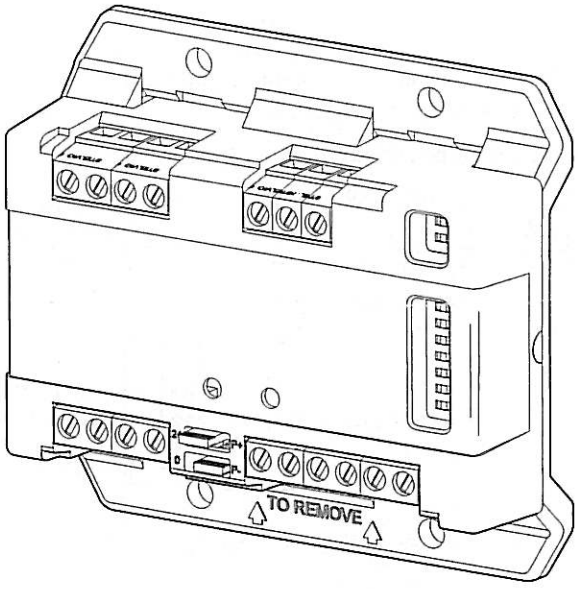


4200-1

Brief description

The A70E-2 Conventional Zone Interface provides the interface between a conventional zone of detectors and an analogue addressable loop. The zone of conventional detectors appears as a single addressable device on the addressable loop.

- Red LED to indicate alarm condition; yellow LED to indicate fault.
- May be DIN rail or surface mounted.
- 24V or loop powered.
- Built-in head-out operation.
- Will drive Intrinsically Safe equipment.

Specifications

General information

Designation	Conventional Zone Interface
Model number	A70E-2
Part number	2025

Monitoring – conventional zone

Open and short circuit fault; with 3K9 EOL resistor (normal conventional devices) or 8K2 EOL (intrinsically safe devices).

Head-out operation with 3K9 resistor available with Z6x0-3 detectors or other detectors with series supply diode. Requires base with Schottky diode, e.g. Z6 BS5. Add a series diode to the base (see *Application notes* on page 3) in order to use other detectors.

Power supply requirements

External power supply	19 to 30 VDC
Loop power	18 to 22 VDC

Current consumption

	From external supply		From loop	
	Quiescent	Worst case (S/C fault)	Quiescent	Worst case (S/C fault)
Ext powered	7.3 mA switched o/p load	36.6 mA	0.8 mA	10 mA
Loop powered	Switched o/p load	Switched o/p load	8.3 mA	24.6 mA

Compatibility (addressable side)

ZP3 analogue addressable systems.'

Compatibility (conventional side – maximum 15 devices)

- Ziton 610, 620, 630
- Apollo series 65 (GE Security Series 650)
- Apollo Orbis Intrinsically Safe (GE Security Series 670) - These devices must be used in conjunction with a galvanic isolator: PEPPERL+FUCHS KFD0-CS-Ex1.51p (GE Security Series GBX2000)

Detector compatibility requirements

Operating voltage	
Normal & headout mode	12.5 to 20 VDC
IS mode	14 to 20 VDC
Alarm clamp voltage	3 to 9 V
Current consumption (all detectors – excl. EOL resistor)	1.5 mA (normal or head-out mode) 3. mA (IS mode)
Reset supplied by A70	2.4 s power disconnect
Callpoint resistor required	220R to 1K2

Switched output

- Operates within 3s of conventional zone fire
- Supplied from external supply input (in all configurations)
- Latching relay
- 750 mA (fused)

Mechanical details

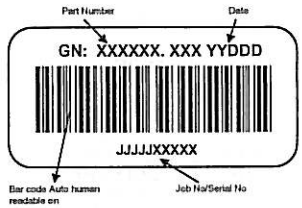
Material	Moulded ABS
Colour	White
Dimensions (L x W x H)	85 x 78 x 27 mm
Weight	80 g
Mounting method	Surface or DIN rail

Environmental

Temperature range	-10 to +80 °C
Humidity range	20 to 95% RH (non condensing)

Manufacturer traceability

A barcode label is affixed to each product (see example below). This label reflects, amongst other things, the date of manufacture of the product in the form YYDDD.



