WDA Sensor

4B Components Limited
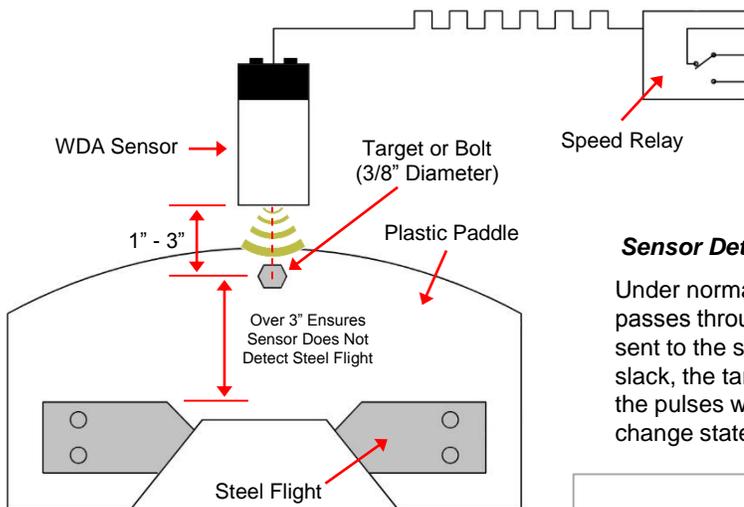
BETTER BY DESIGN

SLACK / BROKEN CHAIN DETECTOR

The WDA is a non-contacting extended range magnetic proximity sensor, not affected by dust or material build up, used to detect moving ferrous material from 1 to 3 inches away. One of the more specialized uses for the WDA sensor is for slack/broken chain detection when installed using one of the three options shown below.

Using the mounting block supplied, cut a 4 inch diameter hole in the sheet metal and position the mounting block so that the sensor is centered on this hole. Alternatively, the sensor and mount can be installed on a 300 series stainless steel plate without drilling a hole for the sensor. In this case, the sensor will not be affected because the sensing field can pass through the stainless steel plate.

WARNING - Make sure that there is no ferrous steel (such as the machine's frame) within the sensing field.

WDA Sensor
Target or Bolt (3/8" Diameter)
Speed Relay
Contacts change state when sensor stops detecting target or bolt.

1" - 3"
Plastic Paddle
Over 3" Ensures Sensor Does Not Detect Steel Flight
Steel Flight

Speed Relay*
(SR2V5-1)
* Optional Enclosure ENC1210
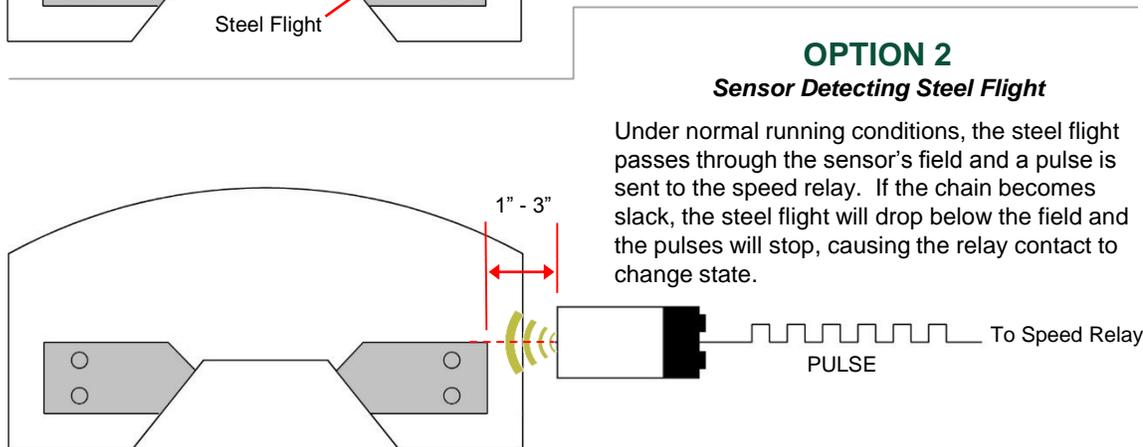
OPTION 1
Sensor Detecting Bolt Installed on the Paddle

Under normal running conditions, the target bolt passes through the sensor's field and a pulse is sent to the speed relay. If the chain becomes slack, the target bolt will drop below the field and the pulses will stop, causing the relay contact to change state.

OPTION 2
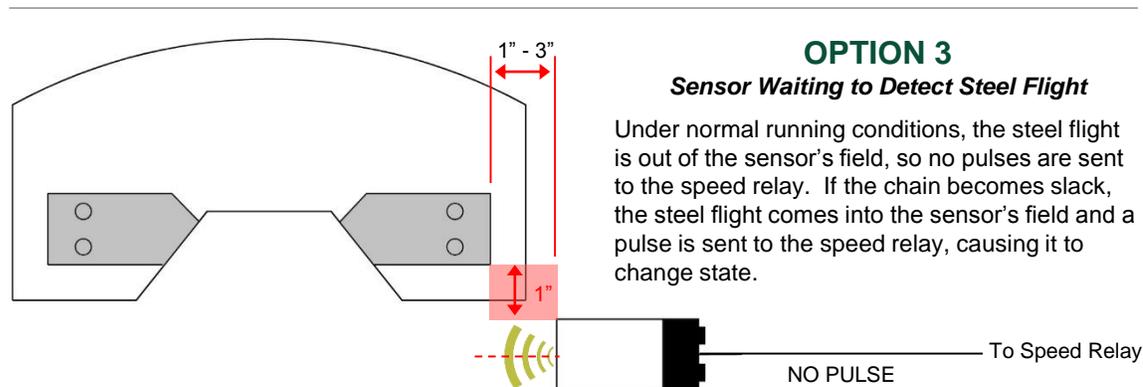#### *Sensor Detecting Steel Flight*

Under normal running conditions, the steel flight passes through the sensor's field and a pulse is sent to the speed relay. If the chain becomes slack, the steel flight will drop below the field and the pulses will stop, causing the relay contact to change state.

1" - 3"
To Speed Relay
PULSE

WDA Sensor
(WDA3V34C)

OPTION 3
Sensor Waiting to Detect Steel Flight

Under normal running conditions, the steel flight is out of the sensor's field, so no pulses are sent to the speed relay. If the chain becomes slack, the steel flight comes into the sensor's field and a pulse is sent to the speed relay, causing it to change state.

1" - 3"
1"
To Speed Relay
NO PULSE

WDA High Temperature Sensor
(HTAS1V34)

Please refer to instruction manual for correct installation. Information subject to change or correction. Oct 2015

Detailed specification, wiring diagrams and installation/operating instructions available upon request.