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## Application Reference

# Reliable microwave switches for blocked chute protection



### Application problem:

The customer had problems getting early enough indication of blocked chute on a critical application on a feeder to vibrating screen with mixed particle sizes. Speed of response was critical and probes proved unsuitable, because “on” delays had to be used to overcome intermittent impact by the product on the probes. The customer wanted a fully fail-safe blocked chute switch that could be pre-tested on each start-up of the conveyer system. Each blocked chute problem was costing the clients thousands of dollars in down time.

### Solution:

We used our non-intrusive Gladiator range remote microwave switches. Because there was high impact and vibration in the transfer chutes, the Gladiator has a toughened wear resistant “UHMW” Polyethylene face and mounted the microwave sender and microwave receiver remotely. The microwave amplifier was mounted in an area where maintenance personnel could gain access. With the Gladiator microwave separation between amplifier and sensors can be up to 500m. The microwave worked in all conditions, with dry material, wet material, fines and bulk material. Build-up inside the chute only marginally reduced the signal strength of the microwave, which has a maximum range of 200m. The client also used the remote pre-test feature to check that the microwave was working, each time the conveyer system started up.

### Ordering information:

Part no Amplifier: GSASUS  
Part no Sender: GMSB101XX  
Part no Receiver: GMRR101XX

### Integral Version also available

Integral Receiver Part No: GMSRU101SX  
Integral Sender Part No: GMSU101XX

*Hawk is a world leader in level, position and flow measurement, providing cutting edge equipment to the global industrial market. We have 30 years of experience and a record of success in a wide range of areas including mining/mineral processing, water supply/waste water, bulk material handling and chemical. Our on-going commitment is to provide industry leading technology and cost effective solutions.*



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