These numbers are interpreted as follows:

YY = year of manufacture

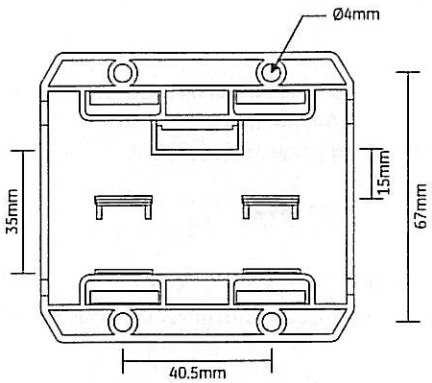
DDD = day of manufacture

For example the numbers 07134 would indicate that the product was manufactured on the 134th day of the year 2007, that is 14th May 2007.

Installation

1. See Figure 1. Mounting holes diameters are 4 mm and centres are at 40.5 mm and 67 mm.
2. 15 or 35 mm DIN rail maybe used.
3. The A70E-2 contains no user-serviceable parts and should NOT be disassembled.
4. Verify that all field wiring is free of open circuit, short circuit, and ground faults.
5. Make wiring connections as shown in the adjacent Figure 2 and Figure 3.

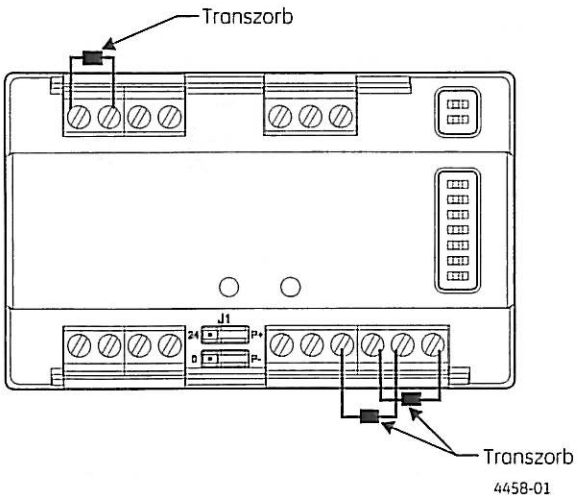
Figure 1: A70E-2 dimensions



Device wiring

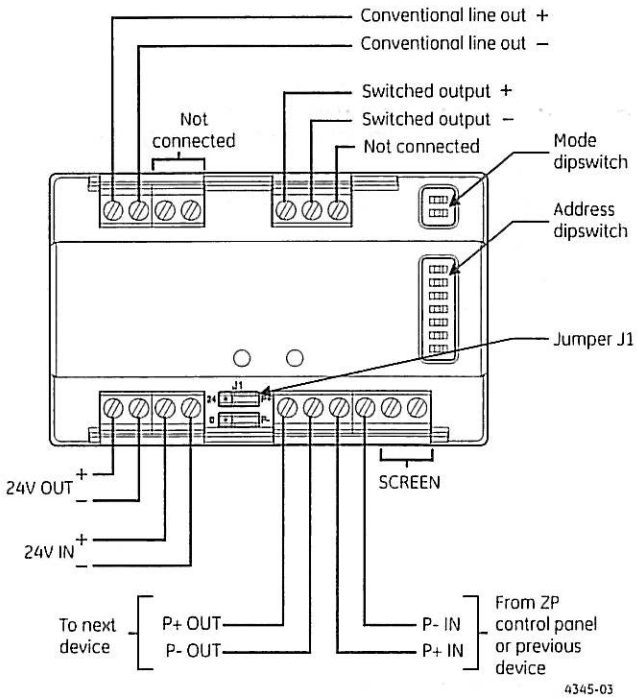
Connect the supplied transient suppression devices (transzorbs) as shown in Figure 2.

Figure 2: Transzorbs wiring



Operational settings

Figure 3: A70E-2 Conventional Zone Interface Wiring



Setting the address

See Figure 3. The A70E-2 Conventional Zone Interface contains a 7-way Dipswitch, which is used to set the device address in binary code. The switch may be set to represent all addresses from 1 to 127.

