

Machine Tool Probes PO Series

Precision, Reliable



PO series contains 3-point trigger unit inside the probe, which is the most stable structure. When the stylus is moved radially or axially by external force, the trigger unit is triggered. Then the circuit inside of probe sends a triggering signal to the receiver, and the receiver transmits it to the machine tool, consequently the present coordinates of each axis of the machine tool are recorded automatically. Finally measurement results are calculated according to the coordinate records of related points.

Features

- High repeatability: One-way repeatability $<1\mu\text{m}$
- Long standby time: As long as 6 months
- Omnidirectional energy-absorbing design: 360° omnidirectional energy-absorbing design, which helps to cushion the spindle in impact when an operating accident occurs
- Waterproof design: IP68 for probe and receiver
- Intelligent LED indicators: Show current working status of the probe



Parameters

- 1) Storage temperature: (-25~70)°C
- 2) Working temperature: (5~55)°C

Model No.	PO40	PO60	PO40L
Size	Φ40mm×L50mm	Φ63mm×L76mm	Φ40mm×L52mm
Weight(Without Holder)	260g	880g	280g
Transmission Type	360° IR	360° IR	360° IR
Transmission Distance	5m	6m	5m
Starting Mode	Code M	Code M, Revolve	Code M
Rotational Speed	Max 1000rev/min	Max 1000rev/min	Max 1000rev/min
Power Supply	1/2AA 3.6V battery×2	AA1.5V/3.6V battery×2	1/2AA 3.6V battery×2
Triggering Direction	±X/±Y/-Z	±X/±Y/-Z	±X/±Y/-Z
Repeatability of One-way triggering $2\delta^*$ ¹	1μm	2μm	1μm
Max overrun ²	XY:12.5mm +Z:6mm	XY:21mm +Z:11mm	XY:12mm +Z:6mm
XY Trigger Force ³	0.5N~ 0.9N	0.5N~1.6N Adjustable	0.3N~1.6N Adjustable
Z Trigger Force	5.8N	3.5N~14N Adjustable	4N~10N Adjustable
Application	Small and mediumsized 3-axis, 5-axis machining center	Large gantry machine tool, horizontal machining center	CNC lathe or turning-milling composite machining center

Note: .

*1: Test with a 50mm straight stylus under speed 480mm/min

*2: Test with a 50mm straight stylus

*3: Test with a 50mm straight stylus under speed 480mm/min

Parameters of Receiver

- 1) Transmission type: IR, 360°
- 2) Working range: Max 8m
- 3) Weight: 926g
- 4) Input voltage: 12V~ 30V
- 5) Input current: <100mA, receiving <40mA
- 6) Cable to machine controller: dedicated 13PIN shielded cable, 8 meters or 15 meters
- 7) Storage temperature: (-25~70)°C, working temperature: (5~55)°C



COMI Receiver