

SWITCH MONITORS



Intelligent Switch Monitor
Part Number SA4700-100IMC

INTELLIGENT SWITCH MONITOR, WITH ISOLATOR SA4700-100IMC

Our Intelligent Switch Monitor is designed to monitor the state of one or more single pole, volt-free contacts connected on a single pair of cables to report the status. It has a selectable status reporting delay making it suitable for monitoring flow switches.

The Switch Monitor provides four input states to the control equipment: Normal, Fault, Pre-alarm & Alarm. The Switch Monitor is fitted with a bi-directional short-circuit isolator and will be unaffected by a single short-circuit on either loop input or output.

ELECTRICAL & MECHANICAL CONSIDERATIONS

The Switch Monitor is loop powered and operates at 17–35V DC with protocol voltage pulses of 5–13V. It is designed to accept a maximum line resistance of 50Ω. The end-of-line resistor required is 20kΩ. The Switch Monitor can be surface mounted with the supplied back-box or flush mounted using a UK double gang, flush mounting back-box of minimum depth 30mm. Designed for indoor use only it has two LEDs:- (1) 'POLL/ISO' - flashes green when the device is polled; continuous yellow when the isolator is active; (2) 'IP' - continuous red when the input is active, continuous yellow when there is an input fault.

Technical Data

Minimum loop operating voltage in normal conditions: 17V DC

Maximum loop operating voltage: 35V DC

Maximum current consumption at 24V:

Power surge up current: 900uA

Quiescent: 500uA

LEDs off: 500uA

LEDs on: 2mA Max

Maximum continuous current: 1A

Maximum cable resistance: 50Ω

Operating temperature: -40°C to +70°C

Humidity (no condensation): 0–95%RH

Shock, vibration and impact: to EN54-17
to EN54-18

IP rating: 54

Radiated and conducted RF emissions to:
BS EN50081-1 & 2

Radiated and conducted RF immunity to:
BS EN50130-4

Dimensions of switch Monitor (surface mount):
60x 150 x 90mm

Weight: 239g

Warranty: 10 Years

Compliant with EN54-17 and EN45-18



Twin-Switch Monitor
Part Number SA6700-100IMC

TWIN-SWITCH MONITOR WITH ISOLATOR SA6700-100IMC

The Intelligent Twin Switch Monitor provides the function of two Switch Monitor units within one enclosure. The two units are electrically independent of each other. There is a DIL switch on each unit to set the address. Both Switch Monitor units in the enclosure are designed to monitor the state of one or more single pole, volt-free contacts connected on a single pair of cables to report the status. It has a selectable status reporting delay making it suitable for monitoring flow switches.

MINI-SWITCH MONITOR WITH ISOLATOR, 55000-760

Our new Context Plus Mini Switch Monitor is an interface within an entirely new housing which is ideal for use in areas where space is limited. Its compact design allows the unit to be fitted onto a standard 35mm DIN-Rail (using a twist-click motion) or to be mounted within an enclosure, for example a manual call point. It is designed to monitor the state of one or more single pole, volt-free contacts connected on a single pair of cables and to report the status to Context Plus compatible addressable control equipment. The unit includes three coloured status LEDs.



Mini-Switch Monitor with Isolator
Part Number 55000-760

INTELLIGENT INPUT/OUTPUT UNIT



Input/output unit with Isolator
Part Number SA4700-102IMC

INPUT/OUTPUT UNIT WITH ISOLATOR, SA4700-102IMC

The Context Plus XP95 Intelligent Input/Output Unit provides supervision of one or more normally open contacts connected to a single pair of cables and a set of changeover relay output contacts.

Compliant with EN54-17 & 18, it is set to return an analogue value of 4 in the event of an open or short-circuit fault and 16 during normal operation. The status of the inputs is reported by means of two input bits. The change-over contacts are operated by an output bit.

It is fitted with a bi-directional short-circuit isolator and will be unaffected by loop short-circuits on either loop input or output.



