

OPS optical part setter



Specification

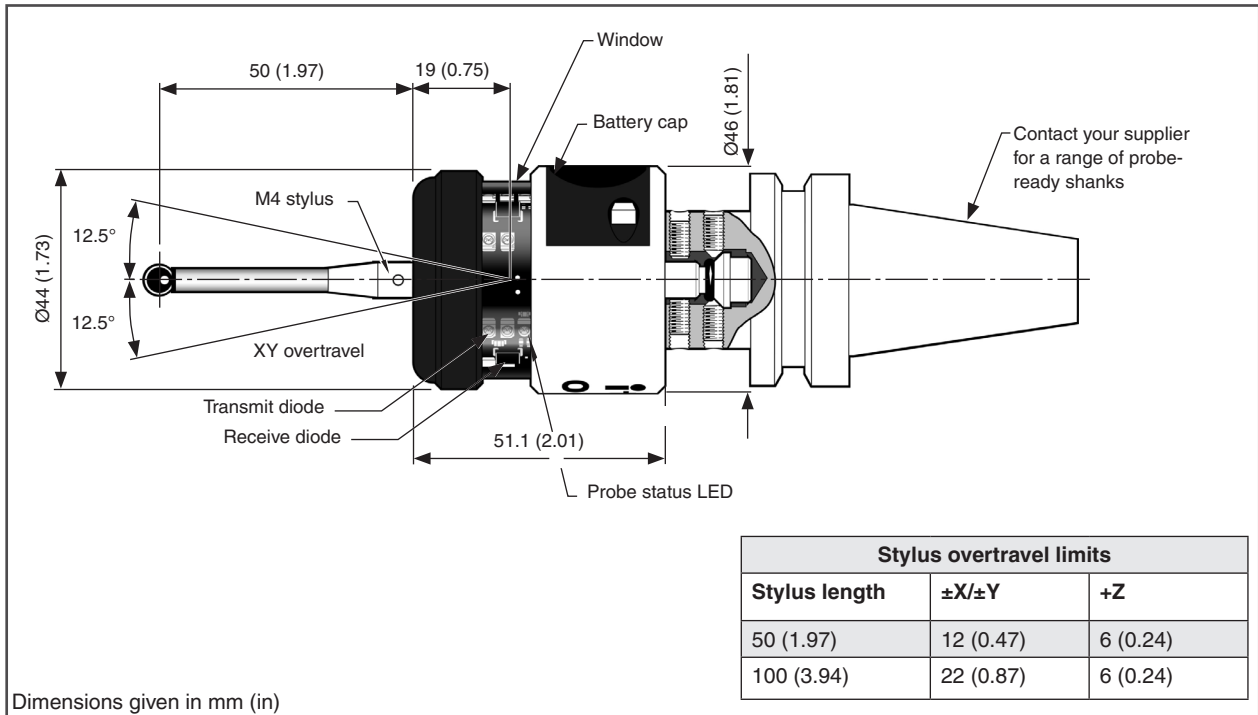
Principal application	Workpiece inspection and job set-up on small to medium machining centres and small multi-tasking machines.	
Transmission type	360° infrared optical transmission	
Compatible receiver/interface	Optical probe interface (OPI)	
Operating range	Up to 3 m (9.8 ft)	
Recommended styli	Ceramic stylus 50 mm (1.97 in) to 100 mm (3.94 in)	
Weight (without shank)	Without batteries	260 g (9.17 oz)
Switch-on method / switch-off options	Optical on \longrightarrow Optical off	
Battery life (2 × CR2 3.0 V lithium batteries)	Standby life	309 days
	Continuous life	240 hours
Spindle speed (maximum)	1000 r/min	
Sense directions	±X, ±Y, +Z	
Unidirectional repeatability	1.00 μm (40 μin) 2σ ¹	
Stylus trigger force ^{2,3}		
XY low force	0.50 N, 51 gf (1.80 oz)	
XY high force	0.90 N, 92 gf (3.24 oz)	
Z	5.85 N, 597 gf (21.04 oz)	
Environment	IP rating	IPX8, BS EN 60529:1992+A2:2013 (IEC 60529:1989+A1:1999+A2:2013)
	IK rating	IK01 (EN/IEC 62262: 2002) [for glass window]
	Storage temperature	-25 °C to +70 °C (-13 °F to +158 °F)
	Operating temperature	+5 °C to +55 °C (+41 °F to +131 °F)

¹ Performance specification is tested at a standard test velocity of 480 mm/min (18.9 in/min) with a 50 mm stylus. Significantly higher velocity is possible depending on application requirements.

