

RosettaCNC Handwheel A - Installation and Maintenance manual



Dear Customer,


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

Need help ?

Write in the Forum on the www.RosettaCNC.com site or send an email to the following address: support@rosettacnc.com, the RosettaCNC development team will be happy to answer you in a short time.

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Informations

				
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03	02	Add description for RosettaCNC Board B	/	12/12/2018

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1. Introduction

1.1 General description

For the manual movements (jog) there is a RosettaCNC Handwell A accessory. It has an ergonomic shape that makes it easy to use And is contained in a sturdy anti-shock box. It is equipped with magnets that guarantee a reliable fixation, The electrical connection cable with the RosettaCNC controller It is equipped with a steel wire that increases its reliability and a removable connector with anti-vibration spring contacts.

Handwell A has :

- the enable command button
- the emergency button
- a selector for choosing the axis on which to act
- a three-position switch 1 – 1/10 – 1 /100 that defines the encoder unit of measurement.
- an encoder to execute the movement of the selected axis

Note:

- in automatic cycle, the encoder can change the value of the feed override.
- in manual, the enable command button can reset the selected axis.

1.2 Symbols used in the manual



Useful Information and tips.



Warnings, failure to comply with these warnings may result in inappropriate operation or damage to the device.^



Potential danger and possible risk of injury.^

1.3 Package Contents

- n.1 Handwheel
- n.1 wire
- n.1 Mounting bracket
- fixing screws



1.4 Product Identification

With the product ordering code it's possible to obtain exactly the features. Check that the product features match your needs.

1.4.1 Product label



- **a - Ordering Code**
- **b - Week made:** indicates the week and year of manufacture
- **c - Part number:** unique code that identifies an ordering code
- **d - Serial number:** product serial number, different for individual product
- **e - Hardware release:** version of hardware release

1.4.2 Ordering code

The RosettaCNC HandWheel A product is available in the following version:

Model	Part number	Description
94030003	RosettaCNC Handwheel A/CBL	Without connectors
94030004	RosettaCNC Handwheel A/WDA	With connectors ready to use for RosettaCNC Board A
94030005	RosettaCNC Handwheel A/WDB	With connectors ready to use for RosettaCNC Board B

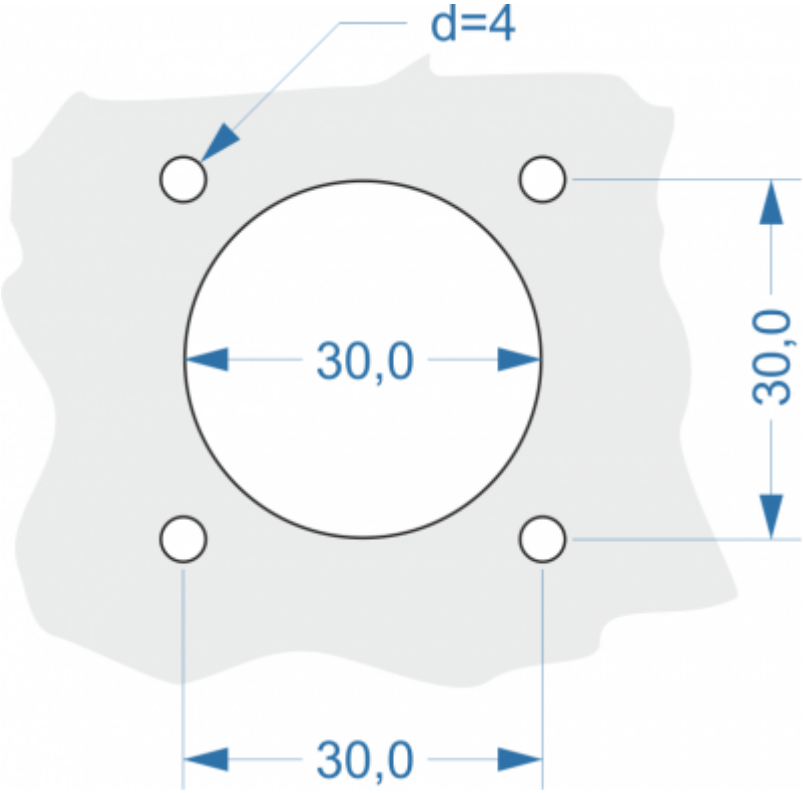
1.4.3 Specification

Name	Description
Emergency button	contact normally closed
Enable button	enable Handwheel commands
Switch	3 positions, 1 - 1/10 - 1/100
Selector	7 positions, OFF - X - Y - Z - 4 - 5 - 6
Encoder	100 divisions for revolution
Cable	with steel wire, length 1,7m (3m stretched)
Support	with magnets

2. Mechanical installation

2.1 Drilling template

Drilling template for the panel connector.