Twin Input/Output Unit
Part Number SA4700-104IMC

ELECTRICAL & MECHANICAL CONSIDERATIONS

The unit operates at 17-35V DC with protocol voltage pulses of 5-13V. No electrical supply greater than 50V AC rms or 75V DC should be connected to any terminal.

Designed for indoor use only, it can be surface mounted with the supplied back-box or flush mounted using a UK double gang, flush mounting back-box of minimum depth 30mm. It has three LEDs:- (1) 'RLY' - lit continuous red when the relay is active; continuous yellow when in fault; (2) 'POLL/ISO' - flashes green when the device is polled; continuous yellow when the isolator is active; (3) 'IP' - continuous red when the input is active, continuous yellow when there is an input fault.

In Failsafe mode the I/O Unit will activate the on-board relay output without being commanded by the control panel on loss of loop or protocol loss. Failsafe mode is selected via a DIL switch and indicated with an analogue value of 17.



Mains Switching Input/Output Unit
Part Number SA4700-103IMC

Technical Data

Minimum loop operating voltage in normal conditions: 17V DC

Maximum loop operating voltage: 35V DC

Max. current consumption at 24V DC no protocol

Power-up surge current: 900uA

Quiescent: 500uA

Max current LEDs On: 3.5mA

Max current LEDs disabled: 500uA

Switch input monitoring voltage (open-circuit condition): 9-11V DC

Maximum cable resistance: 50Ω

Opto-coupled input

Maximum voltage: 35V DC

Impedance: 10kΩ

Relay output contact rating at 30V AC or DC (inductive or resistive): 1A

Relay output wetting current at 10mV DC: 10μA

On resistance 0.2Ω

Maximum continuous current: 1A

Maximum switching current: 3A

Operating temperature: -40°C to +70°C

Humidity (no condensation) : 0-95% RH

IP rating: 54

Dimensions of Input/Output Unit (surface mount):

60 x 150 x 90mm; Weight: 244g

Warranty: 10 Years

ALSO AVAILABLE:

TWIN INPUT/OUTPUT UNIT WITH ISOLATOR, SA4700-104IMC

Provides the function of two Input Output Units within one enclosure. Both I/Os in the enclosure are electrically independent of each other and provide supervision of one or more normally open volt free contacts connected to a single pair of cables and a set of changeover relay output contacts.

MAINS SWITCHING INPUT/OUTPUT UNIT WITH ISOLATOR, SA4700-103IMC

Provides a voltage-free, single pole change-over relay output and a monitored switch input. Capable of switching 250VAC at up to 5A.

THREE CHANNEL INPUT/OUTPUT UNIT, 55000-588

Provides three voltage-free, single pole, change-over relay outputs and three monitored switch inputs. Supervises one or more normally-open switches on each of the three inputs. Capable of switching up to 30V @ 1A on each of the outputs.

OUTPUT UNIT, 55000-849

Provides a voltage-free single pole, change-over relay output. It is a simplified version of the Input/Output unit without circuitry for monitoring inputs. Capable of switching up to 30V @ 1A.

ZONE MONITOR



Zone Monitor
Part Number 55000-845IMC

NOTES ON USE

1. Zone voltage is regulated to $19 \pm 1V$ for any loop voltage greater than 22V. If the loop voltage falls below 22V, the zone voltage is approximately 1.5V below the loop voltage. It is important to ensure that under worst-case conditions, the zone voltage is above the minimum operating voltage for the conventional detectors.
2. Alarm conditions are latched internally by the Zone Monitor. It is therefore necessary to reset the alarm even if non-latching conventional detectors are used.
3. Manual call points can be located at any point in the zone wiring if active end-of-line monitoring with diode detector bases is used. If a 5.1k Ω resistor is used for monitoring, manual call points must be connected between the Zone Monitor and the first detector.

ZONE MONITOR WITH ISOLATOR, 55000-845IMC

The Context Plus XP95 Zone Monitor powers and controls a zone of up to 20 Series 65 conventional fire detectors from a loop of Context Plus addressable detectors and interfaces.