A switch only represents its coded value position. In the OFF position it represents a zero. See table below.

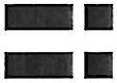
Switch no.	1	2	3	4	5	6	7
Coded value	1	2	4	8	16	32	64

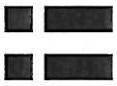
To arrive at the address number of a device, add the representative numbers of all switches which are in the ON position: for example switches 2, 3 and 6 set to ON will represent address 38 (2 + 4 + 32).

Power supply selection - J1

See Figure 3. Jumper J1 is used to select between an externally or loop powered conventional zone.

Important: Remove both jumpers before inserting either of them.

External 24 VDC Power 

Loop power 

Note: The A70E-2 device will go offline if the jumpers are left out or if external power is removed when J1 is in the External 24 VDC Power position.

Operating mode selection

See Figure 3. A 2-way Mode DIP switch is used to select the conventional zone operating mode.

SW 1 & 2 OFF	normal mode
SW 1 ON	Intrinsically safe mode
SW 1& 2 ON	Intrinsically safe mode
SW 2 ON	Head-out mode

Note: It is not possible to be in both IS and Head-out mode.

LED indicators

Red alarm LED Flashing = conventional zone fire and/or Switched output operated

Yellow fault LED Flashing = conventional zone fault

Once registered by the panel the alarm LED and switched output are maintained by the panel until reset.

Fault LED is non-latching.

Application notes

Figure 4: Normal mode operation

Mode SW1 & 2 OFF

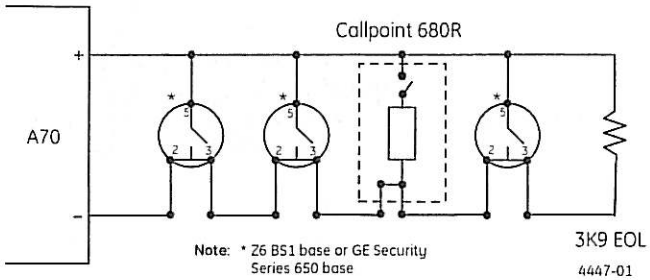


Figure 5: Head-out detection mode – for detectors having in-series diode (consult manufacturer)

Mode SW1 OFF, SW2 ON

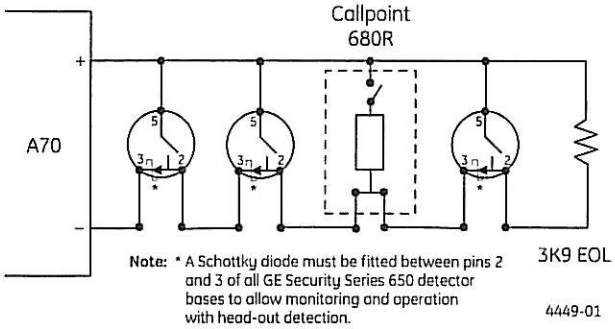


Figure 6: Head-out detection mode - for detectors not having in-series diode (consult manufacturer)

Mode SW1 OFF, SW2 ON

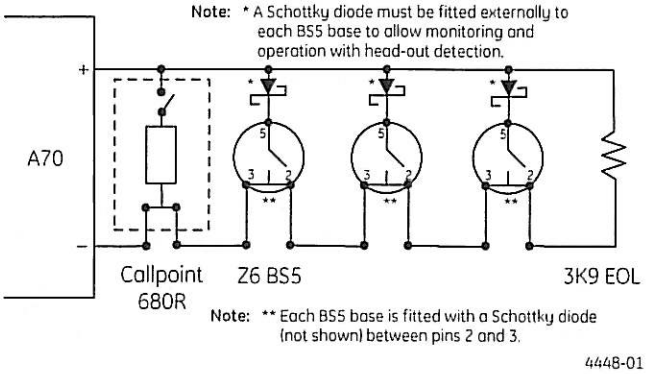


Figure 7: Intrinsically safe mode – using D67x series detectors

Mode SW1 ON, SW2 OFF