Dimensions in millimeters

3. Connections


3.1 Cable description

3.1.1 Full cable


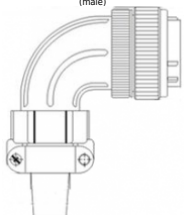
Handwheel						Extension cord				
Handwheel	Operation	Cable	Connector	Colore	PIN	PIN	Colore	Connector	Cable	Color



+5V
0V
A
B
A-
B-
X
Y
Z
4
5
6
X1
X10
X100
COM1
COM2
NC
LED+
LED-


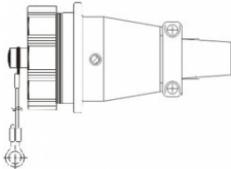


Weipu connectors
WS28J20TS1
(male)



red	10	10	red
black	11	11	black
green	12	12	green
white	13	13	white
violet	15	15	violet
violet/black	16	16	violet/black
yellow	1	1	yellow
yellow/black	2	2	yellow/black
brown	3	3	brown
brown/black	4	4	brown/black
pink	19	19	pink
pink/black	20	20	pink/black
grey	5	5	grey
grey/black	6	6	grey/black
orange	7	7	orange
orange/black	14	14	orange/black
blue	17	17	blue
blue/black	18	18	blue/black
green/black	9	9	green/black
white/black	8	8	white/black
red/black			red/black








Weipu connectors
WS28K20Zxx (femmina)



21 terminals, 1.5mt long shielded cable

11, 21 Non collegato

3.1.2 Terminals only

Encoder		
	Color	Function
red		+5V
black		0V
green		A
white		B
violet		A-
violet/black		B-
Axis selector and multiplier		
yellow		X
yellow/black		Y
brown		Z
brown/black		4
pink		5
pink/black		6
grey		X1
grey/black		X10
orange		X100
orange/black		COM1
Estop		
blue		COM2
blue/black		NC
LED		
green/black		LED+
white/black		LED-

3.2 Connections with RosettaCNC Board A



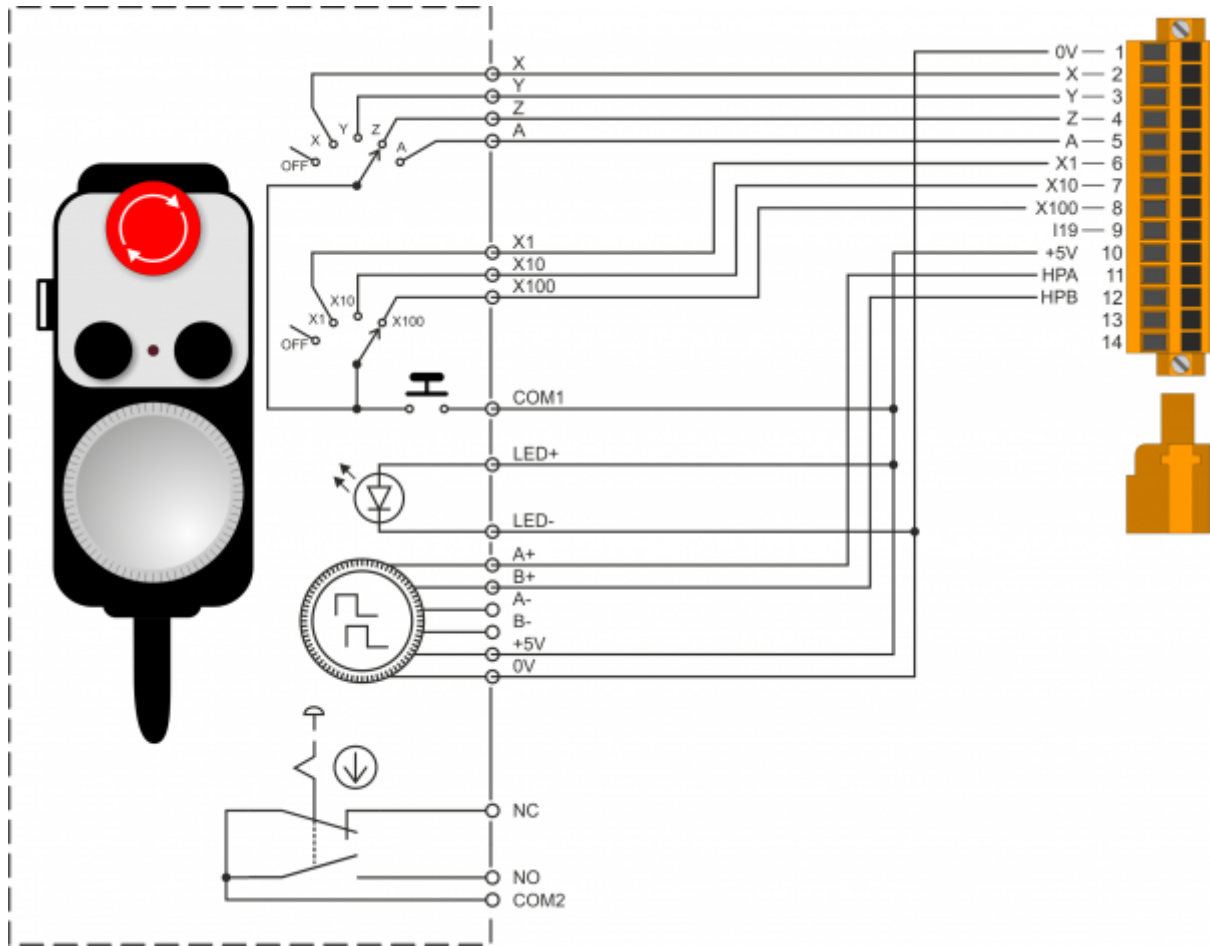
This product is compliant only with RosettaCNC Board A hardware version 1.2 or greater.



