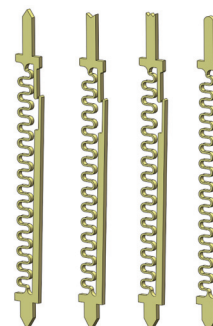


# Probe Pin XP3A

## Electroplated Probe Pin for High Reliability

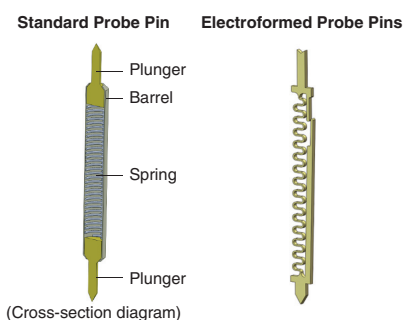
- The Probe Pin is made of only one part.
- The flat structure helps you reduce the pin pitch in comparison with standard probe pins.
- Separating the spring and relay achieves a stable resistance and greater durability.



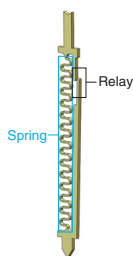
**NEW**

## Features

### ■ Achieves the functions of four parts with one part

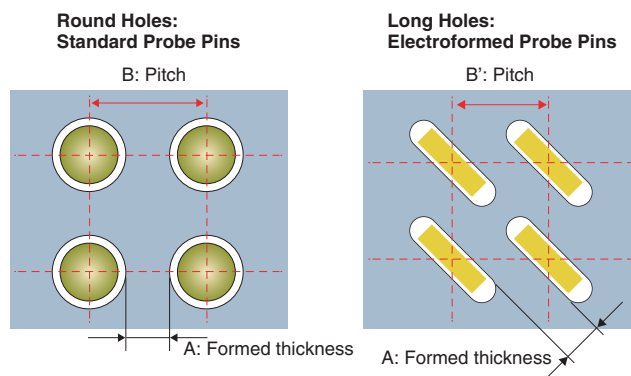


### ■ Separating the spring and relay achieves a stable resistance and greater durability



### ■ The electroformed Probe Pins use a flat structure. This allows you to position the pins at any angle.

In comparison with round pins, these flat Probe Pins help you reduce the pin pitch



Round hole pitch  $B >$  Long hole pitch  $B'$   
Round Hole formed thickness  $A =$  Long hole formed thickness  $A$

### ■ Socket

Model	XP3A-□□□□-□□□□D-R/S	XP3A-□□□□-□□□□D-S/S	XP3A-□□□□-□□□□D-D/S	XP3A-□□□□-□□□□D-T/S
Appearance				

### ■ Ratings and Characteristics

Rated current (see note)	0.25 A/pin
Contact resistance (see note)	100 mΩ max./pin
Contact force	15 g min.
Ambient operating temperature	- 25 to 85°C

**Note:** The performance values are doubled for two pins.

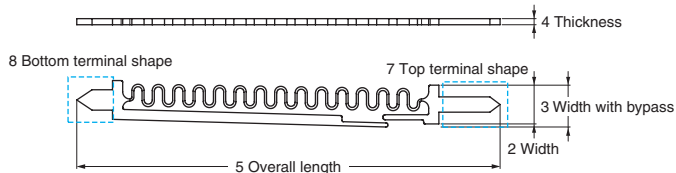
### ■ Materials and Finish

Item	XP3A
Contacts	Nickel alloy/gold plating (1 μm)

# Model Number Legend

**XP3A-**
 
 
 
 
**-**
 
 
 
 
 
