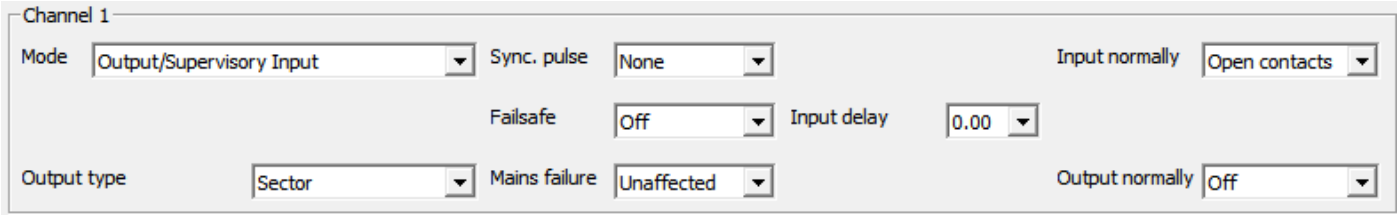
This is when a channel is configured as an output and the channels input terminals are Zone Input.



Mode	settings	notes
Output / Zone input	*Zone input type*	*See page 5*
	Output type	*See page 4*
	Sync. pulse	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Validation delay	*See page 5*
	Reset period	*See page 5*
	Output normally	*See page 4*

Output with Supervisory Input mode

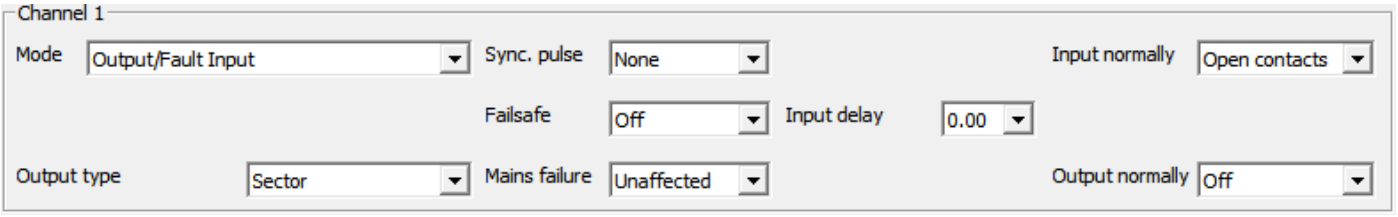
This is when a channel is configured as an output and the channel's input terminals are Supervisory Input.



Mode	settings	notes
Output / Supervisory input	Output type	See page 4
	Sync. pulse	See page 4
	Failsafe	See page 4
	Mains failure	See page 4
	Input Delay	See page 6
	Input normally	See page 6
	Output normally	See page 4

Output with Fault Input mode

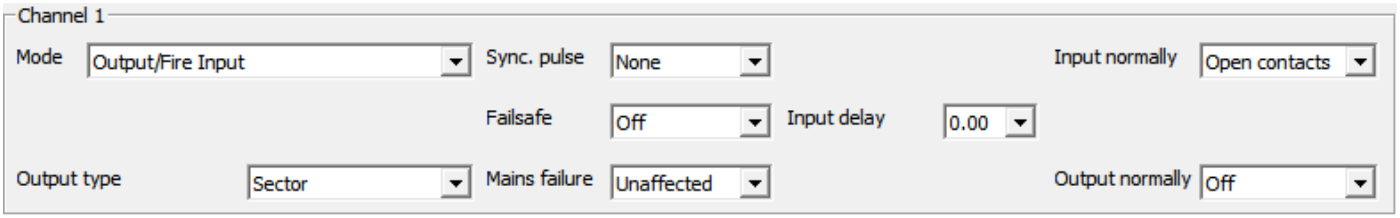
This is when a channel is configured as an output and the channel's input terminals are Fault Input.