Handwheel	Connector CN11 on RosettaCNC Board A	
	black	1
	white/black	
	yellow	2
	yellow/black	3
	brown	4
	brown/black	5
	grey	6
	grey/black	7
	orange	8
		9
	red	
	orange/black	10
	green/black	
	green	11
	white	12
		13
		14
	blue and blue/black	To be connected in series to the emergency stop circuit

The following wires remain disconnected:

- violet
- violet/black
- pink
- pink/black



3.2.1 Installation

To connect the handwheel to the RosettaCNC board A, insert the connector into the CN11 as shown in the picture:





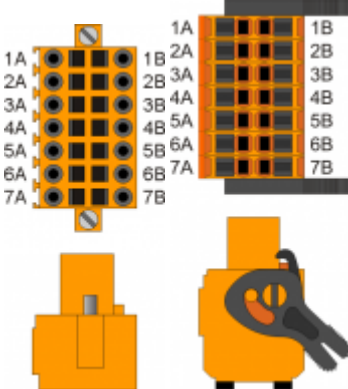







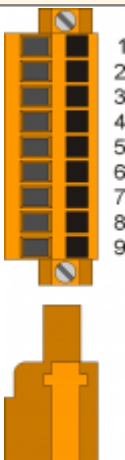










Picture 1. Handwheel Installation



Check the emergency button connection in accordance with the safety circuit of the machine.

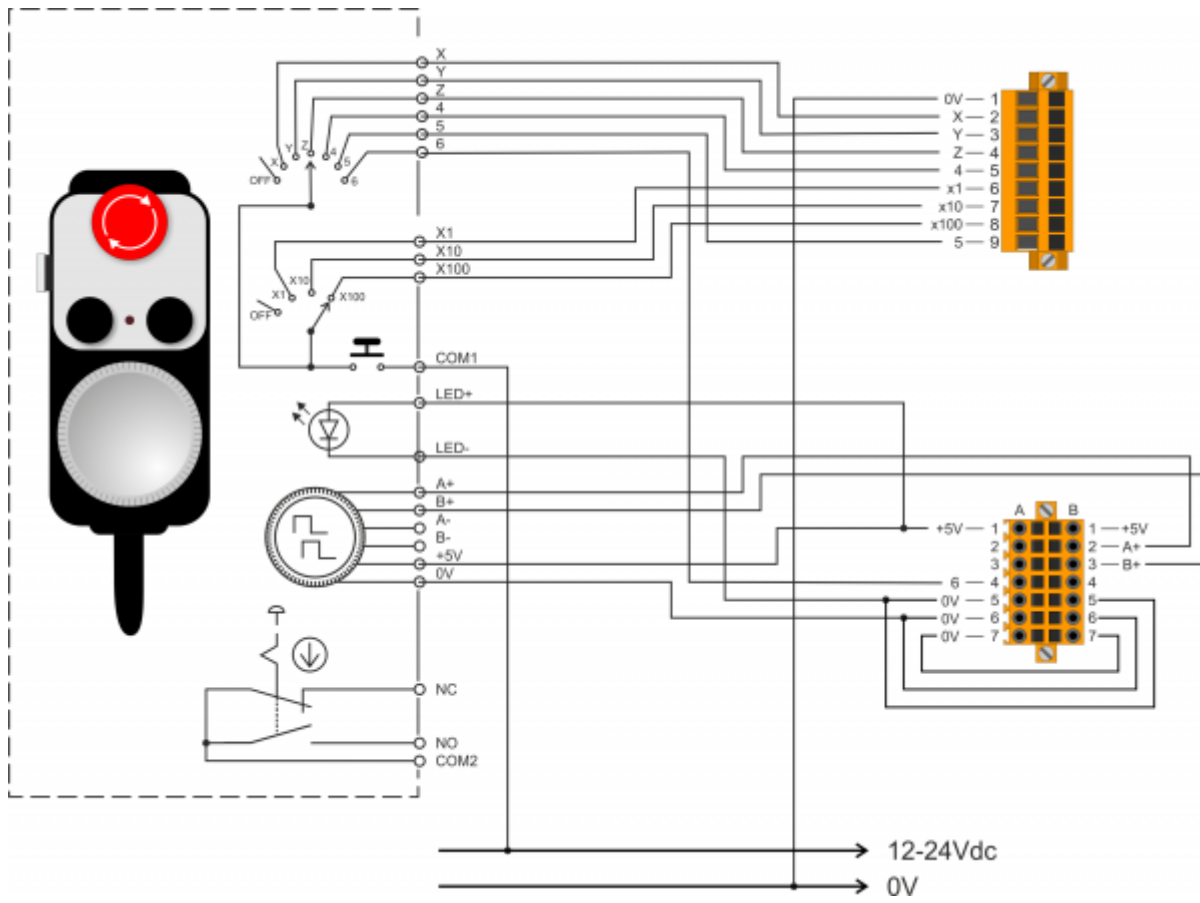
For examples of connection of emergency circuits see the product manual [RosettaCNC Board A](#).