 
**-**
 
**/**
 

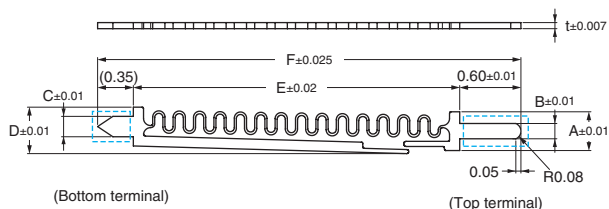
1
2
3
4
5
6
7
8



1	2		3		4		5		6	7		8				
Series	Width		Width with bypass		Thickness		Overall Length		Movability	Top terminal shape		Bottom terminal shape				
XP3A	38	0.38 mm	46	0.455 mm	06	0.06 mm	42	4.15 mm	D	Both ends are movable	R		S			
							50	4.95 mm								
							60	5.95 mm								
							70	6.95 mm								
	46	0.46 mm	54	0.535 mm	07	0.07 mm	30	2.95 mm			25	2.45 mm			S	
							42	4.25 mm								
							50	5.15 mm								
							60	6.15 mm								
							70	7.15 mm								
							75	7.15 mm								
	58	0.58 mm	66	0.655 mm	08	0.08 mm	25	2.45 mm			30	2.95 mm			D	
				0.665 mm												
				42			4.35 mm									
				50			5.15 mm									
				60			6.15 mm									
				70			7.15 mm									
	75	0.75 mm	83	0.826 mm	25	2.45 mm	25	2.45 mm			30	2.95 mm			T	
				0.828 mm												
				0.827 mm												
				0.826 mm												
				0.825 mm												
				0.976 mm												
	90	0.9 mm	98	0.976 mm	25	2.45 mm	30	2.95 mm			42	4.35 mm			50	5.15 mm
				0.975 mm												
				60			6.15 mm									
				70			7.15 mm									

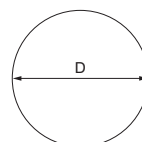
# XP3A - Top Terminal, R Shape

## Dimensions

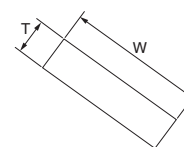


## Mounting Hole Dimensions

Round holes



Slits

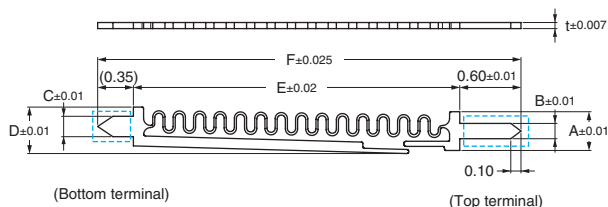


## Ordering Information - Standard Models

Probe Pins											Recommended Mounting Hole Dimensions		Model		
Pitch		Load	Recom- mended Stroke	Overall Length	Spring Length	Width	Width with bypass	Thick- ness	Lower Contact	Upper Contact	Round Holes	Slits			
Round Holes	Slits			F	E	A	D	t	C	B	(Tolerance: ± 0.01)	(Tolerance: ± 0.01)			
0.5	0.4	15 g min.	0.3	4.15	3.2	0.38	0.455	0.06	0.2	0.15	0.4 dia.	0.1 x 0.4	XP3A-3846-0642D-R/S		
			0.4	4.95	4.0								XP3A-3846-0650D-R/S		
			0.5	5.95	5.0								XP3A-3846-0660D-R/S		
			0.5	6.95	6.0								XP3A-3846-0670D-R/S		
0.65	0.5		0.3	2.95	2.0	0.46	0.535	0.07			0.2	0.15	0.48 dia.	0.1 x 0.48	XP3A-4654-0730D-R/S
			0.4	4.25	3.2										XP3A-4654-0742D-R/S
			0.5	5.15	4.0										XP3A-4654-0750D-R/S
			0.5	6.15	5.0										XP3A-4654-0760D-R/S
0.8	0.7		0.5	7.15	6.0	0.58	0.665	0.07		0.2	0.15	0.6 dia.	0.1 x 0.6	XP3A-4654-0770D-R/S	
			0.3	2.45	1.5									XP3A-5866-0725D-R/S	
			0.4	3.05	2.0									XP3A-5866-0730D-R/S	
			0.5	4.35	3.2									XP3A-5866-0742D-R/S	
1.0	0.8		0.5	5.15	4.0	0.75	0.826	0.08		0.2	0.2	0.77 dia.	0.1 x 0.77	XP3A-5866-0750D-R/S	
			0.5	6.15	5.0									XP3A-5866-0760D-R/S	
			0.5	7.15	6.0									XP3A-5866-0770D-R/S	
			0.3	2.45	1.5									XP3A-7583-0825D-R/S	
		0.4	2.95	2.0	XP3A-7583-0830D-R/S										
		0.5	4.35	3.2	XP3A-7583-0842D-R/S										
1.2	1.0	0.5	5.15	4.0	0.9	0.976	0.08	0.2	0.2	0.92 dia.	0.1 x 0.92	XP3A-5866-0780D-R/S			
		0.5	6.15	5.0								XP3A-5866-0790D-R/S			
		0.5	7.15	6.0								XP3A-5866-0800D-R/S			
		0.3	2.45	1.5								XP3A-9098-0825D-R/S			
		0.4	2.95	2.0								XP3A-9098-0830D-R/S			
		0.5	4.35	3.2								XP3A-9098-0842D-R/S			
0.5	5.15	4.0	XP3A-9098-0850D-R/S												
0.5	6.15	5.0	XP3A-9098-0860D-R/S												
0.5	7.15	6.0	XP3A-9098-0870D-R/S												

