

Direct detection of alteration in equipment

Easy setup for reliable detection of slight (5–6 mm) stroke changes in automatic tool changers



Product

Discrete sensor
Adjustable Proximity Sensor

Model

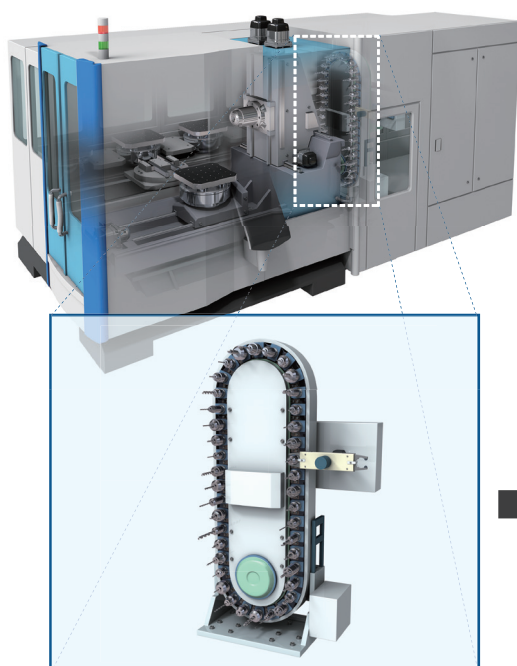
H3C

Process/
Equipment

Machining Center
automatic tool changer

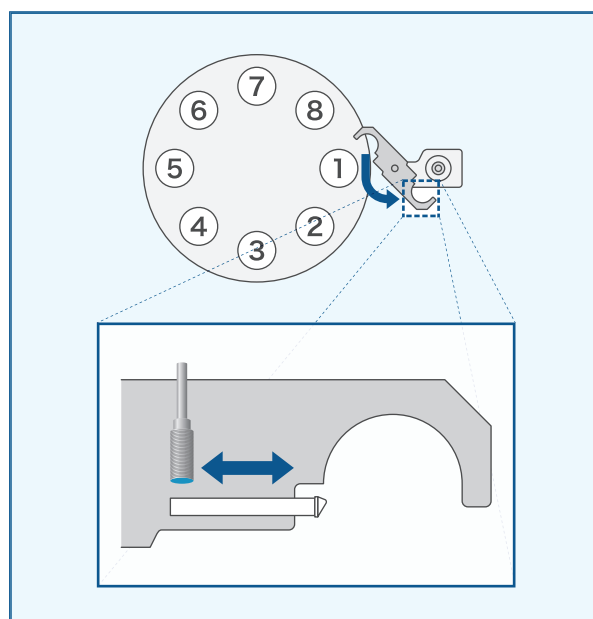
Current Situation

- Proximity switches are used to detect the pin positions on both the main spindle and tool magazine to detect if the tool is properly locked.
- After the tool is locked on both the main spindle and tool magazine (each checked by a proximity switch), a 180° rotation changes the tool.



Current Problems

- The pin stroke differentiating locked and unlocked positions is short (5–6 mm) and the space is narrow, so it is difficult to install proximity switches to detect locked/unlocked position in two locations.
- It is impossible to identify the two positions with the ON/OFF output of one proximity switch. Situations such as the pin getting stuck mid-stroke cannot be detected either.



Solution 1

Saving space

A single sensor can detect locked and unlocked positions as well as a pin stuck in an intermediate position based on a change in the detection level on half of the sensing surface.

Solution 2

Easy adjustment and reduced man-hours

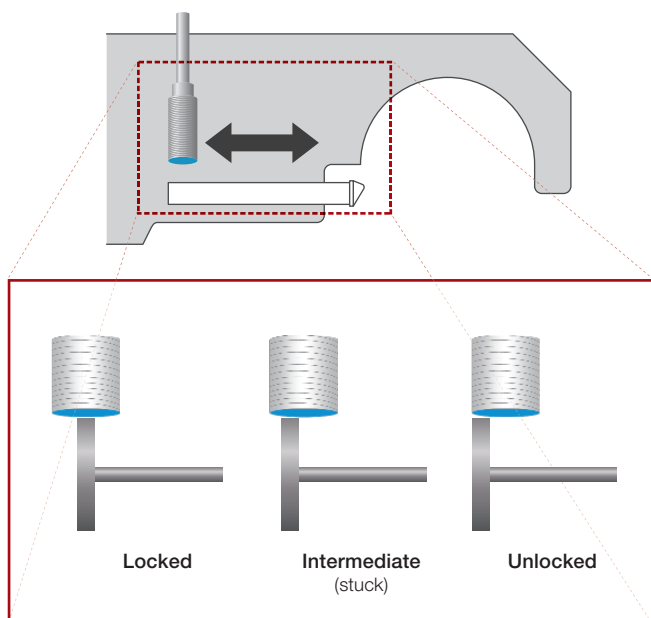
Tuning in the locked, intermediate, and unlocked states sets thresholds at the midpoints of the detection levels.

Solution 3

Configuration Tool makes detection levels easily visible

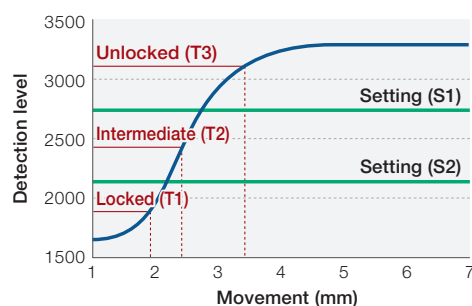
The special Configuration Tool makes it possible to monitor safety margins for sensing, allowing you to always know the optimum threshold and make adjustments.

Solution 1 Sample proximity switch installation

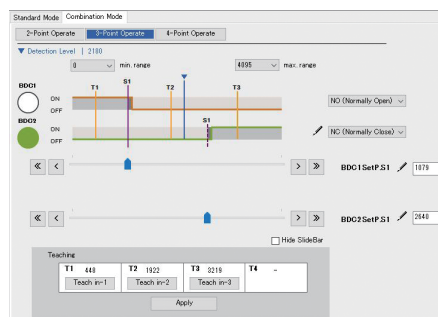


| | Locked | Intermediate | Unlocked |
|----------|--------|--------------|----------|
| Output 1 | ON | ON | OFF |
| Output 2 | OFF | ON | ON |

Solution 2 Set by auto-tuning



Solution 2 Configuration Tool



Please read "Terms and Conditions" from the following URL before ordering and use.

<https://www.azbil.com/products/factory/order.html>

Other product names, model numbers and company names may be trademarks of the respective company.

[Notice] Specifications are subject to change without notice.
No part of this publication may be reproduced or duplicated without the prior written permission of Azbil Corporation.

Azbil Corporation

Advanced Automation Company

1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan

URL: <https://www.azbil.com>