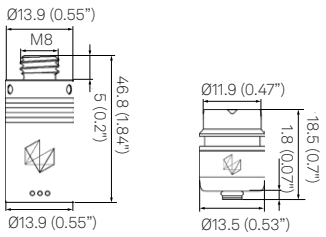
Touch trigger probes
HP-THD



HP-THD-SF HP-THD-MF



Built from cutting-edge technology, the HP-THD touch trigger probe is particularly well-suited for applications with tight tolerances, as well as tasks that require both high speed measurement and a high level of point density. The HP-THD delivers highly accurate touch trigger probing with styli configurations of up to 100 mm. It offers high-precision repeatability and low 3D form error thanks to a highly innovative optomechanical design capable of detecting nanometric movements in the X, Y and Z directions.

With its robust design and long module life, the HP-THD reduces downtime and enables additional time and cost savings with its high performance and fast stylus and module changes.

Standard probes employ a mechanical switch to create probing points that generate variable force dependant on the direction of probing. This force leads to small form errors sometimes called 'lobing'. The mechanical design of the HP-THD touch trigger probe saves potential rework time by overcoming this force to deliver very low lobing in all six probing directions.

		HP-THD-SF Standard force	**HP-THD-MF** Medium force
Touch trigger probes	Part no. (Probe module)	03939603	03939604
	Kit no. (Probe module and body)	03939621	03939622
	Part no. (Probe body)	03939601	03939601
	Part no. (Styli kit)	03969161	03969161
	Overtravel force (XY plane)	Max. 0.3 N	Max. 0.7 N
	Overtravel force (Z plane)	1.2 N	2.6 N
	Mounting	M8 with active 1 wire connection	M8 with active 1 wire connection
	Suitable interface	HH-C-V2.1 or higher	HH-C-V2.1 or higher
	Trigger force (XY plane)	0.07 N	0.07 N
	Trigger force (Z plane)	0.78 N	0.78 N
	Probing directions	6 Way ± X, ± Y and ± Z	6 Way ± X, ± Y and ± Z
	Form error (2D)	0.8 µm	0.8 µm
	Form error (3D)	1.3 µm	1.3 µm
	Unidirectional repeatability 2σ*	0.3 µm	0.3 µm
	Weight (probe and body)	21.6 g	21.6 g
	Stylus mounting	M2	M2
	Module changer rack	HR-P / HR-MP	HR-P / HR-MP
	Max. probe head extensions	200 mm (HH-A-M5 or HH-A-M7.5) 300mm (HH-A-T5 or HH-A-T7.5) 450mm (HH-A-T2.5) 750mm (HH-A-H2.5)	200 mm (HH-A-M5 or HH-A-M7.5) 300mm (HH-A-T5 or HH-A-T7.5) 450mm (HH-A-T2.5) 750mm (HH-A-H2.5)
	Max. straight stylus length	30 mm	50 mm (All materials) 100 mm (Mono-block CF)
	Max. star styli length	-	40 mm
	Max. star styli extension length	-	20 mm (Mono-block)
	Max. star styli span	-	30 mm (pre-build)
	Weight (Body and Module)	21.6 g	21.6 g

* Test conditions: Straight stylus, length 10 mm, touch speed 5 mm/sec.

Touch trigger probes
HP-TM





HP-TM is a compact and modular five way touch trigger probe, ideal for fast and high accuracy measurement.

The two piece design comprises of the probe body and a detachable probe module. The body and module are connected together by a highly repeatable kinematic magnetic coupling. The modules can be quickly changed either manually or automatically without the need to recalibrate the probe.

The stylus modules are available in four versions, each giving a different trigger force to ensure high accuracy. The HP-TM system can be easily retrofitted and is compatible with a range of touch trigger controllers, extensions and accessories.