3.3 Connections with RosettaCNC Board B

Handwheel		Connector CN17 on RosettaCNC Board B	
	red 	1A	 Connect: 5A↔5B 6A↔6B 7A↔7B
	green/black 		
	green 	2B	
	white 	3B	
	pink/black 	4A	
	black 	7A	
	white/black 	7B	
		Connector CN19 on RosettaCNC Board B	
	yellow 	2	
	yellow/black 	3	
	brown 	4	
	brown/black 	5	
	grey 	6	
	grey/black 	7	
	orange 	8	
	pink 	9	
orange/black 		To be connect at +24Vdc	
blue  e blue/black 	To be connected in series to the emergency stop circuit		

The following wires remain disconnected:

-  violet
-  violet/black



3.3.1 Installation

To connect the handwheel to the RosettaCNC board B, insert the connectors CN17 and CN19 as shown in the picture:

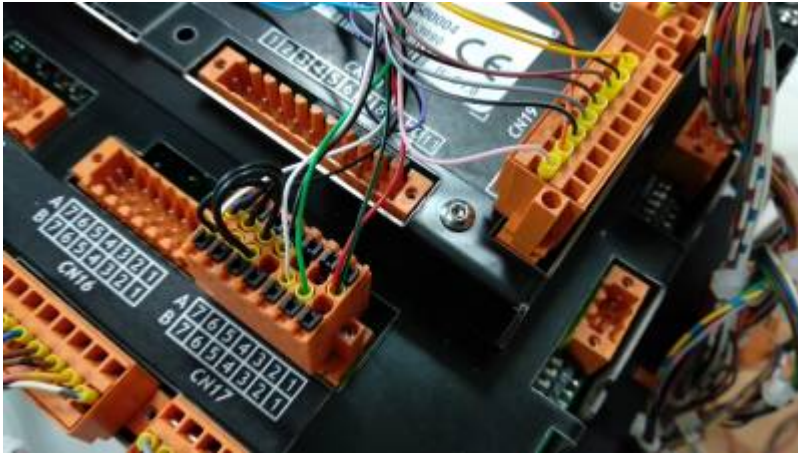


Figure 2. Installation



Check the emergency button connection in accordance with the safety circuit of the machine.

For examples of connection of emergency circuits see the product manual [RosettaCNC Board B](#).

4. Settings

To use the handwheel, you must set the highlighted values in the following picture (In the “RosettaCNC board settings” Panel):

Board Settings

Jog Controller

General | Joystick - Backward | Joystick - Forward

Jog Controller Type: **Handwheel A**

☐ Enable Jog Controller Zero

Jog Controller Zero Time: 3.0 s

Handwheel Pulses per Revolution: 400

Handwheel Velocity: 100 %

Jog Default Mode: Normal

Maximum Interpolated Jog Velocity: 5000 mm/min

Feature

Jog Mode Selector: None

N/O ☐ N/C

When Input is INACTIVE = Jog movements will use what is defined in the Jog Default Mode

When Input is ACTIVE = The Jog movements will be along the tool

Import Export Save Cancel

5. Previous hardware versions

Below are links to consult the previous hardware versions of the product.

Modello	Part number
Hardware version 01	User Manual

6. Acknowledgement

All those who want to contribute to the improvement of this documentation are in advance thanks to the reporting inaccuracies or incorrect content. Write to the address: support@rosettacnc.com

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