

# Contact Probes, Receptacles

## Minimum Mounting Pitch 3.0mm / 3.5mm / 4.5mm Series

# Turn Probes

Features: Receptacle's stopper portion is machined slightly smaller in I.D. to avoid probes from being pressed in too far.

**Contact Probes - Minimum Mounting Pitch 3.0mm**

**Receptacles - Minimum Mounting Pitch 3.0mm**

**NP84SF, NP84, NP84HD Tip Shapes**

**NR84 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	Stainless Steel	-
4	Ball	SUS	-

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

No.	Material	Surface Treatment
5	German Silver	Gold Plating on Nickel Undercoat
6	Brass	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.5mm**

**Receptacles - Minimum Mounting Pitch 3.5mm**

**NP90SF, NP90, NP90HD Tip Shapes**

**NR90 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 4.5mm**

**Receptacles - Minimum Mounting Pitch 4.5mm**

**NP89SF, NP89S, NP89 Tip Shapes**

**NR89 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	Stainless Steel	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.0mm**

**Receptacles - Minimum Mounting Pitch 3.0mm**

**NP84SF, NP84, NP84HD Tip Shapes**

**NR84 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating
4	Ball	SUS	-

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat
Brass	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.5mm**

**Receptacles - Minimum Mounting Pitch 3.5mm**

**NP90SF, NP90, NP90HD Tip Shapes**

**NR90 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 4.5mm**

**Receptacles - Minimum Mounting Pitch 4.5mm**

**NP89SF, NP89S, NP89 Tip Shapes**

**NR89 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	Stainless Steel	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.0mm**

**Receptacles - Minimum Mounting Pitch 3.0mm**

**NP84SF, NP84, NP84HD Tip Shapes**

**NR84 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating
4	Ball	SUS	-

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat
Brass	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.5mm**

**Receptacles - Minimum Mounting Pitch 3.5mm**

**NP90SF, NP90, NP90HD Tip Shapes**

**NR90 End Shapes**

**Contact Probes**

Part Number	Mounting Pitch (min.)	Full Stroke	Spring Pressure Initial	Spring Pressure 2/3 Stroke	Allowable Current	Resistance	Replacement Cycle (Reference)	Unit Price (1-69 pc(s))	Volume Discount Rate (70-99)	Volume Discount Rate (100-500)
NP84SF	3.0mm	6.3mm	10gf	50gf	1.5A	80mΩ	300,000 times			
NP84			45gf	126gf						
NP84HD			77gf	200gf						
NP90SF	3.5mm (4.5mm)	6.4mm	10gf	50gf	1.5A	80mΩ	300,000 times			
NP90			40gf	150gf						
NP90HD			146gf	250gf						
NP89SF	4.5mm	6.4mm	30gf	100gf	1.5A	80mΩ	300,000 times			
NP89S			84gf	275gf						
NP89			170gf	450gf						

Mounting Pitch in ( ) is applicable to Tip Shape A and D. For orders larger than indicated quantity, please request a quotation.

**Receptacles**

Part Number	Matching Contact Probe	Mounting Hole for Press-Fitting Dimension (Reference)	Unit Price (1-69 pc(s))	Volume Discount Rate (70-99)	Volume Discount Rate (100-500)
NR84	NP84SF NP84 NP84HD	2.41~2.46mm			
NR90	NP90SF NP90 NP90HD	2.77~2.82mm			
NR89	NP89SF NP89S NP89	3.58~3.63mm			

For NR84, NR89 and NR90, please select the end shape. For orders larger than indicated quantity, please request a quotation.

**Contact Probes - Minimum Mounting Pitch 3.0mm**

**Receptacles - Minimum Mounting Pitch 3.0mm**

**NP84SF, NP84, NP84HD Tip Shapes**

**NR84 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	Stainless Steel	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 3.5mm**

**Receptacles - Minimum Mounting Pitch 3.5mm**

**NP90SF, NP90, NP90HD Tip Shapes**

**NR90 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Contact Probes - Minimum Mounting Pitch 4.5mm**

**Receptacles - Minimum Mounting Pitch 4.5mm**

**NP89SF, NP89S, NP89 Tip Shapes**

**NR89 End Shapes**

**Contact Probes**

No.	Part	Material	Surface Treatment
1	Plunger	C1730B	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass	Gold Plating on Nickel Undercoat
3	Spring	Stainless Steel	Gold Plating
4	Ball	SUJ	Gold Plating

Inside of Probe Barrel is greased.  
The receptacle has a stopper that prevents the probe from being pulled out.