		HP-TM-LF Low force	HP-TM-SF Standard force	HP-TM-MF Medium force	HP-TM-EF Extended force
Touch trigger probes	Part no. (Probe module)	03939170	03939171	03939172	03939173
	Part no. (Probe body)	03939174	03939174	03939174	03939174
	Pretravel variance	± 0.6 µm	± 0.8 µm	± 1.00 µm	± 2.00 µm
	Trigger force	0.055 N at 10 mm	0.08 N at 10 mm	0.10 N at 25 mm	0.10 N at 50 mm
	Repeatability 1D (2 sigma)*	< 0.35 µm	< 0.35 µm	< 0.5 µm	<0.65 µm
	Probing directions	± X, ± Y, + Z	± X, ± Y, + Z	± X, ± Y, + Z	± X, ± Y, + Z
	Probe mounting	M8	M8	M8	M8
	Stylus mounting	M2	M2	M2	M2
	Max. stylus length	30 mm	50 mm	60 mm	60 mm
	Weight (Probe and body)	11 g	11 g	11 g	11 g

* Test conditions: Stylus length 10 mm, Touch speed 8 mm/sec.

Contents of HP-TM Kits

		Kit 1	Kit 2	Kit 3	Kit 4	Kit 5	Kit 6	Kit 7	Kit 8	Kit 9	Kit 10	Kit 11
HP-TM Kits	Part no.	03939175	03939210	03939211	03939212	03939213	03939214	03939215	03939216	03939217	03939218	03939219
	HP-TM-LF	1 pc.							1 pc.			
	HP-TM-SF	1 pc.	2 pc.	1 pc.	1 pc.					1 pc.		
	HP-TM-MF	1 pc.		1 pc.		2 pc.	1 pc.				1 pc.	
	HP-TM-EF	1 pc.			1 pc.		1 pc.	2 pc.				1 pc.
	HP-TB probe body	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.	1 pc.

Touch trigger probes

HP-T





Cost-effective and sturdy, the HP-T touch trigger probe is a durable and compact five way touch trigger probe, offering high accuracy and measuring flexibility.

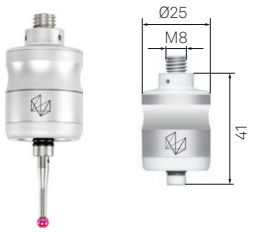
The HP-T is available in one of four variations, each providing a different trigger force (ranging from low to extended force).

The touch trigger probe is fitted with a M8 threaded connection, enabling compatibility with a wide range of manual and automatic probe heads. A kinematic adapter can also enable automatic module changes with the HR-R changer rack.

		HP-T-LF Low force	**HP-T-SF** Standard force	**HP-T-MF** Medium force	**HP-T-EF** Extended force
Touch trigger probes	Part no.	03939070	03939071	03939072	03939073
	Pre travel variance	± 0.6 µm	± 0.8 µm	± 1.00 µm	± 2.00 µm
	Trigger force	0.055 N at 10 mm	0.08 N at 10 mm	0.10 N at 25 mm	0.10 N at 50 mm
	Repeatability 1D (2 sigma)*	< 0.35 µm	< 0.35 µm	< 0.5 µm	< 0.65 µm
	Probing directions	± X, ± Y, +Z	± X, ± Y, + Z	± X, ± Y, + Z	± X, ± Y, + Z
	Probe mounting	M8	M8	M8	M8
	Stylus mounting	M2	M2	M2	M2
	Max. stylus length	30 mm	50 mm	60 mm	60 mm
	Weight	9.5 g	9.5 g	9.5 g	9.5 g

* Test conditions: Stylus length 10 mm, Touch speed 8mm/s

Touch trigger probe
HP-T-RP



Compatible with all Hexagon bridge and sheet metal measuring machines, the HP-T-RP is a robust and accurate touch trigger probe designed to be used in even the harshest industrial environments.

The rugged nature of the probe makes it ideally suited to work with both robots and portable equipment. The accuracy can be optimised by manually adjusting the trigger force for the required application.

		HP-T-RP
Touch trigger probe	Part no.	03939350
	Probing directions	± X, ± Y, + Z
	Stylus force	0.11 N to 0.30 N
	Repeatability 1D (2 sigma)*	0.35 µm
	Probe mounting	M8
	Stylus mounting	M3
	Overtravel	X/Y: ± 22.0°, Z: 5.5 mm (with 0.11 N), 2.0 mm (with 0.30 N)
	Max stylus length	100 mm
	Weight	43 g

* Test conditions: Stylus length 21 mm, Force setting 0.12 N, Touch speed 8mm/s