

## 3D Touch Probe 5-24V

The 3D-finder touch probe is used for measuring workpiece geometries such as edges, holes, grooves, studs, angles and corners. This probe has been developed for high measurement precision and high repeatability.

To achieve a high measurement precision, the touch probe must be mechanically calibrated, so that its axis aligns perfectly with the spindle axis of the machine.

The development of our 3D Touch Probe was focused particularly on achieving an affordable price without sacrificing precision, repeatability and reliability. Furthermore, the 3D Touch Probe is not just a simple switch, but it also includes electronics to ensure a stable and reliable switching behavior.

In addition, the contact surfaces of the probe were gold-plated to protect against contact oxidation, which would lead to incorrect probe operation.

### Technical Data 3D Touch Probe v2

- Sensing directions:  $\pm X$ ;  $\pm Y$ ;  $-Z$
- Max. stylus overtravel:  $XY = 120$ ;  $Z = 3\text{mm}$  [ .0787" ]
- Trigger force:  $XY = 0.5 - 1\text{N}$ ;  $Z = 2.5\text{N}$
- Repeatability (unidirectional): under  $5\mu\text{m}$  with  $20\text{mm}$  [ .7874" ] stylus and max.  
50mm/min probing feedrate
- Output function: electronic high-speed switch as (PNP-NC) switching voltage - normally close contact
- Gold-plated switch contacts
- Switching current: 240mA
- Functional indication: switching point indication by LED (red)
- Operating voltage (power supply): wide range 5 – 24V DC
- Cable length: 2 m (with connector)
- Connector: pull / push 3 pin
- Body: aluminium alloy
- Tool holder: with alignment function and 8mm cylindrical shaft
- Stylus: stylus with 2mm ruby ball (included) – Renishaw standard no A-5000-3603
- Dimensions (without holder): (D) 35mm [ 1.3780" ], (H) 33mm [ 1.2992" ], stylus 20mm [ .7874" ] + extension – 20mm [ .7874" ]
- IP Code: IP64

### New features

- Reduction of the current through the switch contacts in the  $\mu\text{A}$  range (even more effective prevents the formation of oxide on switching elements)
- Changed geometry of the switching contacts
- Wide range voltage: 5 – 24 V
- Delayed switch-on function of the electronics during power-on (protection against voltage peaks during power-on)