**Receptacles**

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

**Receptacles with Lead Wire**

Part Number	Lead Wire Color Selection	Lead Wire Length (mm)	Lead Wire	Lead	Receptacles Used
NRB84	W (White)	400	Ø1.0	Ø0.08x40 pcs.	NR84-C
NRB90	R (Red)	1000	Ø1.0	Ø0.08x40 pcs.	NR90-C
NRB89	BL (Blue)		Ø1.0	Ø0.08x40 pcs.	NR89-C

For orders larger than indicated quantity, please request a quotation.

Features: The plunger rotates while stroking, breaking flux and oxide film. Mainly used for PCB open-shot testing. Receptacle stopper is machined smaller in I.D. to prevent fall-off of Probe.

**Turn Probes**

**Receptacles for Turn Probes**

**Turn Probes**

No.	Part	Material	Surface Treatment
1	Plunger	SK4	Rhodium Plating on Nickel Undercoat
2	Barrel	Brass*	Gold Plating on Nickel Undercoat
3	Spring	SWP	Gold Plating on Nickel Undercoat
4	Ball*	Brass	Gold Plating on Nickel Undercoat

\* For TNP60, the material of barrel is German silver. \* Ball is not included in TNP72.  
Inside of Probe Barrel is greased.

**Receptacles**

No.	Part	Material	Surface Treatment
5	Receptacles	Brass	Gold Plating on Nickel Undercoat
6	Wire Wrap Post	Brass	Gold Plating on Nickel Undercoat

The receptacle has a stopper that prevents the probe from being pulled out.

**Turn Probe Tip Shape (C, K) Dimensions**

Part Number	d	d1	(L)	(L1)
TNP72	0.53	0.53	1.0	-
TNP10	0.73	1.0	1.4	2.5
TNP60	1.0	2.0	1.9	2.0

**Turn Probes**

**Receptacles for Turn Probes**

**Turn Probes**

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**Turn Probes**

**Receptacles for Turn Probes**

**Tip Shapes**

**NR60 End Shapes**

**Turn Probes**

**Receptacles for Turn Probes**

**Turn Probes**

Part Number	Mounting Pitch (min.)	Full Stroke	Spring Pressure Initial	Spring Pressure 2/3 Stroke	Allowable Current	Resistance	Replacement Cycle (Reference)	Unit Price (1-69 pc(s))	Volume Discount Rate (70-99)	Volume Discount Rate (100-500)
TNP72	1.27mm	4.5mm	10gf	50gf	1.5A	250mΩ	300,000 times			
TNP10	1.9mm	5.5mm	20gf	140gf		200mΩ	300,000 times			
TNP60	2.54mm	6.4mm	50gf	165gf		200mΩ	100,000 times			

For orders larger than indicated quantity, please request a quotation.

**Receptacles for Turn Probes**

Part Number	Applicable Turn Probes	Mounting Hole for Press-Fitting Dimension (Reference)	Unit Price (1-69 pc(s))	Volume Discount Rate (70-99)	Volume Discount Rate (100-500)
NR72	TNP72	0.93~0.94mm			
NR10	TNP10	1.39~1.41mm			
NR60	TNP60	1.77~1.79mm			

For NR60, please select the end shape. For orders larger than indicated quantity, please request a quotation.

**Turn Probes**

**Receptacles for Turn Probes**

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**Turn Probes**

**Receptacles for Turn Probes**

**Ordering Example**

Part Number: TNP72, TNP60, NR60

Tip (End) Shape: C, A, C

Example: TNP72 - C, TNP60 - A, NR60 - C

**Pattern C**