

# HIGH-LEVEL ALARM IN ASH HOPPERS

Reliable high-level detection  
for electrostatic precipitators



 **BERTHOLD**



# HIGH-LEVEL ALARM DURING EXHAUST AIR PURIFICATION

Filters clean process exhaust air, for example in the cement industry and in coal-fired power plants. Suspended particles are filtered out of the process exhaust air that would otherwise be released as air pollution into the environment. Electrostatic precipitators are commonly used for this purpose. In the future, it can be assumed that the dust emission limits will be further tightened worldwide, so that such filters will be used more frequently or even be replaced by more effective filters, e.g., by combinations of tube filters and electrostatic precipitators (hybrid filters).

Suspended particles that are filtered out of the process exhaust air are collected in hoppers. If the level in these hoppers rises too high that the fine dust touches the electrostatic precipitators, these precipitators will short-circuit causing a process upset condition. To prevent this, the high-level must be reliably measured. Radiometric level switches offer best in class reliability for this application. Geiger Müller (GM) technology radiation level switches were historically used for these applications. However, in plants that have been in operation for a long time, the activity of the radioactive source has decreased significantly due to natural source decay. The sensitivity of the GM detectors is then no longer sufficient to reliably continue limit switch measurements. Replacements or retrofit solutions become necessary.

## Level switch measurement system LB 471

If it is legally and technically possible to use an existing radiation source over the recommended operating time, the existing GM level switches can be replaced by the more sensitive LB 471 scintillator measurement system from Berthold. Commonly, an additional 10 to 15 years of operation are possible with the existing measurement source left in place. Berthold's LB 471 scintillator measurement system provides reliable level switch detection without the effort and expense of disposal and replacement of the existing radiation source. The LB 471 level switch measurement system is either available in a wall-mounted housing or in a 19" rack (for up to 19 limit switches).

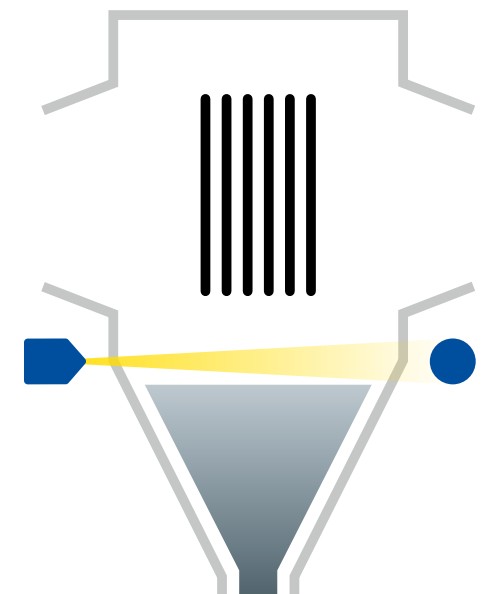


## Customer Benefits

- Best in class sensitivity
- Proven industrial measurement technology
- Real-time measurement during operation
- Wear-free and maintenance-free
- Simple installation on the outside of the vessel

## Technical Features

- "Retrofit" installation on existing measurements, where the source has become too weak
- High availability and thus high operational reliability
- One-time calibration, no recalibration required



*Limit switch arrangement on ash hopper*



## THE EXPERTS IN MEASUREMENT TECHNOLOGY

Berthold Technologies stands for excellent know-how, high quality and reliability. The customer is always the focus of our solution. We know our business!

Using our varied product portfolio, our enormous specialized knowledge and extensive experience, we develop suitable solutions together with our customers for new, individual measurement tasks in a wide variety of industries and applications.

### **We are here for you – worldwide!**

The engineers and service technicians from Berthold Technologies are wherever you need them. Our global network assures you fast and above all competent and skilled assistance in case when needed. No matter where you are, our highly qualified experts and specialists are ready and waiting and will be with you in no time at all with the ideal solution for even the most difficult measurement task.

**Berthold Technologies GmbH & Co. KG**

Calmbacher Straße 22 · 75323 Bad Wildbad · Germany  
+49 7081 1770 · [industry@berthold.com](mailto:industry@berthold.com) · [www.berthold.com](http://www.berthold.com)