FEATURES

The Zone Monitor is factory preset to return an analogue value of 16 when all detectors on the zone are in quiescent state and 64 when a detector changes to the alarm state. The Zone Monitor latches in the alarm state. A 5.1k Ω end-of-line resistor is fitted to detector cables for open- and short-circuit faults. Alternatively, an active end-of-line monitor may be used in conjunction with diode bases and a capacitor of up to 50 μF fitted at the Zone Monitor wiring terminals. In either case an analogue value of 4 is transmitted during open- or short-circuit faults. The Zone Monitor is fitted with a bi-directional short circuit isolator and will be unaffected by loop short circuits on either the loop input or loop output.

ELECTRICAL & MECHANICAL CONSIDERATIONS

The Zone Monitor is loop powered and operates at 17–28V DC with protocol pulses of 5–9V. It is supplied with a backbox for surface mounting, and is also available without the backbox for flush mounting. Both versions are for indoor use only. Two LEDs, one red and one yellow, are visible through the front of the enclosure. The red LED indicates that a fire condition has been detected on the zone wiring. The yellow LED is lit when the built-in isolator has sensed a short circuit loop fault.

Technical Data

Context Plus line voltage: 17V-28V DC

Zone voltage (loop voltage $\geq 22V$): $19V \pm 1V$

Zone voltage (loop voltage $< 22V$): Loop voltage -1.5V

Maximum current consumption at 24V (5.1K Ω EOL):

Switch-on surge, max 150ms: 3.5mA

Quiescent: 4mA + detector load

Alarm: 11mA (19mA when increased current enabled)

Short circuit: 11mA

End of line resistor value: 5.1K $\Omega \pm 5\%$ 1/3W

Stabilisation time on power up: 4 seconds

Maximum capacitor on zone terminals: 5 μF

Operating temperature: $-20^{\circ}C$ to $+70^{\circ}C$

Humidity (no condensation): 0-95%RH

Shock, vibration and impact: to GEI 1-052

IP rating: 54

Radiated and conducted RF emissions to: BS EN50081-1 & 2

Radiated and conducted RF immunity to: BS EN50130-4

Dimensions of Zone Monitor (surface mount): 150 x 90 x 48mm

Weight: 230g

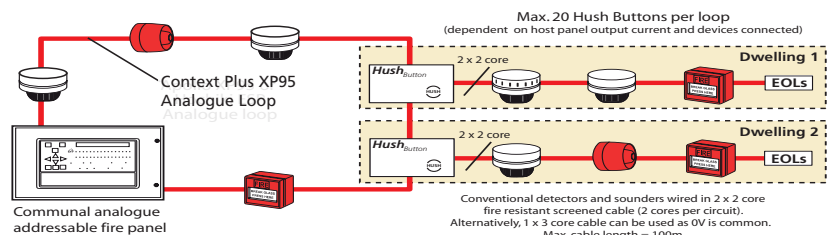
HUSH BUTTON



Hush Button
Part Number XFP508X

HUSH BUTTON, XFP508X

Context Plus Hush Buttons can be looked on as miniature fully monitored single zone fire panels that sit on the ContextPlus loop. They are typically used in flats & apartments to provide fully monitored fire detection, alarm and silencing facilities inside each individual dwelling.



Technical Data

Max. no of hush buttons per analogue loop: 20

Onboard loop isolator: Yes

Max. no. of conv. detectors per hush button: 10

Max. no. of manual call points per hush button: 10

Max. sounder circuit load per hush button: 30mA

Operating voltage: 17-40Vdc

Quiescent current: 5mA

Max. cable length of detector & sounder circuit: 100m

Line monitored for open and short circuit faults: Yes

User indicators: Supply present; local alarm and hushed LEDs; Buzzer sounds when hushed period due to expire

Engineer Indicators: Open/short circuit fault (also shown at host panel)

Dimensions (WxHxD) in mm: W144 x H84 x D37.

