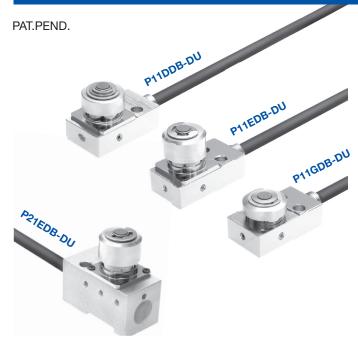
www.metrol.co.jp/en

P11 / P21

1-signal / 2-signal plunger type

Straight touch, Flat type (Plain bearing)



Space-saving design

Suitable for the situation where height for installation is restricted. Excellent parallelism between the contacting surface and the mounting surface.

Best suited for small tool setter

Tool preset, tool wear & breakage detection, and correction of the tool position displacement caused by thermal expansion.

■ P21 has a second switch for over travel alert signal

■Representative specification

unit:mm

Product name	Contacting part	Stroke	Mounting hole	with LED
P11DDB-DU	- 1-signal	3 (D)	2- <i>φ</i> 4.6	P11DDB-DU LD
P11DMB-DU			2-M4	P11DMB-DU LD
P11EDB-DU		5 (E)	2-φ4.6	P11EDB-DU LD
P11EMB-DU			2-M4	P11EMB-DU LD
P11GDB-DU		2 (G)	2- <i>φ</i> 4.6	P11GDB-DU LD
P11GMB-DU			2-M4	P11GMB-DU LD
P21EDB-DU	2-signal	5 (E)	2 <i>-</i> φ4.6	P21EDB-DU LD

-DU: Contacting part *φ* 5 flat carbide Protective cover, Upward (No gap) -LD: LED indicator (Attached to the switch)

■Common specification

First signal specification

3			
Switch structure	Dry contact		
Output mode	B : Normally close		
Pretravel	0		
Repeatability	Both On→Off, Off→On/ 0.0005		
	(At operating speed 50~200mm/min)*		
Movement differential	0		
Contact life time	3 million (If no specified bungle caused by vibration		
	and used under voltage and current rating)		
Protective structure	IP67		
Contact force	1.5N		

*Operating speed slower than 10mm/min is not recommended.

	unitallin	
Cable	Standard length 3 m Oil resistant ϕ 5 / 2 cores,	
(Refer to P2-4)	(2-signal: 4 cores)	
	Tensile strength 30N, minimum bending R7	
Operating temperature range	0°C∼80°C (Ice-free)	
Temperature drift	0	
Oscillation	10~55Hz total amplitude 1.5 for X,Y,Z each direction	
Impact	300m/s ² for X,Y,Z each direction	
Contact rating	DC5V~DC24V 10mA (MAX20mA) Resistance load	
Second signal (only for P21)		
Output mode	B: Normally close	
Pretravel	2.5	

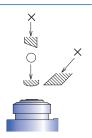
unit:mm

High-accuracy MT-Touch Switch

How to use

Make contact with detected object at right angle (within deflection angle ±3°) Do not press the plunger to the stroke end. It may cause malfunction due to the impact.

If there is a possibility to press the plunger to the stroke end, install a stopper separately to prevent the malfunction.



For metal cuttings and coolant

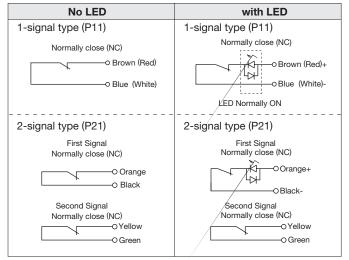
Protective cover is strongly recommended to avoid damage from cuttings and coolant when the switch is used in machining environment. In addition, an extra cover is recommended to avoid direct hit by high-pressure coolant or heavy cuttings.

For horizontal mounting, an extra cover prevents coolant or cuttings from entering inside and getting piled up in the body.



Circuit diagram

(Old wire color)

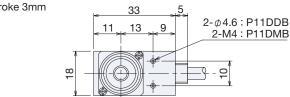


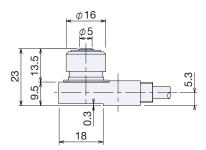
Electrical specification / circuit diagram. (Refer to P2-1) When using the switches with LED option, limit the current below 10mA.

Outer dimension

(-D : Contacting part ϕ 5 flat carbide) (-U : Protective cover, Upward, No gap) 1-signal type **P11DDB-DU** (B: NC) **P11EDB-DU** (B : NC) **P11EMB-DU** (B : NC)

P11DMB-DU (B: NC) Stroke 3mm





33

13

11

9

2-φ4.6 : P11GDB

P11GDB-DU (B: NC) **P11GMB-DU** (B : NC)

Stroke 2mm

