

Contact Probes / Receptacles

Minimum Mounting Pitch 3.0 / 3.5 / 4.5 mm Series

Contact Probes – Minimum Mounting Pitch 3.0mm

Receptacles – Minimum Mounting Pitch 3.0mm

RoHS 10

NP84SF / NP84 / NP84HD Tip 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	Stainless Steel	—

Receptacles

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

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

NP84SF / NP84 / NP84HD Tip Shapes

NR84 End Shapes Applicable Terminal P.1980

A Wire Wrap Type **B Crimp Type** **C Solder Type**

Contact Probes – Minimum Mounting Pitch 3.5mm

Receptacles – Minimum Mounting Pitch 3.5mm

RoHS 10

NP90SF / NP90 / NP90HD Tip 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

Receptacles

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

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

NP90SF / NP90 / NP90HD Tip Shapes

NR90 End Shapes Applicable Terminal P.1980

B Crimp Type **C Solder Type**

Contact Probes – Minimum Mounting Pitch 4.5mm

Receptacles – Minimum Mounting Pitch 4.5mm

RoHS 10

NP89SF / NP89S / NP89 Tip 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

Receptacles

Material	Surface Treatment
German Silver	Gold Plating on Nickel Undercoat

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

NP89SF / NP89S / NP89 Tip Shapes

NR89 End Shapes Applicable Terminal P.1980

B Crimp Type **C Solder Type**

Contact Probes

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

Ⓢ Mounting Pitch in () is applicable to Tip Shape A and D.

Receptacles

Part Number	Matching Contact Probe	Mounting Hole for Press-Fitting Dimension (Reference)
NR84	NP84SF NP84 NP84HD	2.41–2.46 mm
NR90	NP90SF NP90 NP90HD	2.77–2.82 mm
NR89	NP89SF NP89S NP89	3.58–3.63 mm

Ⓢ For NR84 / NR89 / NR90, please select the end shape.

Receptacles with Lead Wire

Part Number	Lead Wire Color	Lead Wire Length (mm)	Lead Wire	Lead	Receptacle Used
NRB84	W (White)	400	Ø1.0	Ø0.08 x 40 pcs.	NR84-C
NRB90	R (Red)		Ø1.0	Ø0.08 x 40 pcs.	NR90-C
NRB89	BL (Blue)		Ø1.0	Ø0.08 x 40 pcs.	NR89-C

Part Number Example

Part Number - Tip (End) Shape - Lead Wire Color - Lead Wire Length

NP84 - G - W - 1000

NR90 - B - BL - 400

NRB84 - W - 1000

NRB90 - BL - 400

Turn Probes / Receptacles for Turn Probes

Turn Probes

RoHS 10

Turn Probes

No.	Part	Material	Surface Treatment
(1)	Plunger	W1-9 Tool Steel	Rhodium Plating on Nickel Undercoat
(2)	Barrel	Brass*	Gold Plating on Nickel Undercoat
(3)	Spring	Spring Steel	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 falling out.

Receptacles for Turn Probes

NR72

Tip Shape Selection (C, K)

Turn Probe Tip Shape (C / K) Dimensions

Part Number	d	d ₁	(L)	(L ₁)
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

TNP10

NR10

TNP60

NR60

Tip Shapes

A **A20** **C** **K**

NR60 End Shapes Applicable Terminal P.1980

A Wire Wrap Type **B Crimp Type** **C Solder Type**

Turn Probes

Part Number	Mounting Pitch (min.)	Full Stroke	Spring Pressure		Allowable Current	Resistance	Ref. Replacement Usage Cycles
			Initial	2/3 Stroke			
TNP72	1.27 mm	4.5	10 gf	50 gf	0.5A	250 mΩ	300,000 times
TNP10	1.9 mm	5.5	20 gf	140 gf	1A	200 mΩ	300,000 times
TNP60	2.54 mm	6.4	50 gf	165 gf	1.3A	200 mΩ	100,000 times

Receptacles for

Part Number	Matching Turn Probes	Mounting Hole Dimensions (Press-Fit, Ref. Only)
NR72	TNP72	0.93–0.94 mm
NR10	TNP10	1.39–1.41 mm
NR60	TNP60	1.77–1.79 mm

Ⓢ For NR60, please select the end shape.

Application Example

C Pattern

Part Number Example

Part Number - Tip (End) Shape

TNP72 - C

TNP60 - A

NR60 - C

Features: To break the flux and oxide film, the contact probe revolves along with the stroke. It rotates according to the helical shape of the built-in plunger.