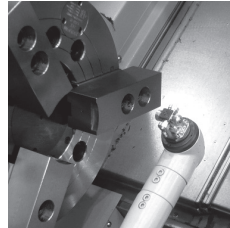


- Tool setters for CNC lathe are used for precise blade positioning, and detection of the wear and breakage.
- Touch sensors are arranged and directly linked in each direction.
- A different signal is emitted for each direction (parallel).



■ Standard specifications

unit:mm

■ Precautions

Product name	HA
Output mode	NC (Normally close)
Pretravel	Approx. 0
Stroke	2
Repeatability	0.001* (Recommended operating speed of 50 - 200mm/min)
Contact life time	3 million
Protective structure	IP67
Contact force	2N
Contact material	Tungsten carbide
Surface finishing	Grinding 4s
Contact rating	DC5V - DC24V 10mA (Max20mA) resistance load
Cable	Oil resistant $\phi 5$ / 2 cores Tensile strength 30N, Minimum bending R7
LED lamp	Default : LED ON / Operating : LED OFF

- Do not press the adjacent contact simultaneously.
- Do not turn the protective boot cover during cleaning and so forth. The rubber boot inside will not return properly if it becomes twisted.
- In the case of horizontal mounting, a D-cover (Downward cover) is optionally required so as to prevent coolant from remaining inside the cover when any one of the switches faces to the ground.
- Rubber materials used in some products are applicable to water-soluble coolants and alkaline liquids. (Refer to P5-4)

- Precautions for Tool Setters ..... P3-1
- Precautions for sensor connecting ..... P5-1
- Cable options ..... P5-2
- Technical guide ..... P5-3

\*Repeatability of the arm is not included.

# Multiple Signal Type

## Tool Setter for CNC Lathes Standard Type

### Outer dimensions

**H4A-002**

Top view dimensions: 40x40mm square body, 20mm segments, 23mm and 34mm widths, 4-LED Lamp (1 BLACK, 2 GREEN, 3 ORANGE, 4 YELLOW), 4-4.5 Drill Hole, 4-0.005/5 A/B surface finish.

Side view dimensions: 49.5mm total height, 30mm body height, 10.5mm top cap, 9mm bottom flange, 4-Tungsten Carbide  $\phi 5$ , O-Ring S20,  $\phi 16.5$  body diameter,  $\phi 23$  base diameter with  $-0.10/-0.15$  tolerance.

**●Circuit diagram**

**●Protective boot cover**  
 Select a type that prevents coolant from entering through the gap and accumulating inside.

**U type (standard)**  
 Upward, sideways

**D type**  
 Downward  
 Detecting direction : select from ① ~ ④

**Not required**  
 Always make sure to enclose when not in use.

### Specification sheet

Fax +81 42 528 1442  
 E-mail : touchsensor@metrol.co.jp

▼Please send us your inquiry by fax/e-mail after copying this page, and filling in necessary information. Sample :

Optional specifications (Bold:Standard)

Date:(mm,dd,yy) \_\_\_\_\_

Location No. of detecting direction	<input type="checkbox"/> ①	<input type="checkbox"/> ②	<input type="checkbox"/> ③	<input type="checkbox"/> ④	<input type="checkbox"/> ⑤
Protective boot cover	<input type="checkbox"/> <b>Utype</b> <input type="checkbox"/> Direction number including D type _____ <input type="checkbox"/> Not required (Case of enclosed types)				

Cable options (1m/unit)

Length / Protective cable	_____ m / <input type="checkbox"/> Not required <input type="checkbox"/> Protective tube _____ m (Upper limit :15m) <input type="checkbox"/> Wire braid _____ m (Upper limit :10m)			
Connector (Refer to P5-2)	<input type="checkbox"/> Not required <input type="checkbox"/> Connector			
Machine side cable option	Length	_____ m		
from connector (if desired)	Protective cable	<input type="checkbox"/> Not required <input type="checkbox"/> Protective tube _____ m (Upper limit :15m) <input type="checkbox"/> Wire braid _____ m (Upper limit :10m)		

Company :
Dept. / Title :
Customer name :
Address :
Tel : _____ Fax : _____
E-mail :
Other (if any) :

Ordering and Inquiries

**1.Customer**

Fill out the specification sheet and send to Metrol.

**2.Metrol**

Send the drawing(s) of specific model based on spec sheet received.

**3.Customer**

Select/confirm the specific model by the customer.

**4.Customer /Metrol**

Metrol sends the quote, and the customer places the order for the same.

✉E-mail to : [touchsensor@metrol.co.jp](mailto:touchsensor@metrol.co.jp)

Download PDF sheet : <http://toolsensor.com/builder.html>