

## Red key switch

Purpose - Gas valve isolation

A key operated red gas switch should be located at the fire alarm panel position within the main Fire Brigade entrance to the building. This switch should be red in colour and should have located adjacent within a glass fronted box a suitable key for the operation of the gas switch by the fire brigade in the event of a fire situation. This “gas switch” should be provided by Honeywell Gent as their break glass range, reference: S4-34807

Operation:

The gas switch should operate the main gas valve to the building and should isolate the gas system to the building. This operation should function through the fire alarm system wiring with the provision of an interface unit, located adjacent to the gas valve. The fire alarm system activation will not set off the gas valve during a fire condition, either as a consequence of an actual event or through testing of the system. The gas valve should only be functioned by the fire brigade entirely at their discretion, except in the circumstances, where a boiler room emergency gas knock off system is provided, in compliance with BS 6644. In this event the gas valve will be functioned manually, locally, to alleviate a potential hazard.

The local gas valve control circuit should be derived from a dedicated electrical supply.

In the event of the gas valve closing, the BMS will shut down all plant through the functionality of the software. The gas valve will latch closed and will need to be manually re-set via the key switch and after the event on the BMS panel.

## Blue key switch

Purpose – Plant Isolation during weekly testing of the fire alarm.

A key operated blue switch should be located at the fire alarm panel position within the main Fire Brigade entrance to the building. This switch should be blue in colour and should be located adjacent to the red switch described above for operation by the maintenance team when carrying out weekly fire sounder testing. This “plant switch” should be provided by Honeywell Gent as their break glass range, reference: S4-34418

Operation:

When carrying out weekly fire alarm sounder testing it is sometimes desirable not to cause certain critical plant to shut down during the testing period.

A blue key switch facilitates the overriding of the action of this shutdown and stops interfaces from activating.

Although not limited to only critical plant, ventilation and boiler plant may not necessarily be required to shut down during this testing.

This list of critical plant should be agreed with the M&E consultants, designers and engineers at the commencement of the project. This will form part of the "Cause and Effect" schedule and will be required to be demonstrated at handover.

Corridor fire door hold back magnets, main entrance door access control auto unlock and door operators, lifts should not be included in this arrangement as it is desirable to be able to see these activate during the fire alarm testing.

The key switch should be suitably and clearly labelled to its operation.

When interfacing to third party fire alarms a suitable key switch, clearly labelled, should be provided at each panel that will allow either panel to be isolated during testing as necessary.

### Fireman's smoke extract switch

Purpose – Smoke extraction, an additional facility to enable smoke clearance may be provided to enable the fire brigade to open smoke dampers and run the extract system in the building to clear smoke after a fire.

A red fireman's switch should be located at the fire alarm panel position within the main Fire Brigade entrance to the building. This switch should be red in colour, clearly labelled "Fireman's smoke extract" along with a set of instructions.

#### Operation:

This facility should not be dependent on the fire alarm system or the BMS and should be directly wired to the extract plant.

When operated the switch will allow the extract ventilation system to run to clear the building of smoke.

#### Note1

The operation of any key switch connected to the fire alarm system for the purposes of either operating or inhibiting the operation of associated plant or system(s) shall cause the fire alarm control panel to (1) continuously sound the internal warning buzzer, (2) illuminate a warning light on the control panel display to indicate an abnormal condition, (3) display an appropriate text message on the control panel LCD screen.