- Powered by the analogue loop
- Provides each dwelling with a two-minute silence facility and a 15-minute isolate facility.
- Reduces the likelihood of unnecessary building evacuations, system vandalism and the possibility of a true alarm signal being ignored
- Fully monitored for open and short circuit faults
- Logging facilities at the main communal panel give full traceability of any problems

SOUNDER CONTROLLER



Sounder controller
Part Number 55000-852IMC

SOUNDER CONTROLLER WITH ISOLATOR, 55000-852IMC

The Context Plus XP95 Sounder Control Unit is used to control the operation of a zone of externally powered conventional sounders and VADs to report their status to a Context Plus fire alarm control panel.

FEATURES

Allows sounders to be operated continuously or pulsed, 1 second on, 1 second off. Sounders may be operated individually or in groups and may be synchronised when in pulsed operation. An opto-coupled input is provided to monitor the state of the external PSU. In normal operation the Sounder Control Unit returns a pre-set analogue value of 16, but in the event of an open or short-circuit fault or of a fault in the external power supply, the unit returns a pre-set analogue value of 4. The Controller is fitted with a bi-directional short-circuit isolator and will be unaffected by loop short-circuits on either loop input or output. In addition to the monitoring of open and short circuit faults on the sounder wiring, the Controller has a facility to monitor the presence and polarity of the external PSU.

The Controller is line powered and operates at 17–28V DC. It requires a local power supply of 9–32V DC to power the external load, which may be up to 1.25A. A polarising diode is required with each alarm device, as sounders are operated by voltage reversal, provided by a double-pole change-over relay. The Controller is supplied with a backbox for surface mounting. Three LEDs, one red, two yellow, are visible through the front cover of the enclosure. A red LED pulses or is lit continuously to indicate the sounders are pulsed or switched on continuously. A yellow LED is lit whenever a fault has been detected. The other LED is illuminated whenever the built-in isolator has sensed a short-circuit loop fault.

Technical Data

Minimum loop operating voltage in normal conditions : 17V DC

Maximum loop operating voltage: 28V DC

Sounder Control Data

Current consumption, loop, at 24V:

Switch-on surge, max 100ms: 2.6mA

Quiescent, 10k Ω EOL fitted : 1.95mA

Sounders operated: 1.7mA

Fault (yellow LED on): 3.6mA

Sounder line short circuit: 2.8mA

Current consumption, external supply:

Relay off: 1mA at 9V; 3mA at 32V

Sounders and red LED on: 44mA at 9V (+ sounder load); 47mA at 32V (+ sounder load)

Sounder output monitoring voltage (open-circuit condition): 9–11V DC

Maximum sounder circuit voltage: 32V DC

Maximum sounder circuit current (inductive or resistive): 1A at 30V DC

On resistance: 0.2 Ω

Maximum continuous current: 1A

Maximum switching current: 3A

Operating temperature: –20°C to +70°C

Humidity (no condensation) : 0–95%RH

Shock, vibration and impact: to GEI 1–052

IP rating: 54

Radiated and conducted RF emissions to: BS EN 50081–1 & 2

Radiated and conducted RF immunity to: BS EN 50130–4

Dimensions of Sounder Control Unit (surface mount): 150 x 90 x 48mm

Weight: 240g

Warranty: 10 Years

VOICE-TEL



Context Plus VOICE-TEL

CONTEXT PLUS VOICE-TEL - COMING SOON

A combined voice evacuation and fire telephone system certified to UL1711 and UL864. Features include:-

- A simple to use touch screen interface.
- Up to four amplifier outputs at each cabinet.
- Up to four supervised alarm device outputs at each cabinet (NAC circuits).
- Up to eight Fire Telephone lines at each cabinet
- Integrated 10A EN54-4 power supply and charger.
- Two recorded messages simultaneously from a library of at least 64 messages.
- Hot swap amplifiers.
- Fire alarm sounder circuit inputs and a volt free reset input.
- Four voltage control inputs for connecting ambient noise sensors or volume controls.
- Connect background music and play in different zones at differing level.
- Ability to connect remote touch-screen microphones for PA or VA paging.