

Workpiece Detection System / Detection Pins for Weld Nuts

Workpiece Detection System

Type	Body		Pin		Spring
	M Material	S Surface Treatment	M Material	S Surface Treatment	M Material
PCPNA	A6061	Clear Anodize	S45C	Electroless Nickel Plating	SUS304-WPB

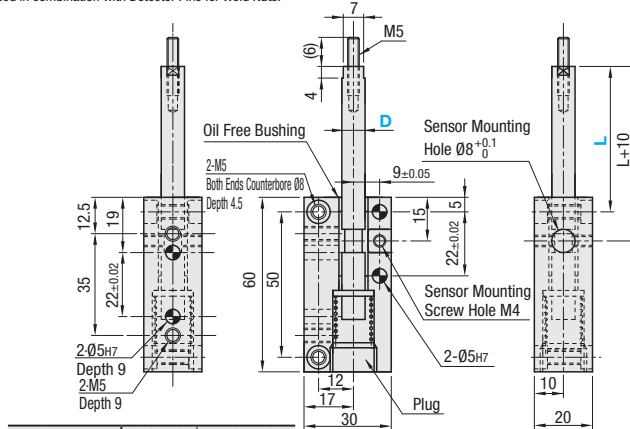
Accessory: Set Screw M4, 1pc.

Can be used in combination with Detector Pins for Weld Nuts.



RoHS 10

Stroke		
0 (min.)	3	8 (max.)
Switch		
OFF	ON	ON



Spring	S (Soft)	H (Hard)
Spring Constant (N/mm)	0.3	0.5
O.D. (mm)	12	12
Wire Dia. (mm)	0.65	0.8
I.D. (mm)	10.7	10.4
Free Length (mm)	20	20
Allowable Deflection	12	9

* Example of an applicable proximity sensor (shield type of 2-Line type)
 • KEYENCE EV-108M
 • OMRON E2E-X2D1-M3G

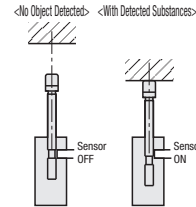
A proximity sensor is not included.

Type	D	Spring Selection	L Selection	S (Soft)		H (Hard)		Unit Price
				Load (N)		Load (N)		
				min	max	min	max	
PCPNA	8	S (Soft) H (Hard)	30 50	1.2 3.6	2.0 6.0			kgf=Nx0.101972



Ordering Example

Part Number - L
 PCPNA8H - 50



Suitable to confirm existence of workpieces when proximity sensor cannot be placed near target objects.

For Urethane Pushers (P-1553) or Detector Pins (below), tip parts can be selected depending on the objects to be detected.

Detection Pins for Weld Nuts

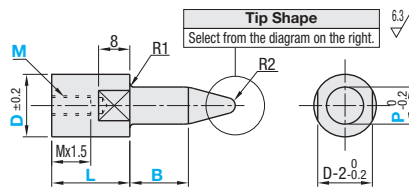
Type	M Material	H Hardness	S Surface Treatment	MxPitch Fine	MxPitch Coarse
NUTK	S45C	-	-	5x0.5 6x0.75 8x0.75	5x0.8 6x1.0 8x1.25
BNUTK	Equivalent	Hardened Hardness: 45 - 50HRC	Black Oxide		

Reference: $\sin 15^\circ = 0.259$ $\sin 30^\circ = 0.5$
 $\sin 45^\circ = 0.707$ $\sin 60^\circ = 0.87$
 $\tan 15^\circ = 0.267$ $\tan 30^\circ = 0.577$
 $\tan 45^\circ = 1$ $\tan 60^\circ = 1.73$

Combination of Workpiece Detecting Unit and Cylinder is available.



RoHS 10



Tip Shape (The center hole remains.)		
Shape A	Shape B	Shape C
Tapered	Taper R	Sphere
$P-2e \tan(A/2) \geq 0.73$	$e = P/2 \tan(A/2) + R - (R/\sin(A/2))$	

Type	Tip Shape	D	P		L	A	E	M		Unit Price		
			0.1mm Increment	1mm Increment				Coarse	Fine	NUTK	BNUTK	
NUTK	A	12	5.0-10.0	5-30	15-20	30	1-10	5	5S			
BNUTK	B	16	10.1-12.0	(B _S Px4)		60		5	6	5S	6S	
	C		12.1-14.0			90		5	6	8	5S	6S
						120						



Ordering Example

Part Number
 Type - Tip Shape - D - P - B - L - A - E - M
 NUTK A 12 - P6.0 - B10 - L20 - A30 - E2 - M5 (Shape A)
 NUTK C 16 - P10.5 - B15 - L20 - - - M6 (Shape C)