azbil

Proximity Switches

Direct detection of alteration in equipment

Easy setup for reliable detection of slight (3–4 mm) stroke changes in collet chucks

| Product	**Discrete sensor** Adjustable Proximity Sensor	Process/ Equipment	CNC lathe
Model	H3C		

Current Situation

- Proximity switches are used to detect the position of a dog linked to the collet chuck to detect whether the workpiece is clamped.

- Two proximity switches are used to detect the position of the dog to distinguish Clamped and Unclamped states. Or, a combination of hydraulic signals and timer conditions are used to identify the state.
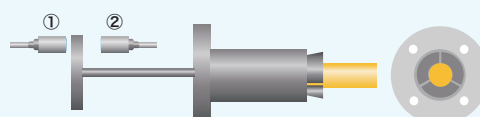

Current Problems

- When two proximity switches are used for detection, adjustment is very difficult because the stroke is short (3–4 mm). In addition, the switches face each other, so making space to install them and route the cables is difficult.

- Using hydraulic signals and a timer for detection requires a longer cycle time, decreasing production efficiency.

Unclamped
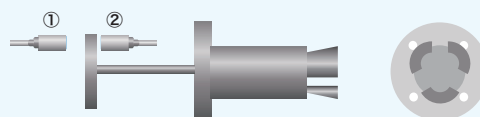
Clamped

	Unclamped	Clamped
Proximity switch 1	OFF	ON
Proximity switch 2	ON	OFF

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Solutions

Solution 1 Sample proximity switch installation
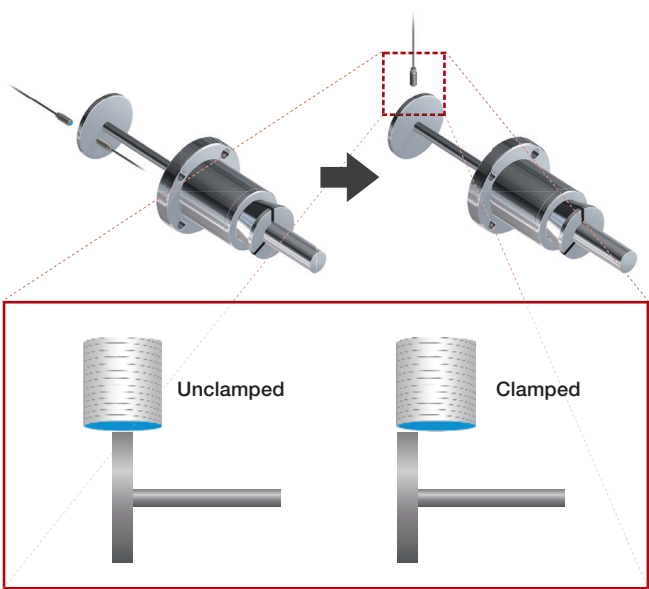
	Unclamped	Clamped
Output 1	OFF	ON
Output 2	ON	OFF

Solution 2 Set by auto-tuning
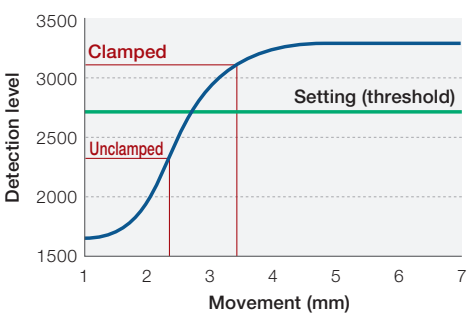
Solution 2 Configuration Tool

CP-PC-9030-005E