TPA2

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Overview

Robust and compact shank mounted 5 way touch-trigger probe used for coordinate measuring machines (CMMs)



Features

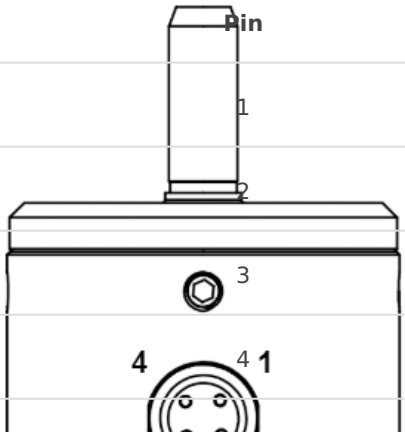
- Black anodized aluminium body and stainless steel shaft
- Anti-oxidizing electrical system covered with dielectric fluid
- Modular construction
- Ingress protected against dust and splashes of water from all directions
- Probe is designed with normally closed internal switch contacts
- Shielded flexible cable with quick action connector
- Each probe is tested before being shipped
- Probe is designed with normally closed internal switch contacts
- Concentricity calibration 4 or 3 set screws with included Allen key. Optically calibrated before shipment.
- Standard M3x0.5 probe tip thread

Specifications

Approach direction	±X, ±Y, ±Z
Repeatability	2 µm
Trigger force	Axial=5 N, Radial=1 N
Weight	160 g
Over travel protection distance	Radial 8mm (with 31mm tip), Axial 5mm
Dimensions	Ø=40 mm, H=35mm, shaft=20mm
Included cable length	3 m
Resistance	Closed = 10-30 Ω, Open = ∞
Shaft diameter	7mm +0.0/-0.05

Wiring

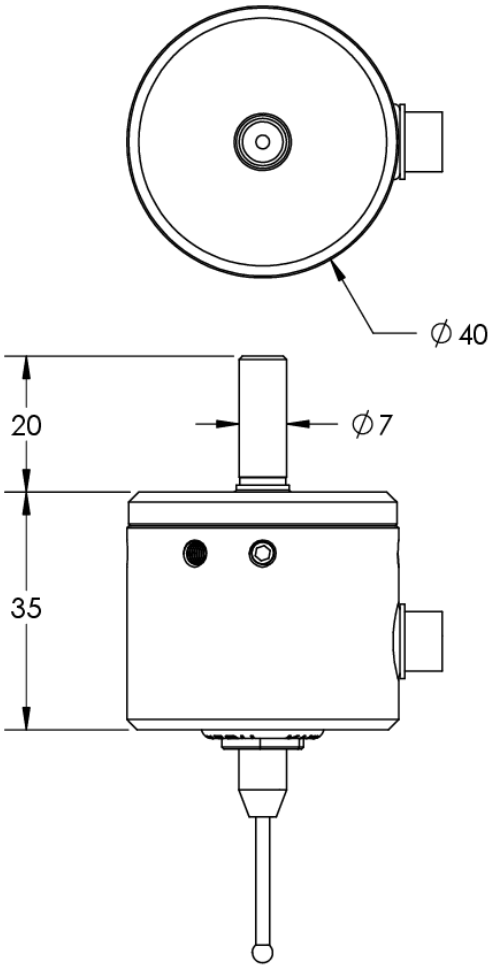
Internal electrical TPA2 connection resembles simple switch with normally connected contacts. After stylus is actuated, contacts become disconnected. Signals are isolated from instrument body.



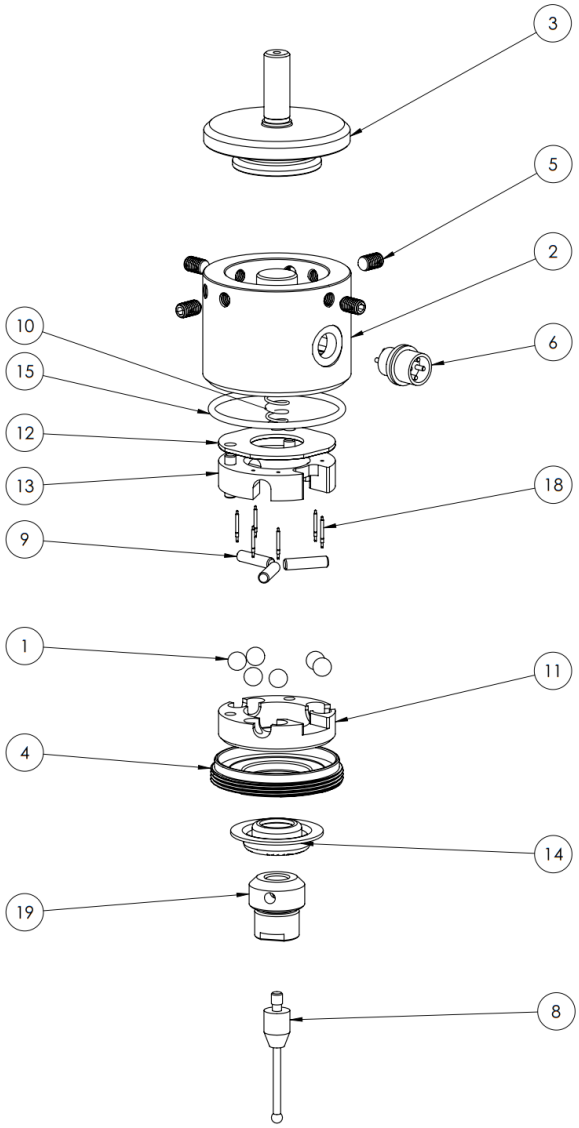
Pin	Function
1	Not used (unconnected)
2	Signal
3	Signal
4	Not used (unconnected)

Dimensions and exploded view

Dimensions



Exploded view



Iten nr	Part number	Description	Qty
1	Carbide ball 5mm	Tungsten carbide 5mm ball	6
2	LP18G-P0001	Aluminium body	1
3	LP18G-P0002	Stainless steel shank part	1
4	LP18G-P0003	Aluminium retention ring	1
5	DIN 7991 - M3 x 8 8N	Set screws	3 or 4
6	YC8-4p socket		1
7	YC8-4p connector		1

8	Stylus	Stylus with M3 thread	1
9	Dowel pin 3x12	Tungsten carbide dowel pin D=3, L=12	3
10	LP18-P0010	Custom spring	1
11	LP18G-P0005	POM spacer	1
12	LP18-P0007	PCB	1
13	LP18G-P0004	POM part	1
14	LP18-P0008	Ingress protection gasket	1
15	LP18-P0014	O-ring	1
18	Spring pin	Spring loaded contact	6
19	LP18G-P0006	Aluminium part	1

3D model

Simplified 3D model is maintained on GitHub