

RosettaCNC Probe A - Installation and Maintenance Manual



Dear Customer,

Thank you for purchasing this product. This document aims to collect all the necessary information for the installation and use of this accessory.

Need assistance?

Post in the forum on the website [RosettaCNC.com](https://www.rosettacnc.com) or send an email to: support@rosettacnc.com, the RosettaCNC development team will be happy to respond promptly.

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Information

				
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Sommario

RosettaCNC Probe A - Installation and Maintenance Manual	1
Information	2
1. Introduction	5
1.1 General Description	5
1.2 Symbols Used in the Manual	5
1.3 Package Contents	6
1.4 Product Identification	7
1.4.1 Product Label	7
1.4.2 Order Code	7
2. Mechanical Installation	8
2.1 Dimensions	8
3. Connections	9
3.1 Cable Description	9
3.2 Connection to RosettaCNC Board A	9
3.3 Connection to RosettaCNC Board B	11
4. Settings	12
4.1 Surface Digitization	12
4.2 G-Code Probing Functions	12
5. Contributions	13

1. Introduction

1.1 General Description

5-axis touch-trigger probe to be mounted on the spindle, robust and compact.

- Black anodized 6061-T6 aluminum body and stainless steel shaft
- Anti-oxidation electrical system covered with dielectric fluid
- Modular construction
- Dust and splash-proof from all directions
- Normally closed internal switching contacts
- Shielded flexible cable with quick connector
- Each probe is tested before shipping
- Concentricity calibration with 3 or 4 screws, Allen key included. Optically calibrated before shipping.
- Probe tip with standard M3x0.5 thread
- Stainless steel shank: D = 7.0 mm, H = 20 mm
- Unit dimensions without stylus: Ø = 40mm, H = 38.5mm
- Maximum safe movement: 8mm radial (with 31mm tip), 5mm axial
- Adjustable: 4-side set screws with included Allen key
- Operating principle: breaks contact in case of a touch event
- Included cable length: 3 m (with connected connector)
- Protection class: IP64 (sealed with silicone gaskets against dust and liquid splashes)
- Base material: black anodized 6061-T6 aluminum and stainless steel
- Weight: 160 g
- Actuation force: axial ~ 5 N, radial 1 N
- Electrical contacts in tungsten carbide with anti-oxidation dielectric fluid
- Repeatability: 2µm

1.2 Symbols Used in the Manual



Useful information and suggestions



Warnings, failure to follow these warnings may lead to improper operation or damage to the device



Potential danger and possible risk of injury

1.3 Package Contents

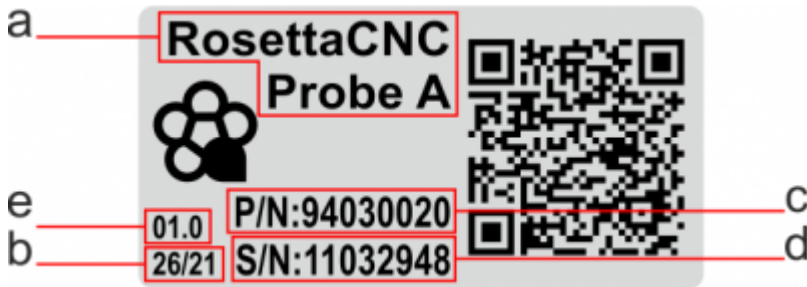
- n.1 Probe
- n.1 Cable
- n.1 Allen key



1.4 Product Identification

Based on the product Order Code, its exact characteristics can be determined. Verify that the product characteristics match your needs.

1.4.1 Product Label



- **a - Codice di ordinazione**
- **b - Data di produzione:** indica la settimana e l'anno di produzione
- **c - Part number:** codice univoco che identifica un codice d'ordinazione
- **d - Serial number:** numero di serie dello strumento, unico per ogni pezzo prodotto
- **e - Versione hardware:** versione e release dell'hardware