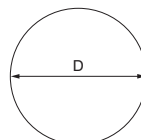
# XP3A - Top Terminal, S Shape

## Dimensions

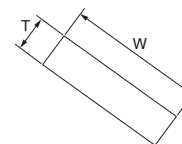


## Mounting Hole Dimensions

Round holes



Slits

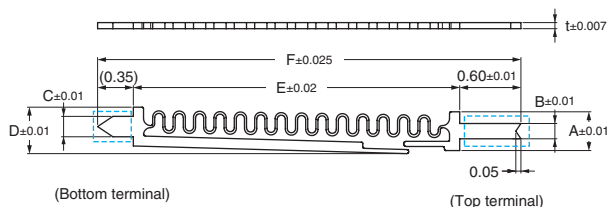


## Ordering Information - Standard Models

Probe Pins											Recommended Mounting Hole Dimensions		Model		
Pitch		Load	Recommended Stroke	Overall Length	Spring Length	Width	Width with bypass	Thickness	Lower Contact	Upper Contact	Round Holes (Tolerance: ± 0.01)	Slits T x W (Tolerance: ± 0.01)			
Round Holes	Slits			F	E	A	D	t	C	B					
0.5	0.4	15 g min.	0.3	4.15	3.2	0.38	0.455	0.06	0.2	0.15	0.4 dia.	0.1 x 0.4	XP3A-3846-0642D-S/S		
			0.4	4.95	4.0								XP3A-3846-0650D-S/S		
			0.5	5.95	5.0								XP3A-3846-0660D-S/S		
			0.5	6.95	6.0								XP3A-3846-0670D-S/S		
0.65	0.5		0.3	2.95	2.0	0.46	0.535	0.07			0.2	0.15	0.48 dia.	0.1 x 0.48	XP3A-4654-0730D-S/S
			0.4	4.25	3.2										XP3A-4654-0742D-S/S
			0.5	5.15	4.0										XP3A-4654-0750D-S/S
			0.5	6.15	5.0										XP3A-4654-0760D-S/S
			0.5	7.15	6.0										XP3A-4654-0770D-S/S
0.8	0.7		0.3	2.45	1.5	0.58	0.655	0.08			0.2	0.15	0.6 dia.	0.1 x 0.6	XP3A-5866-0725D-S/S
			0.4	3.05	2.0										XP3A-5866-0730D-S/S
			0.5	4.35	3.2		0.665								XP3A-5866-0742D-S/S
		0.5	5.15	4.0	XP3A-5866-0750D-S/S										
		0.5	6.15	5.0	XP3A-5866-0760D-S/S										
		0.5	7.15	6.0	XP3A-5866-0770D-S/S										
1.0	0.8	0.3	2.45	1.5	0.75	0.826	0.08	0.2	0.15	0.77 dia.	0.1 x 0.77	XP3A-7583-0825D-S/S			
		0.4	2.95	2.0		0.828						XP3A-7583-0830D-S/S			
		0.5	4.35	3.2		0.827						XP3A-7583-0842D-S/S			
		0.5	5.15	4.0		0.826						XP3A-7583-0850D-S/S			
		0.5	6.15	5.0								XP3A-7583-0860D-S/S			
		0.5	7.15	6.0								0.825	XP3A-7583-0870D-S/S		
1.2	1.0	0.3	2.45	1.5	0.9		0.976	0.08	0.2	0.15	0.92 dia.	0.1 x 0.92	XP3A-9098-0825D-S/S		
		0.4	2.95	2.0		XP3A-9098-0830D-S/S									
		0.5	4.35	3.2		0.975	XP3A-9098-0842D-S/S								
		0.5	5.15	4.0			XP3A-9098-0850D-S/S								
		0.5	6.15	5.0			XP3A-9098-0860D-S/S								
		0.5	7.15	6.0			XP3A-9098-0870D-S/S								

