

Repeatability of 0.5 microns without an amplifier!

IP67 protective structure results in compatibility with adverse environments using water, oil and coolant

Stable output of high-precision position signals without an amplifier.

Position signals having repeatability of 0.5 microns can be obtained without an amplifier. No occurrence of drift or movement differential accompanying fluctuations in power supply voltage or temperature, or overtime.

IP67 protective structure

The use of a sealed structure results in compatibility with adverse environments involving the use water, oil and coolant.

Highly reliable contact type

Minimal susceptibility to the effects of dust and cutting oil and no restrictions on the material or surface conditions of detected objects.

High cost performance

The initial cost is less than 1/20 of laser sensors and electric microswiches. Signals can be input directly to a PLC or CNC and connected electrical circuits can be configured at low cost.

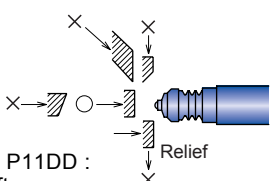
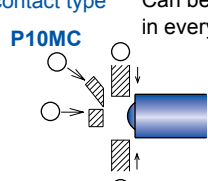
Both contact and contact-less types are available

Contact types are free of movement differential and temperature drift. Contact-less types eliminate all the disadvantages of non-contact sensors except for movement differential and temperature drift, making it possible to utilize the advantages of contact-less sensors.

Outline of High-accuracy MT-touch Sensors

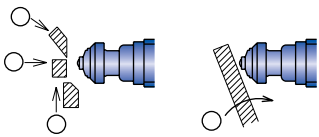
Mechanical specifications (Metal bearing type)

unit:mm

Type	P085D	P10D	P10DK	P10DL	P11DM	P11DD	P10MC	P10DNN P10DNE	P10DKNN P10DKNE
Form	Cylinder type		Long-stroke type		Flat type		Ball Contact type	Cylinder type	Long type
Bearing type	Metal bearing								
Contact type	Contact						Contact-less(NPN / PNP)		
Mode	B:NC	A:NO(normally open)/B:NC(normally closed)			B:NC		A:NO/B:NC	A:NO	
Repeatability	0.0005						0.002	0.005	
Protective structure	I P67						I P40	I P67	
Stroke	3		6	10	3		1.2	3	5
Pretravel	0	NO:0.2 / NC:0			0		0.3	0.4	
M×P	M8×0.5		M10×0.5		—		M10×0.5	M10×0.5	
Movement differential (M.D.)	0						0.04		
Working temperature range	0~80°C (with the exception of freeze)								
Temperature drift	—						0.03/10~40°C (MAX)		
Contact force	1 N								
Contact accuracy life	3 million times						—		
Contact material	Tungsten carbide								
Cable	3m Oil-resistant 2-core φ3						3m Oil-resistant 3-core φ4		
Instructions for use	<p>How to apply detecting objects</p> <p>Metal bearing type</p> <p>Apply straight. Otherwise, breakage may occur. (acceptable ±3°)</p> <p>•P10D, P10DK, P10DL, P10DM, P11DD : Provided with non-rotating shaft.</p>  <p>Ball contact type P10MC</p> <p>Can be used for sliding in every direction.</p> 								

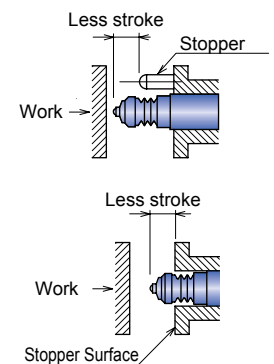
Types of sliding objects • Rotating objects • Lever contact (Ball bearing type)

unit:mm

Type	P10DH	P10DHNNE / P10DHNE
Form	Cylinder type	
Bearing type	Ball bearing	
Contact type	Contact type	Contact-less type (NPN / PNP)
Mode	A:NO(normally open) / B:NC(normally closed)	A:NO
Repeatability	0.0005	0.002
Protective structure	I P67	
Stroke	3	3
Pretravel	NO:0.2 / NC:0	0.4
M×P	M14×0.5	M14×0.5
Movement differential (M.D.)	0	0.04
Working temperature range	0~80°C (with the exception of freeze)	
Temperature drift	0	0.03/10~40°C (MAX)
Contact force	1 N	
Contact accuracy life	—	
Contact material	Tungsten carbide	
Cable	3m 3-core φ4	
Instructions for use	<p>How to apply detecting objects</p> <p>Ball bearing type(P10DH)</p> <p>Ball bearing type can be used for sliding in every direction.</p> 	



Do not use the end face as a stopper. Doing push hardly may cause breakage. Provide a separate stopper as shown below.



Orders for heat-resistant (ambient temperature: 200°C) and sensors provided with vacuum, non-magnetic and other special specifications are also accepted. Please consult your dealer.

Electrical Specifications•Circuit Diagram

☞ P5