

# Mini Switch Monitor



## Product Overview

Product Type	Mini Switch Monitor
Part No.	55000-760
Digital Communication Protocol	XP95®, Discovery® & CoreProtocol® compatible

## Product Information

The Mini Switch Monitor is a miniature interface. The monitor is designed to fit into equipment with limited space or to be mounted within an enclosure such as a manual call point. The monitor can also be fitted onto a standard 35mm DIN-rail using a twist-click motion.

The Mini Switch Monitor is designed to monitor the state of one or more single-pole, volt-free contacts. It also reports the contact status to Apollo compatible fire control panels.

The Mini Switch Monitor features a 20I short-circuit isolator as standard and can be used as an interrupt or non-interrupt device. The interrupt feature (selected via the DIL Switch) means the monitor can be used where a priority response is required, in particular for monitoring an individual or a zone of conventional manual call points.

Note: When the eighth section of the DIL switch is changed, the Mini Switch Monitor will change the type code it sends to the panel. The panel will have to be programmed to accept this change.

The unit provides “normal”, “fault”, “pre-alarm” and “alarm” states to the control equipment. The states are derived from the switched resistive values shown in Table 2. The device accepts a maximum line resistance of 50Ω and requires a 20kΩ End-of-Line resistor.

## Technical Data

All data is supplied subject to change without notice. Specifications are typical at 24V, 25°C and 50% RH unless otherwise stated.

<b>Supply voltage (Vmin–Vmax)</b>	17-28V DC
<b>Digital communications protocol</b>	XP95, Discovery & CoreProtocol compatible 5-9V Peak to Peak
<b>Current consumption (max) at 24V DC</b>	
<b>Power up surge</b>	0.8mA
<b>Quiescent (20kΩ End-of-Line fitted)</b>	0.2mA
<b>LED on</b>	3.4mA + quiescent
<b>Remote LED on</b>	2.8mA + quiescent
<b>Yellow fault LED on</b>	2.8mA + quiescent
<b>Maximum cable resistance</b>	50Ω
<b>Operating temperature</b>	-20°C to +60°C
<b>Humidity</b>	0% to 95%RH (no condensation or icing)
<b>Vibration, impact and shock</b>	EN 54-17 & EN 54-18
<b>Approvals &amp; standards</b>	EN 54-17, EN 54-18, CPD, LPCB, VdS, CCMG & VNIPO
<b>Dimensions</b>	20mm height x 39mm width x 39mm depth
<b>Weight</b>	30g

## Electrical Consideration

The Mini Switch Monitor is loop powered and operates at 17–28V DC with protocol pulses of 5–9V.

Table 1 Digital communications protocol compatibility

Protocol	Device behaviour
XP95/Discovery	XP95
CoreProtocol (fire control panel dependant)	XP95

## Mechanical Construction

The Mini Switch Monitor (see Figure 1) is moulded from the same white self-extinguishing polycarbonate as Apollo detectors.

The unit has three status LEDs, one red, one green and one yellow.

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The red LED is switched by the control panel and illuminates in the event of an alarm condition being detected.

The green LED means that the device is polled.

The yellow LED can either mean a short-circuit on loop-wiring (constant) or a fault on the monitored circuit (pulsing).

The unit has provision for a remote LED which is switched by the control panel. The length of cable used for the remote LED must not exceed 3m (see Table 2 and Figure 1).

**Table 2 Key to resistors**

R1 – Alarm	1K $\Omega$
R2 – Pre-Alarm	10K $\Omega$
R3 – End-of-Line	20K $\Omega$
D1 – Optional Remote LED	Max 3m cable length

**Table 3 Analogue Values Related to Circuit Status and Zone Load (Input Resistance)**

Status	Analogue Value	Mini Switch Monitor (55000-760)
Short Circuit Fault	4	< 0.1k $\Omega$
Indeterminate	4 or 64	0.1k $\Omega$ – 0.2k $\Omega$
Alarm	64	0.2k $\Omega$ – 2k $\Omega$ (1k $\Omega$ )*
Indeterminate	45–51 or 64	2k $\Omega$ – 3k $\Omega$
Pre-alarm	45–51	3k $\Omega$ – 11k $\Omega$ (10k $\Omega$ )*
Indeterminate	16 or 45–51	11k $\Omega$ – 15k $\Omega$
Normal	16	15k $\Omega$ – 25k $\Omega$ (20k $\Omega$ )*
Indeterminate	4 or 16	25k $\Omega$ – 30k $\Omega$
Open Circuit Fault	4	> 30k $\Omega$

\* Note: The values shown in brackets are recommended values, recommended value resistors supplied with the unit

## EMC Directive 2004/108/EC

The Mini Switch Monitor complies with the essential requirements of the EMC Directive 2004/108/EC, provided that it is used as described in this data sheet.

A copy of the Declaration of Conformity is available from Apollo on request.

## Construction Products Directive 89/106/EEC

The Mini Switch Monitor complies with the essential requirements of the Construction Products Directive 89/106/EEC.

A copy of the Declaration of Performance is available from Apollo on request.

**Figure 1 Mini Switch Monitor**