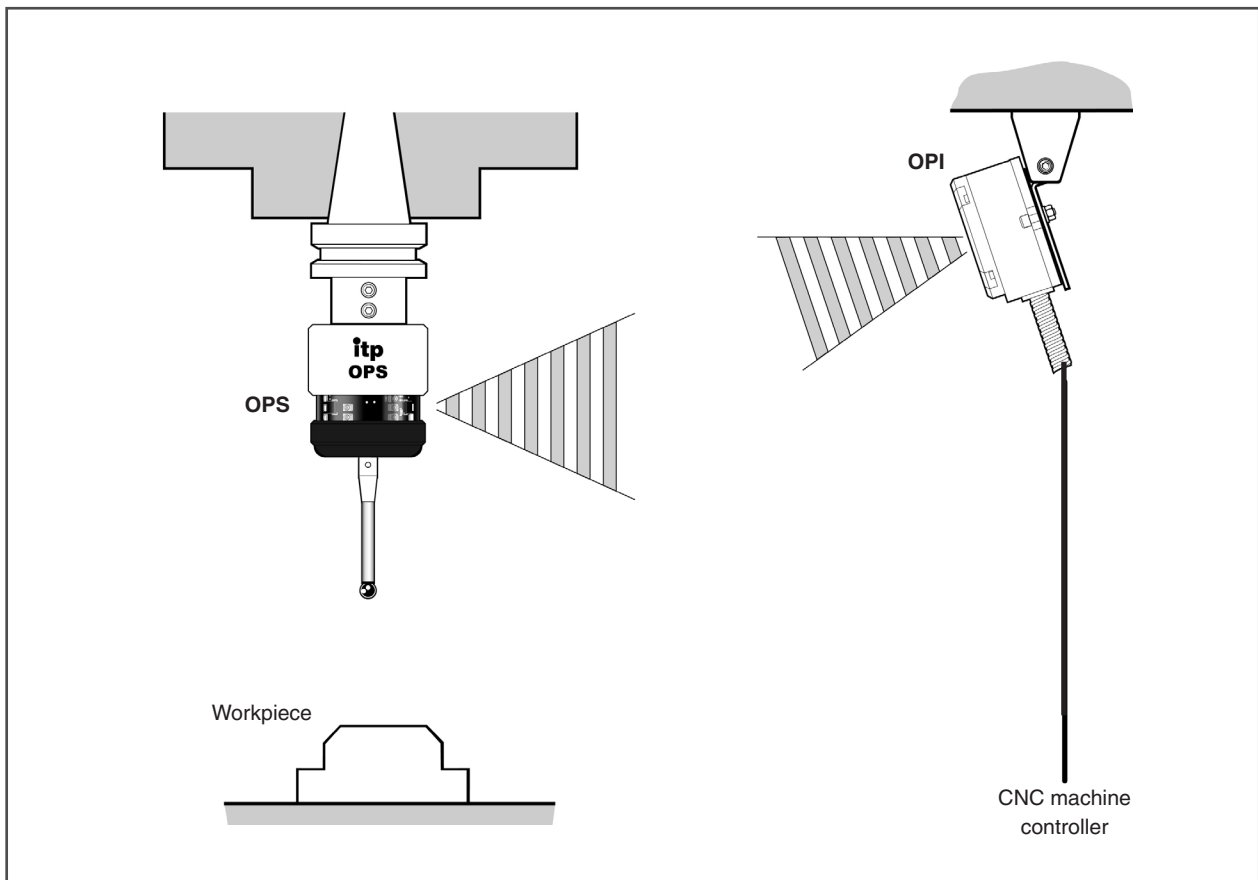
² Trigger force, which is critical in some applications, is the force exerted on the component by the stylus when the probe triggers. The maximum force applied will occur after the trigger point (overtravel). The force value depends on related variables, including measuring speed and machine deceleration.

³ These are the factory settings; manual adjustment is not possible.

