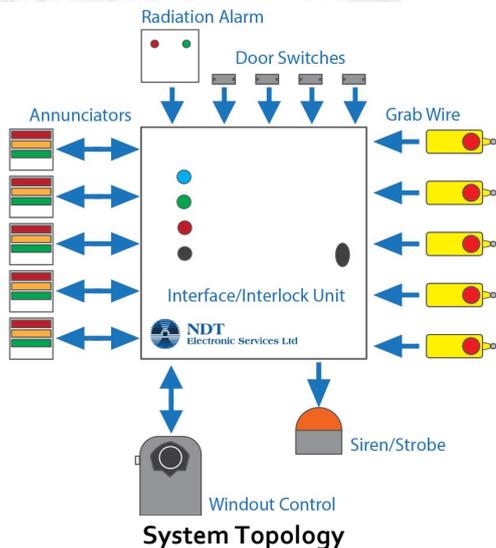




# NDT Electronic Services Ltd

## ISIS X-Ray/Gamma Interlock System



System Topology

The ISIS Interlock system is a radiographic compound monitoring system. Its role is to inhibit/cease radiography in the event that: The compound access doors are opened, an emergency stop is activated or a warning sign (Annunciator) has malfunctioned and display the status of the X-ray/Gamma machine connected to the system.

The ISIS Interlock System features dual safety circuits and complies with the following standards: EN ISO 13849 with an achieved performance level PLe, BS EN 62061, SIL3, Ionising Radiation Regulation 2017.



The System is comprised of the **Control Unit:**

The central point and control of the system, all peripheral devices connect to the Interlock Unit. Inside the Control Unit resides a TUV certified Mechan Controls ISIS-4 Safety Relay that continuously monitors the operational status of all peripherals connected to the system.



### Annunciator:

A Three stage LED illuminated warning sign that displays the status of the X-Ray/Gamma system connected to the Interlock Unit. Each Annunciator features LED failure detection circuitry and an automatic test function, if over 50% of the LEDs fail the Interlock System will inhibit X-Ray/Gamma exposure.

Up to 5 signs can be fitted to the system.

### Emergency Stop:

A waist height "grab wire" emergency stop that runs along the inner perimeter of the compound that allows personnel to manually stop the X-Ray/Gamma system from within the compound.

Up to 5 Lifeline Emergency Stops can be fitted to the system.



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## Door Switch

A magnetically coded, non-contact, maintenance-free switch to be fitted to the compound doors. The door switches fail to safe in the event that the connecting cables are short or open circuit.

Up to 4 ISIS Door Switches can be fitted to the system.



## Siren/Strobe Emergency Alarm

The siren strobe unit operates in the event of the emergency stop being activated or the compound door is opened whilst radiation is present within the compound.

One siren strobe is fitted to the system.

## Radiation Alarm

The Radiation Alarm detects radiation within the compound and signals the Interlock Unit to illuminate the "Radiation Exposure" legend on the Annunciators. The detection threshold is set to 20  $\mu\text{Sv/h}$  as standard but can be user specified.

One Radiation Alarm is fitted to the system.



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