Mode	settings	notes
Output / Fault input	Output type	See page 4
	Sync. pulse	See page 4
	Failsafe	See page 4
	Mains failure	See page 4
	Input Delay	See page 6
	Output normally	See page 4

Output with Fire input mode

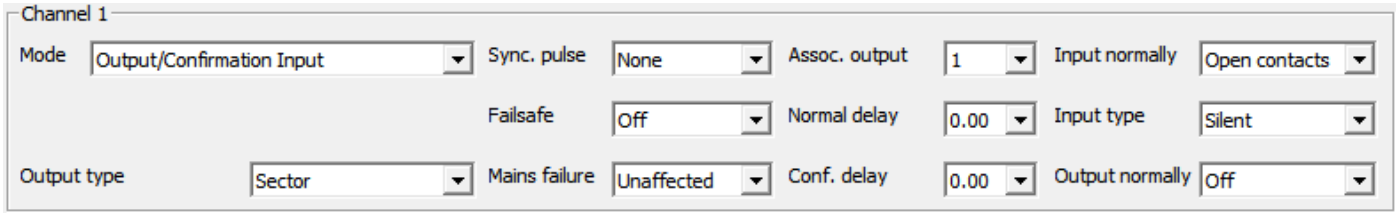
This is when a channel is configured as an output and the channels input terminals are Fire Input.



Mode	settings	notes
Output / Fire input	*Output type*	*See page 4*
	Sync. pulse	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Input Delay	*See page 6*
	Input normally	*See page 6*
	Output normally	*See page 4*

Output / Confirmation Input mode

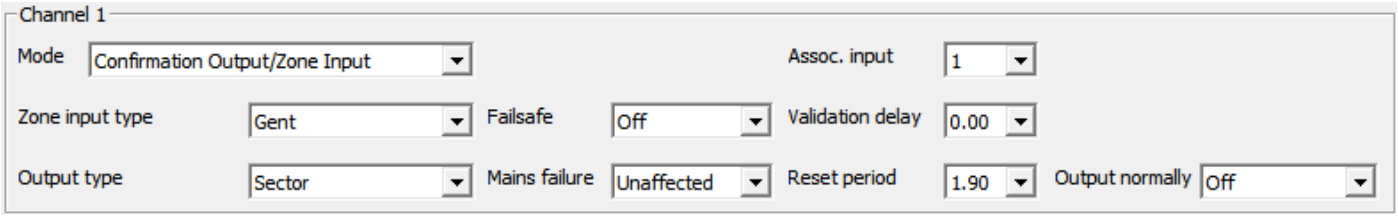
This is when a channel is configured as an output and the channels input terminals are Confirmation Input.



Mode	settings	notes
Output / Confirmation input	*Output type*	*See page 4*
	Sync. pulse	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Associated output	*See page 7*
	Normal delay	*See page 7*
	Conf. delay	*See page 7*
	Input normally	*See page 6*
	Input type	*See page 7*
	Output normally	*See page 4*

Confirmation Output with Zone Input mode

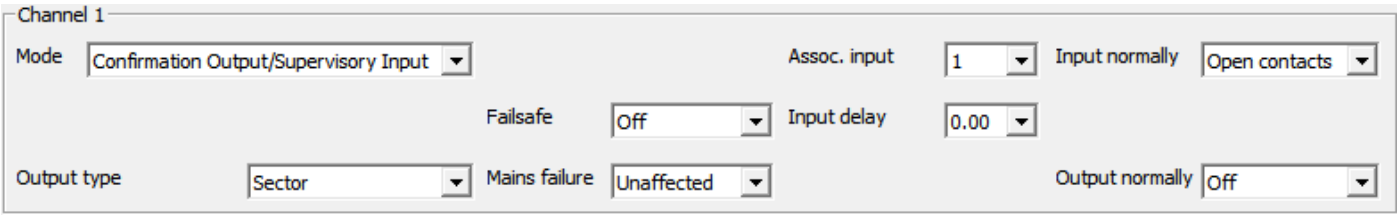
This example shows how to set a confirmation output when there is a state change on the associated **Zone input**.



Mode	*settings*	*notes*
Confirmation Output / Zone Input	*Zone Input Type*	*See page 5*
	Output type: Sector, LED, UnMonitored Sector	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Associated Input	*See page 4*
	Validation Delay	*See page 5*
	Reset Period	*See page 5*
	Output normally	*See page 4*

Confirmation Output with Supervisory Input mode

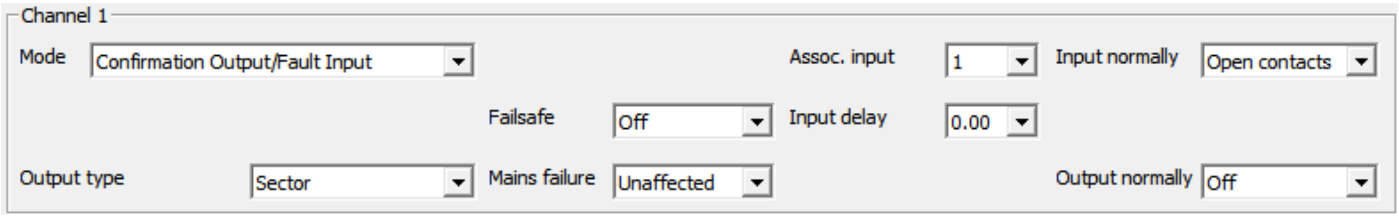
This example shows how to set a confirmation output when there is a state change on the associated **Supervisory input**.