OPS dimensions

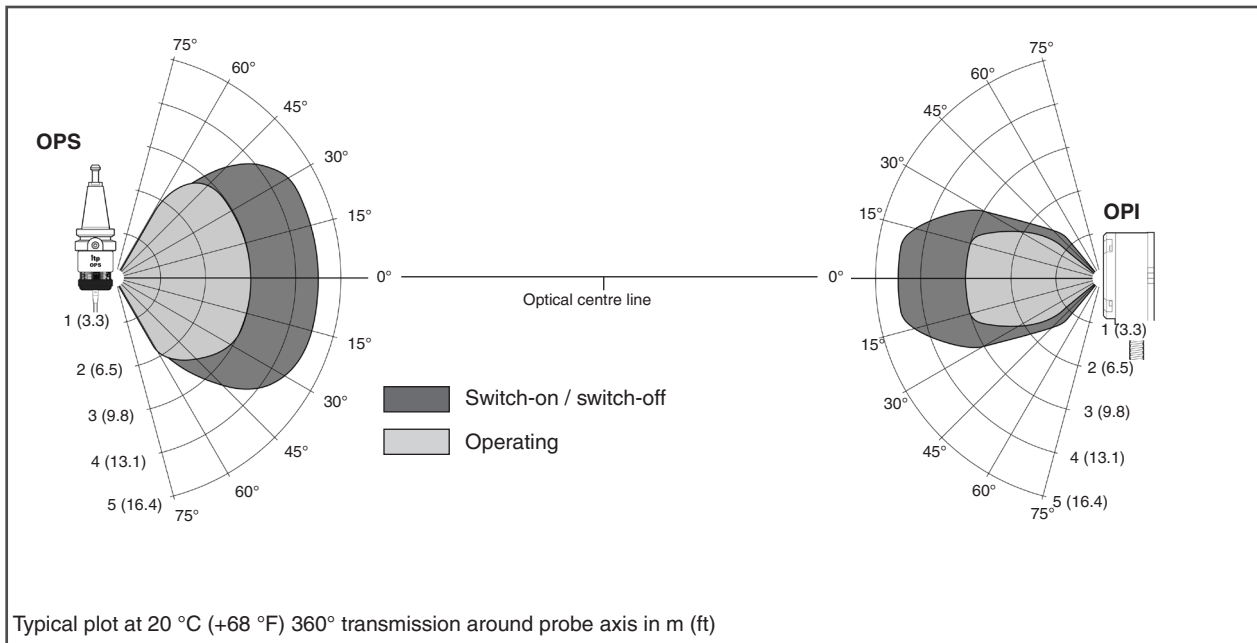


Installing the OPS with an OPI



Performance envelopes with an OPI

The OPS and OPI diodes must be in each other's field of view and within the performance envelope shown. The OPS performance envelope is based on the OPI being at 0° and vice versa.



