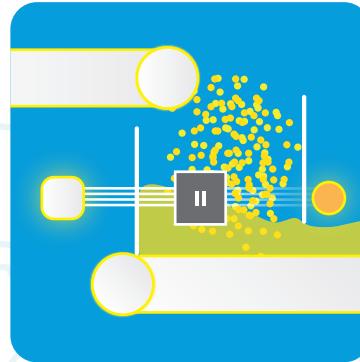


Gamma Type Point Level Switch

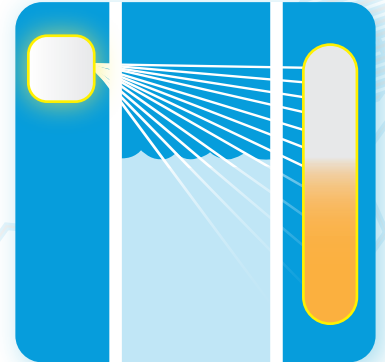
The NPL-3XX series Point Level system comprises:

- Gamma emitting isotope (source) in holder and;
- one or more point type Gamma detectors.

The processing electronics may also be integrated into the detector housing or mounted separately at a remote location in a separate enclosure.



Single source, dual detector application



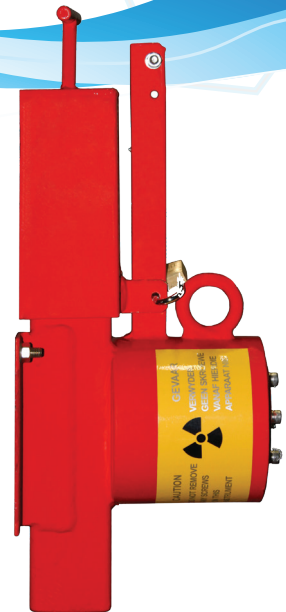
Blocked chute application

The Source Holder Assembly

The source holder is fabricated from mild steel (optionally others) to exceed the requirements of the Department of Health / Directorate Radiation Control. The isotope standardly used is Caesium¹³⁷.

The source holder emits a beam of gamma radiation, appropriately collimated, to suit the application requirements. The activity of the isotope is selected to match the application.

The source holder may be equipped with our optional electronic Tag (I TAG®) which removes the problem of illegible or lost Source holder identification tags. It offers greatly increased safety against gamma radiation exposure, since the I-TAG® may be read in a non-contact method (using the I-TAG® Reader), at a safe distance (as opposed to having to bring ones eyes right up the source holder to read the information punched onto the stainless steel source tag).



The Detector Assembly

The detector housing bolts to the vessel in which the level is to be measured. The Gamma detector is located within this housing.



Depending on the requirement, multiple Level detectors may be used with a single source - collimated appropriately.

Detector Types

We offer two types of gamma detectors:-

GM Tube Detector

The Geiger-Müller (GM) tube detector is a rugged gas filled tube, with inherent high output. The detector may be equipped with either 1 or more GM tubes.

Features of this detector type are :-

- Low cost.
- Simple processing electronics.

Scintillating Detector

This detector type has a far greater sensitivity than that available from the GM Tube equipped detector, resulting in greatly reduced isotope activity.

Features of this detector type are:-

- Greater sensitivity resulting in lower isotope activity.
- Lower radiation levels – greater margins of safety.

The transmitter electronics may be integrated into detector housing (Model NPL-300 or NPL-321) or the transmitter electronics may be mounted remote from the detector (Model NPL-310 or NPL-320)



Integral Electronics version

Detector Type	Either Halogen filled Geiger-Müller tube(s) or; high sensitivity Scintillator type.
Outputs	Volt free contact rated at 2A for 110/220 VAC 50/60 Hz, or 24 VDC.
Power Supply	Transient free instrument quality power; 110 VAC, 50/60 Hz 220 VAC, 50/60 Hz 24 VDC (Scintillation model only).
Detector enclosure	Epoxy painted mild steel to IP 65 protection. Others optional.
Operating Temperature	-10°C to +45°C
Weight	Approx. 100kg – 300 kg - Dependent on the measurement range and isotope activity etc.

Remote Electronics version

Detector Type	Either Halogen filled Geiger-Müller tube(s) or; high sensitivity Scintillator type.
Outputs	Volt free contact rated at 2A for 110/220 VAC 50/60 Hz, or 24 VDC.
Transmitter	EDS-1520 (GM tube model) or; UNIPRO® (scintillation model)
Field Buss support	All the major field busses are supported (UNIPRO® transmitter).
Power Supply	Transient free instrument quality power; 110 VAC, 50/60 Hz 220 VAC, 50/60 Hz
Detector enclosure	Epoxy painted mild steel to IP 65 protection (scintillation model) or; Painted die cast Aluminium (GM tube model). Others optional.
Operating Temperature	-10°C to +45°C
Weight	Approx. 100kg – 300 kg - Dependent on the measurement range and isotope activity etc.