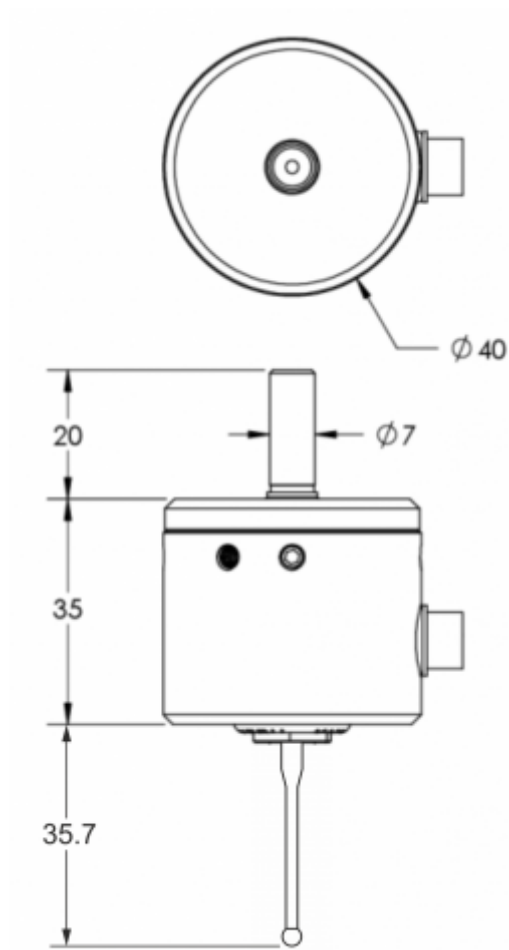
1.4.2 Order Code

The RosettaCNC Probe A is available in the following versions:

Part number	Model	Description
94030020	RosettaCNC Probe A	Precision = 0.01mm, complete with stylus, ruby, and cable

2. Mechanical Installation

2.1 Dimensions



Dimensions in mm

3. Connections

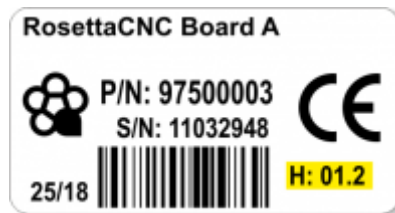
3.1 Cable Description

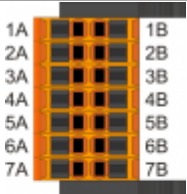
Color	Function
White 	NC Contact
Shield 	Common

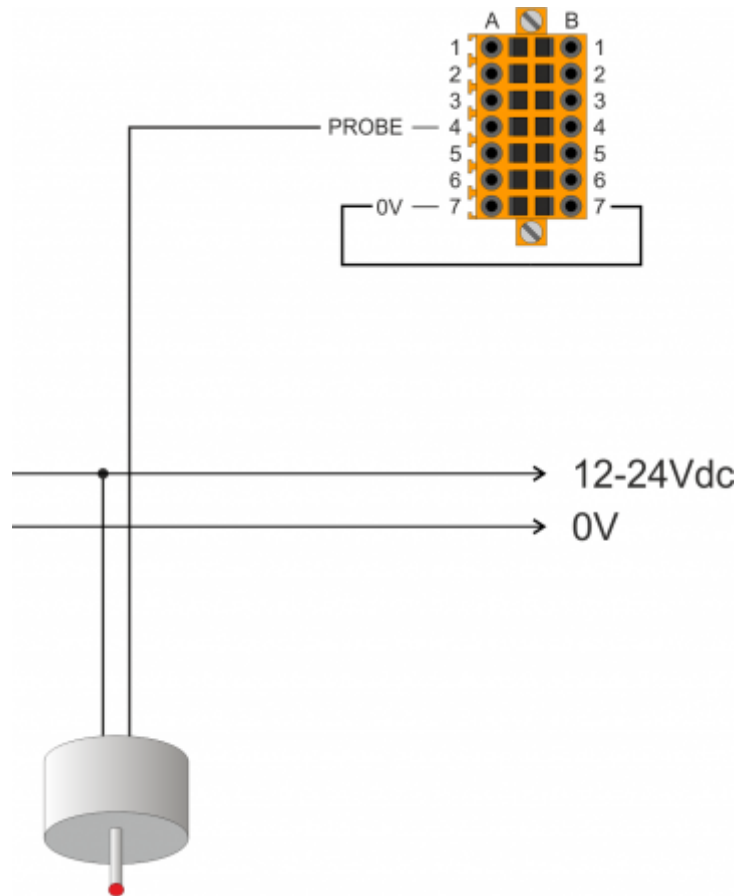
3.2 Connection to RosettaCNC Board A



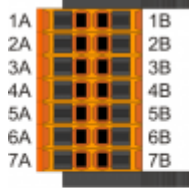
This Probe model is compatible only with RosettaCNC Board A from hardware version 1.2 onwards.