Mode	*settings*	*notes*
Confirmation Output / Supervisory Input	*Output type* Sector, LED, UnMonitored Sector	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Associated input 1, 2, 3, 4	*The selected input channel is associated with the confirmation output channel.*
	Input delay	*See page 6*
	Input normally	*See page 6*
	Output normally	*See page 4*

Confirmation Output with Fault Input mode

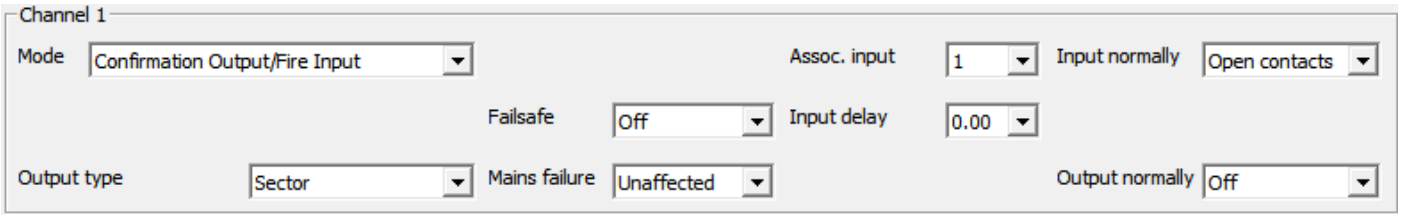
This example shows how to set a confirmation output when there is a state change on the associated fault input.



Mode	settings	notes
Confirmation Output / Fault Input	*Output type* Sector LED UnMonitored Sector	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Output normally	*See page 4*
	Associated input	*See page 8*
	Input delay	*See page 6*
	Input normally	*See page 6*

Confirmation Output with Fire Input mode

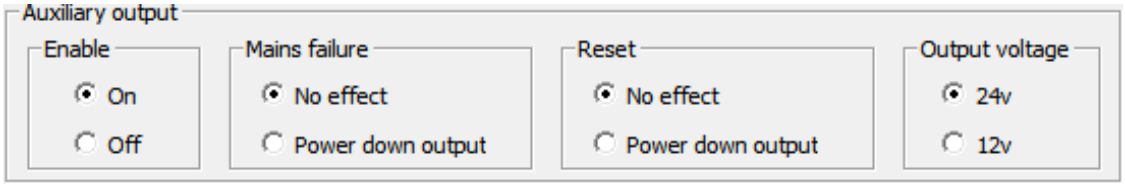
This example shows how to set a confirmation output when there is a state change on the associated **fire** input.

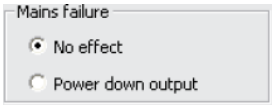
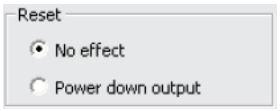


Mode	settings	notes
Confirmation Output / Fire Input	*Output type* Sector LED UnMonitored Sector	*See page 4*
	Failsafe	*See page 4*
	Mains failure	*See page 4*
	Associated input	*See page 8*
	Input delay	*See page 6*
	Input normally	*See page 6*
	Output normally	*See page 4*

Auxiliary output

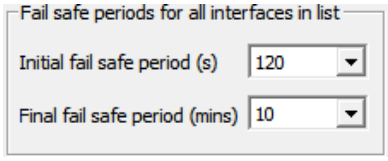
The interface has an auxiliary output rated at 1A max. The output voltage can be programmed as unregulated 24V (+/-3V) on the S4-34440-02 or regulated 12V/24V (+/-0.5V) on the S4-34440-12.