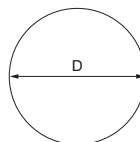
# XP3A - Top Terminal, D Shape

## Dimensions

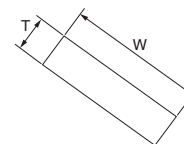


## Mounting Hole Dimensions

Round holes



Slits

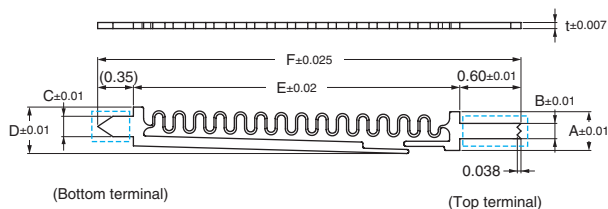


## Ordering Information - Standard Models

Probe Pins											Recommended Mounting Hole Dimensions		Model		
Pitch		Load	Recom- mended Stroke	Overall Length	Spring Length	Width	Width with bypass	Thick- ness	Lower Contact	Upper Contact	Round Holes (Tolerance: ± 0.01)	Slits T x W (Tolerance: ± 0.01)			
Round Holes	Slits			F	E	A	D	t	C	B					
0.5	0.4	15 g min.	0.3	4.15	3.2	0.38	0.455	0.06	0.2	0.15	0.4 dia.	0.1 x 0.4	XP3A-3846-0642D-D/S		
			0.4	4.95	4.0								XP3A-3846-0650D-D/S		
			0.5	5.95	5.0								XP3A-3846-0660D-D/S		
			0.5	6.95	6.0								XP3A-3846-0670D-D/S		
0.65	0.5		0.3	2.95	2.0	0.46	0.535	0.07			0.2	0.15	0.48 dia.	0.1 x 0.48	XP3A-4654-0730D-D/S
			0.4	4.25	3.2										XP3A-4654-0742D-D/S
			0.5	5.15	4.0										XP3A-4654-0750D-D/S
			0.5	6.15	5.0										XP3A-4654-0760D-D/S
0.8	0.7		0.5	7.15	6.0	0.58	0.665	0.08		0.2	0.2	0.6 dia.	0.1 x 0.6	XP3A-4654-0770D-D/S	
			0.3	2.45	1.5									XP3A-5866-0725D-D/S	
			0.4	3.05	2.0									XP3A-5866-0730D-D/S	
			0.5	4.35	3.2									XP3A-5866-0742D-D/S	
1.0	0.8		0.5	5.15	4.0	0.75	0.826	0.08		0.2	0.2	0.77 dia.	0.1 x 0.77	XP3A-5866-0750D-D/S	
			0.5	6.15	5.0									XP3A-5866-0760D-D/S	
			0.5	7.15	6.0									XP3A-5866-0770D-D/S	
			0.3	2.45	1.5									XP3A-7583-0825D-D/S	
		0.4	2.95	2.0	XP3A-7583-0830D-D/S										
		0.5	4.35	3.2	XP3A-7583-0842D-D/S										
1.2	1.0	0.5	5.15	4.0	0.9	0.976	0.08	0.2	0.2	0.92 dia.	0.1 x 0.92	XP3A-7583-0850D-D/S			
		0.5	6.15	5.0								XP3A-7583-0860D-D/S			
		0.5	7.15	6.0								XP3A-7583-0870D-D/S			
		0.3	2.45	1.5								XP3A-9098-0825D-D/S			
		0.4	2.95	2.0								XP3A-9098-0830D-D/S			
		0.5	4.35	3.2								XP3A-9098-0842D-D/S			
0.5	5.15	4.0	XP3A-9098-0850D-D/S												
0.5	6.15	5.0	XP3A-9098-0860D-D/S												
0.5	7.15	6.0	XP3A-9098-0870D-D/S												