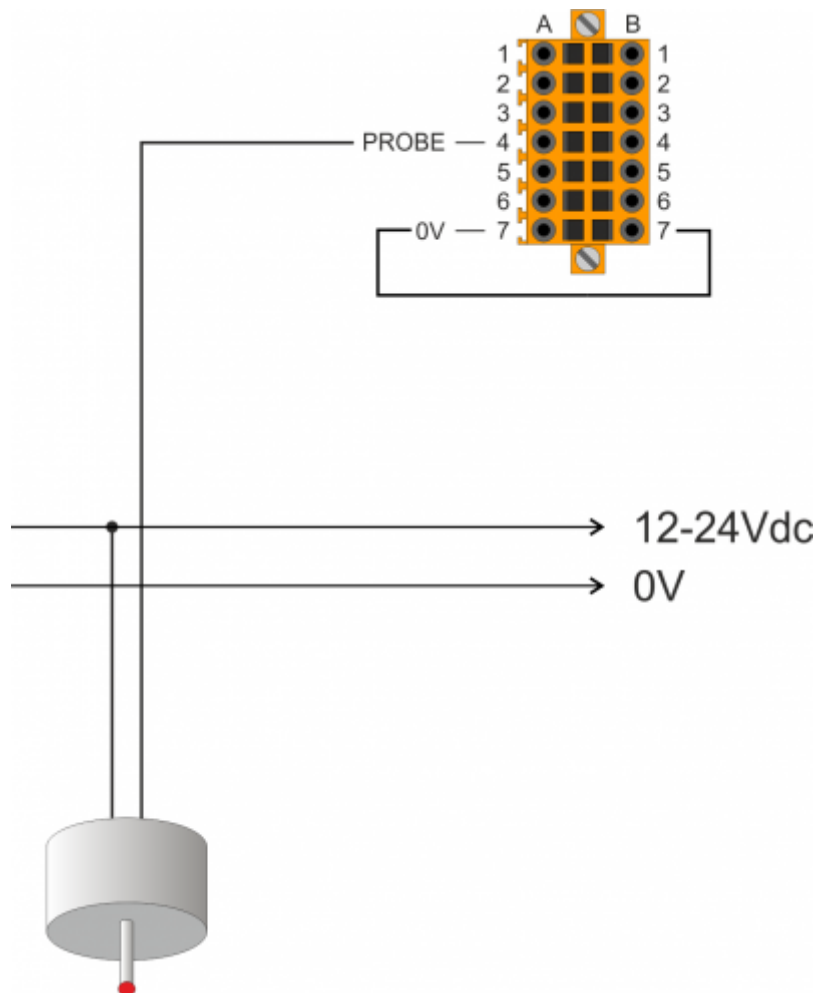
Probe		Connector CN9 on RosettaCNC Board A	
	White 	4A	
		7A - Connect to 7B	
		7B - Connect to 7A	
		Shield	Connect to +24Vdc

PROBE on CN9

3.3 Connection to RosettaCNC Board B

Probe		Connector CN16 on RosettaCNC Board B	
	White 	4A	 
		7A - Connect to 7B	
		7B - Connect to 7A	
	Shield 	Connect to +24Vdc	

PROBE on CN16



4. Settings

To use the Probe, it is necessary to correctly set the values highlighted in the following figure (in the panel “RosettaCNC Board Settings→Digitizer”):

Impostazioni scheda

Digitalizzatore

Tipo di probe: Digitale

Asse di scansione: X

Velocità approccio: 100 mm/min

Velocità distacco: 100 mm/min

Override accelerazione: 50 %

Raggio punta sonda: 1.0 mm

Tempo filtro probe analogico: 0 ms

Misura probe analogico al centro: 100.0 mm

Misura probe analogico in basso: -35.0 mm

Ingresso probe analogico in alto: 35.0 mm

Soglie probe analogico

Soglia inferiore: 0.0 %

Soglia superiore: 100.0 %

Ingresso analogico: *** %

Nome ingresso

Probe

Tipo

NA ☐ NC ☒

Funzionalità

Numero ingresso

Ingresso probe ready: Nessuno

Tipo

NA ☐ NC ☐

Importa Esporta OK Annulla

For the model described here, the correct setting is NC.

With this probe, it is possible to perform surface digitization or use G-code probing functions.

4.1 Surface Digitization

For this function, some parameters must be set in the “RosettaCNC Board Settings→Digitizer” panel. Then the function is started from the “Functions→3D Scanning with Probe” panel.

4.2 G-Code Probing Functions

These functions are activated using G38 codes. See the section [probing](#).

5. Contributions

We thank in advance all those who wish to contribute to improving this documentation by reporting inaccuracies or additional content. Write to: support@rosettacnc.com

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