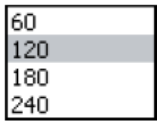
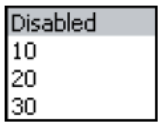


Mode	settings	notes
Auxiliary output		*When 'On' the auxiliary output is enabled and is disabled when set to 'Off'. The 'Off' setting should be selected when the auxiliary output is unused to maximise the battery standby period.*
		*If there is a mains failure then the auxiliary output can be switched off to preserve battery supply for essential inputs and outputs.*
		*Option for any equipment that needs a reset pulse to remove a latched condition, such as a conventional beam that is powered from the auxiliary terminal and signals a fire condition with relay contacts connected to a line configured as a switch input.*
		*Select the required output voltage. The 12V option is for S4-34440-12 Interface unit only.*

Fail Safe period settings

The fail safe periods are associated with all the Mains powered interface units in a standalone system where Outputs are configured for Door release Category A applications ONLY, *See page 4*.



Mode	settings	notes
Initial fail safe period (seconds)		*If there is a fault preventing detection of fire, disablement of fire detection or other conditions preventing fire detection operation, like supply failure, then the Outputs will turn 'On' (ie doors released) after an initial **fail safe period** of 120s (default).*
Final fail safe period (minutes)		*If there are three **fail safe** conditions that occur within a period set here then the Outputs are latched 'On' (ie doors released) and can only be reset by powering down the interface and then powering it up again. This **final fail safe period** can be disabled by selecting the 'Disabled' setting, which is a default setting.*

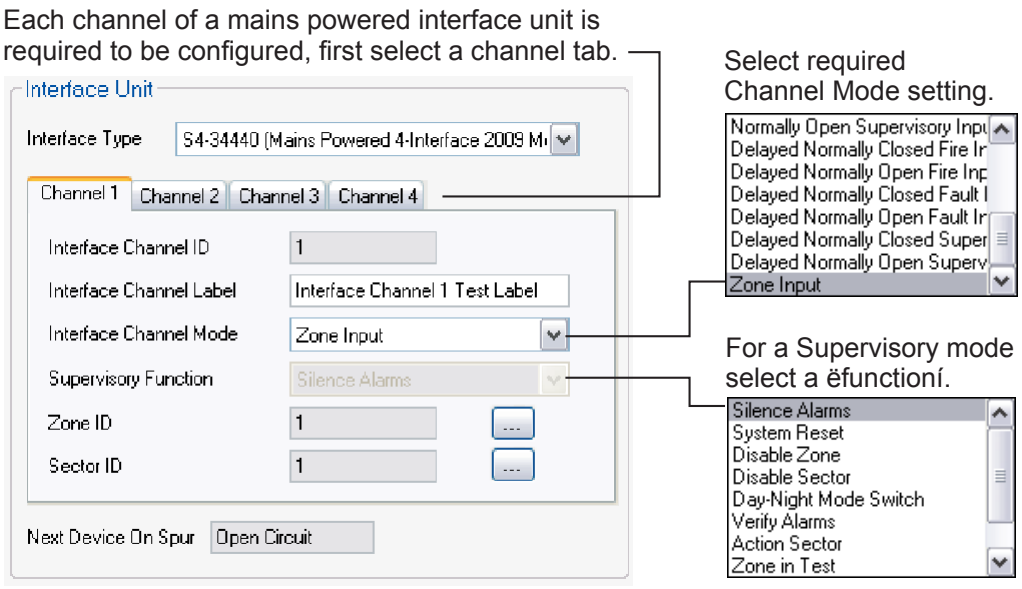
Vigilon system - Configuration

The following steps must be taken to ensure changes made to S4 mains powered interface unit configuration is correctly implemented:

- Firstly the configuration of S4 Mains Powered Interface units on the respective loop circuit must be saved at the Commissioning tool.
- The configurations of the respective loop circuit must then be transmitted to the control panel.
- The respective loop on which the S4 Mains powered interface unit reside must then be backed up at the control panel.
- Finally the respective loop circuits must be reallocated from the control panel before the configured changes take effect.

Nano Commissioning tool

The Nano system can be configured using either the Nano Commissioning tool or from the Nano panel menus, for details see the Nano Commissioning tool user guide or Nano Commissioning instructions. The following screen shot shows the configurations possible using the Nano Commissioning tool.



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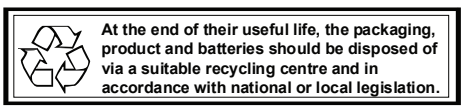

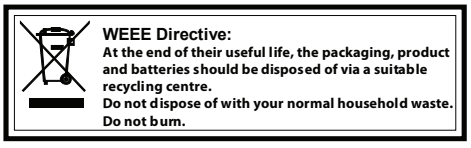

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