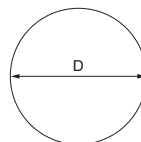
# XP3A - Top Terminal, T Shape

## Dimensions

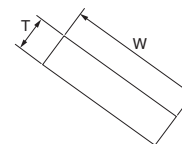


## Mounting Hole Dimensions

Round holes



Slits



## Ordering Information - Standard Models

Probe Pins										Recommended Mounting Hole Dimensions		Model			
Pitch		Load	Recommended Stroke	Overall Length	Spring Length	Width	Width with bypass	Thickness	Lower Contact	Upper Contact	Round Holes		Slits		
Round Holes	Slits			F	E	A	D	t	C	B	(Tolerance: ± 0.01)		T x W (Tolerance: ± 0.01)		
0.5	0.4	15 g min.	0.3	4.15	3.2	0.38	0.455	0.06	0.2	0.15	0.4 dia.	0.1 x 0.4	XP3A-3846-0642D-T/S		
			0.4	4.95	4.0								XP3A-3846-0650D-T/S		
			0.5	5.95	5.0								XP3A-3846-0660D-T/S		
			0.5	6.95	6.0								XP3A-3846-0670D-T/S		
0.65	0.5		0.3	2.95	2.0	0.46	0.535	0.07			0.2	0.15	0.48 dia.	0.1 x 0.48	XP3A-4654-0730D-T/S
			0.4	4.25	3.2										XP3A-4654-0742D-T/S
			0.5	5.15	4.0										XP3A-4654-0750D-T/S
			0.5	6.15	5.0										XP3A-4654-0760D-T/S
			0.5	7.15	6.0										XP3A-4654-0770D-T/S
0.8	0.7		0.3	2.45	1.5	0.58	0.655	0.08			0.2	0.15	0.6 dia.	0.1 x 0.6	XP3A-5866-0725D-T/S
			0.4	3.05	2.0										XP3A-5866-0730D-T/S
			0.5	4.35	3.2		0.665								XP3A-5866-0742D-T/S
		0.5	5.15	4.0	XP3A-5866-0750D-T/S										
		0.5	6.15	5.0	XP3A-5866-0760D-T/S										
		0.5	7.15	6.0	XP3A-5866-0770D-T/S										
1.0	0.8	0.3	2.45	1.5	0.75	0.826	0.08	0.2	0.15	0.77 dia.	0.1 x 0.77	XP3A-7583-0825D-T/S			
		0.4	2.95	2.0		0.828						XP3A-7583-0830D-T/S			
		0.5	4.35	3.2		0.827						XP3A-7583-0842D-T/S			
		0.5	5.15	4.0		0.826						XP3A-7583-0850D-T/S			
		0.5	6.15	5.0								XP3A-7583-0860D-T/S			
		0.5	7.15	6.0								0.825	XP3A-7583-0870D-T/S		
1.2	1.0	0.3	2.45	1.5	0.9		0.976	0.08	0.2	0.15	0.92 dia.	0.1 x 0.92	XP3A-9098-0825D-T/S		
		0.4	2.95	2.0		XP3A-9098-0830D-T/S									
		0.5	4.35	3.2		0.975	XP3A-9098-0842D-T/S								
		0.5	5.15	4.0			XP3A-9098-0850D-T/S								
		0.5	6.15	5.0			XP3A-9098-0860D-T/S								
		0.5	7.15	6.0			XP3A-9098-0870D-T/S								

# Precautions

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## ■ Correct Use

### General Environmental Conditions

Use the Probe Pins at an ambient operating temperature of -25 to 85°C and a humidity of 30%.

Use the Probe Pins in an ambient atmosphere that does not contain dust, dirt, corrosive gas or oil so that the Probe Pins do not become contaminated.

### Stroke Conditions

Apply a load to the Probe Pins only in the axial direction. Never apply a lateral load.

The life of the Probe Pins will be drastically reduced if the recommended stroke is exceeded.

### Current Application Conditions.

Apply a current when the Probe Pins are stationary after they have come into contact with the target at the recommended stroke position.

If a current is applied during the stroke, at a position other than the recommended stroke, or when the Probe Pins are not in contact with the target, the life of the Probe Pins will be drastically reduced.

The catalog value of the carrying capacity may not be met due to Probe Pin deterioration or other factors. Allow sufficient leeway when you design the actual application.

### Voltage Application Conditions

Apply a voltage when the Probe Pins are stationary after they have come into contact with the target at the recommended stroke position.

Do not apply a voltage when the Probe Pins are not in contact with the target. The Probe Pins will be damaged due to discharge immediately before they come into contact.

When a high voltage is applied to the contact probe, strictly observe the current and voltage application conditions. Also, take measures to prevent discharge or other large instantaneous current.

### Carrying Capacity

The rated current that is given in the catalogs is the maximum continuous current for 1 minute under the above conditions (general environment, stroke, current application and voltage application).

### Resistance

If a large current is applied, the resistance may increase due to deterioration of the contacts and internal components.

As the number of strokes increases, the resistance may increase due to deterioration of the contacts and internal components.

### Durability

The durability specification that is given in the catalog is a guideline for the number of times that the Probe Pins can be used without problems at 10 mA.

Depending on the operating environment and conditions, the Probe Pins may need to be replaced sooner than given in the specifications due to increased resistance, reduced contact force or other factors. Replace the Probe Pins as required by the actual application.

### Contact Force

The contact force of the Probe Pins will be reduced at a temperature of 85°C or higher.

If the current is increased, heat generated by the Probe Pins will reduce the contact force.

### Recommended Mounting Hold Dimensions

The dimensions are reference values. Actual values will depend on the material and thickness of the resin plate.

All sales are subject to Omron Electronic Components LLC standard terms and conditions of sale, which can be found at [http://www.components.omron.com/components/web/webfiles.nsf/sales\\_terms.html](http://www.components.omron.com/components/web/webfiles.nsf/sales_terms.html)

**ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.**  
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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