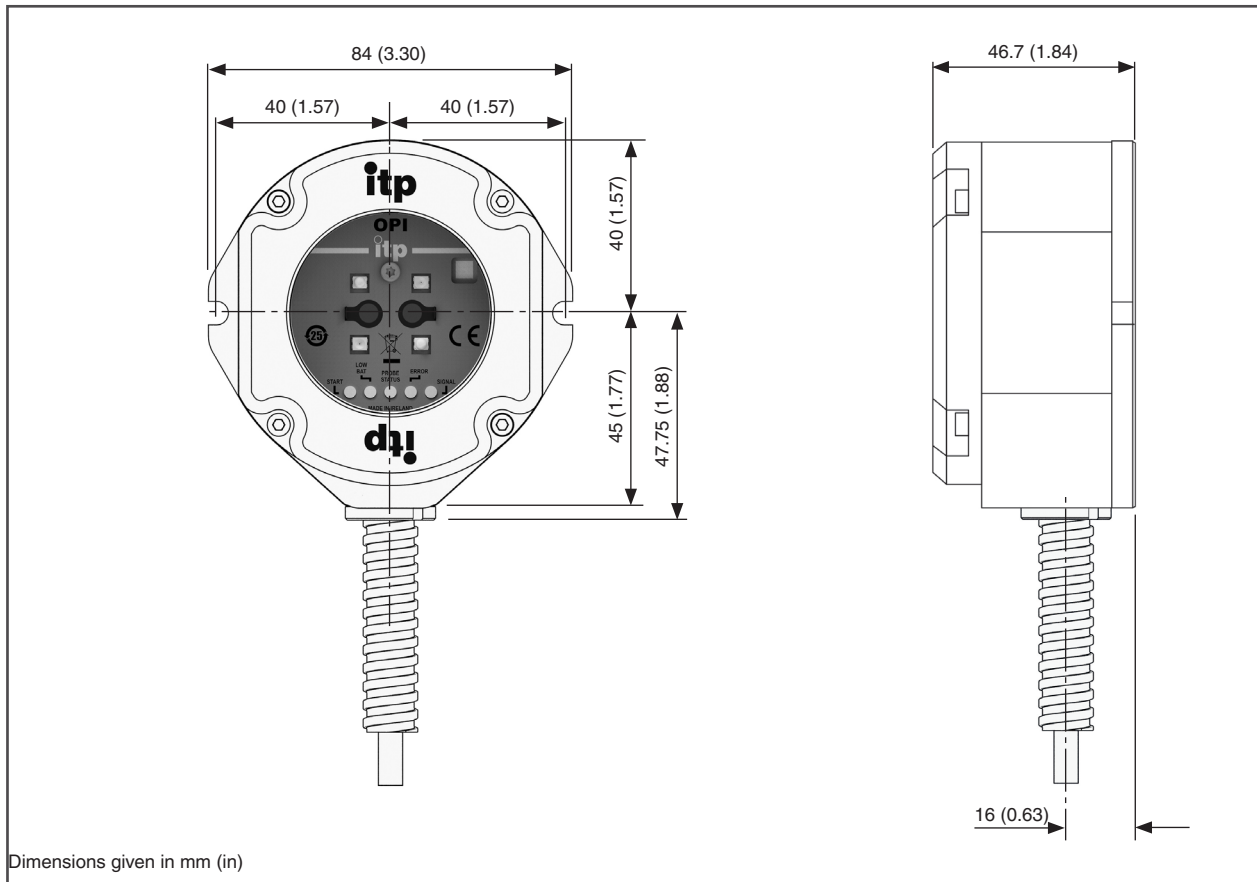
OPI optical probe interface



Specification

Principal application	The OPI processes signals from a probe and converts them into machine outputs, which are then transmitted to the CNC controller.	
Transmission type	Infrared optical transmission	
Compatible probe	Optical part setter (OPS)	
Operating range	Up to 3 m (9.8 ft)	
Weight	OPI including 5 m (16.4 ft) of cable = 578 g (20.39 oz)	
Probes per system	One	
Supply voltage	12 Vdc to 30 Vdc (for more information, see the "Wiring diagram" in the <i>OPI optical probe interface</i> installation guide (part no. H-6834-8504))	
Supply current	Transmitting: 160 mA max. peak Receiving: 40 mA average <hr/> NOTE: @24 Vdc, all outputs open circuit. <hr/>	
M-code inputs	Level 10 V to 30 V (10 mA @ 24 V)	
Output signal	Probe Status Voltage-free solid-state relay (N/C SSR only) output. Switching time (with 10 mA load), open to closed 100 μ s max., closed to open 25 μ s max.	
Input / output protection	Supply protected by resettable fuse. Outputs protected by over current protection circuit.	
Diagnostic LEDs	Start, low battery, probe status, error and signal condition.	
Cable (to machine controller)	Specification	\varnothing 5.8 mm (0.23 in), 6-core screened cable, each core 18 \times 0.1 mm
	Length	5 m (16.4 ft)
Mounting	Flush mounting or directional mounting with optional mounting bracket (available separately).	
Environment	IP rating	IPX8, BS EN 60529:1992+A2:2013 (IEC 60529:1989+A1:1999+A2:2013)
	IK rating	IK03 (EN/IEC 62262: 2002) [for glass window]
	Storage temperature	-25 $^{\circ}$ C to +70 $^{\circ}$ C (-13 $^{\circ}$ F to +158 $^{\circ}$ F)
	Operating temperature	+5 $^{\circ}$ C to +55 $^{\circ}$ C (+41 $^{\circ}$ F to +131 $^{\circ}$ F)

OPI dimensions



Dimensions given in mm (in)

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