

Product Information

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Subject: K4000 Windows Software

1. SET of 2 discs. Copy both discs to a temporary directory and RUN \setup.exe or downloaded K_Winsoft.exe from our internet site (zipped file to unzip and RUN \setup.exe

2. Start Window



"Menu A" and "Working display" Windows are active only in ON-Line mode

3. Password



The Factory Password is: acomel

You can set your own password using **New**

If you forgot your own password, you have to re-install the program. Remove the existing installation first.



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4. Menu B – Operating parameters

| K General Par | t of menu "B" | | × |
|--|---|---|---|
| | Genera | al Part of menu "B" | |
| | Mains voltage 400 Speed ref.filter 1 | [V] Start/Stop © Keypad © T.Block | Partition sel. © Keypad © T.Block |
| Speed units Speed ref.input The second sec | | Revers.allowed - | Revers.way © Keypad © T.Block |
| <u>C</u> T/min | <u>C</u> 010V <u>P</u> art. prog. | Stop by default Free Coast | Catch spin. mot. No Yes |
| Save | <u>D</u> ownload | | |
| <u>O</u> pen | Eull Down. | Print | <u>E</u> xit |
| K4000 | | | |

- **Part. prog.** Access to the partition programming.
- **Print** Print out the complete file. If you are **ON-line** with a drive, the content of the menu A will be printed too. All 32 (64) partitions will be printed.
- **Download** Active only when **ON-Line.** Transfer of the programmed data **into** the K4000 drive. Menu B of the active partition **and** menu C will be downloaded.
- **Full Down.** Download of the 32 (64) partitions from the PC into the drive.
- Save Save be programmed data to your hard disk. A file name will be required. If ON LINE, the 32 (64) partitions will be transferred from the drive to the PC.
 Open Load a programmed file from your hard disk.
- Exit Back to the Main Menu. Will ask to confirm if the modified data must be saved.

For the detailed explanation of the various functions shown, please refer to the User Manual, programming section.

5. Programming the partitions

K4000-software version up to version V12 have 32 possible partitions K4000-software version from version V14 have 64 possible partitions

First enter a Partition Number (between 1 and 64)

| Range nur | nber 1 | - Im>lref | kind of MCM | Imcm1 0.00 | 14 |
|--|---|--|--|---|---------|
| Freq. ctrl. src. — ⓒ Keypad ⓒ T.Block | Iref Source Keypad RTrip | © Stop © Decel. © Nothing | C SH C DTO C Nothing | Imcm3 0.00 Imcm4 0.00 | U U |
| Speed measure — ⓒ No ⓒ Yes | Nbre p Slip in | ulses/revol. 1 % of Fmax. 0 | FCC Braking cur Permanent brakir | c duration 0 rent IFCC 0.00 | * / |
| Nunb Motor nomi Current a Motor o RI con Accele Decele Default fi Minimum fi | er of poles 2 otor power 1.00 hal current 1.00 ccel/decel 1.00 current Iref 1.00 ration time 1.00 ration time 1.00 requency 0.00 equency 0.00 equency 0.00 | (kW) [A] [A] [S] [s] [Hz] [Hz] py | Low frequency : Slip com Preset freque Preset freque Preset freque Prohibited frequ Prohibited frequ Prohibited frequ Prohibited frequ Prohibited frequ | smoothing 0 pensation 0 ncy N*1 0.00 ncy N*2 0.00 ncy N*3 0.00 lency N*1 0 lency N*1 0 lency N*2 0 lency N*2 0 lency N*3 0 | |

• **Copy** Allow to copy the above setting into an other one patition

To open the window to program the U/F characteristic, click on the button $\ensuremath{\text{Prog. U/F}}$

| Partition copy (with | out NEMA) | × |
|------------------------|--------------|---|
| from partitio | on N* 1 | |
| into parti | tion N* 2 | |
| <u>о</u> к | <u>E</u> xit | 1 |
| The value has to be be | etween: 1 64 | • |

Click on **Correction** to start to enter values for the voltages and frequency. At least **one** point must be completed i.e. **Point 1.**

Click on End Nema to close the programming of the U/F characteristic.

| | Ra | nge numbe | ar 1 | | Point U/F 16 | 0 | [V] | 0 | [Hz] |
|-------------|------|-----------|------------|------|--------------|---|-----|---|--------------|
| Point U/F 1 | 1 | [1] | 50 | [Hz] | Point U/F 17 | 0 | [V] | 0 | [Hz] |
| Point U/F 2 | 2 0 | [1] | 0 | [Hz] | Point U/F 18 | 0 | [V] | 0 | [Hz] |
| Point U/F 3 | 3 0 | [V] | 0 | [Hz] | Point U/F 19 | 0 | [V] | 0 | [Hz] |
| Point U/F 4 | 1 0 | [V] | 0 | [Hz] | Point U/F 20 | 0 | [1] | 0 | [Hz] |
| Point U/F | 5 0 | [V] | 0 | [Hz] | Point U/F 21 | 0 | [V] | 0 | [Hz] |
| Point U/F 6 | 5 0 | [V] | 0 | [Hz] | Point U/F 22 | 0 | [V] | 0 | [Hz] |
| Point U/F | 1 0 | [V] | 0 | [Hz] | Point U/F 23 | 0 | [V] | 0 | [Hz] |
| Point U/F 8 | 3 0 | [V] | 0 | [Hz] | Point U/F 24 | 0 | [1] | 0 | [Hz] |
| Point U/F | 3 0 | [7] | 0 | [Hz] | Point U/F 25 | 0 | [1] | 0 | [Hz] |
| Point U/F 1 | 0 | [V] | 0 | [Hz] | Point U/F 26 | 0 | [V] | 0 | [Hz] |
| Point U/F | 110 | [V] | 0 | [Hz] | Point U/F 27 | 0 | [V] | 0 | [Hz] |
| Point U/F 1 | 12 0 | [7] | 0 | [Hz] | Point U/F 28 | 0 | [1] | 0 | [Hz] |
| Point U/F 1 | 30 | [1] | 0 | [Hz] | Point U/F 29 | 0 | [1] | 0 | - [Hz] |
| Point U/F | 4 0 | [1] | 0 | [Hz] | Point U/F 30 | 0 | [1] | 0 | [Hz] |
| Point U/F | 15 0 | [1] | 0 | [Hz] | Point U/F 31 | 0 | [V] | 0 | [Hz] |
| Correction | | Clear | End | NEMA | | | | | |
| Copy NEMA | D | ownload | <u>G</u> r | aph | | | | ſ | <u>E</u> xit |

Using **Correction** you can any time modifive the programming of the U/F characteristic. If you enter 2 points with the sames values, one will be automatically deleted when you click on **End Nema**

For the detailed explanation of the various functions shown, please refer to the User Manual, programming section.

6. Display of the programmed characteristic

Click on the button **Graph** to see a graphic representation of the U/F charasteristic.



Entering a value in the filed ${\bf U}$ and moving to the field ${\bf F}$ or vice a versa, will automatically display the reversed value

A click on the button Exit will close the window and go back to the previous window.

Once you have completed the programming of the partitions, close the various windows and leave the partition programming part using **Exit**. Once back to the **general part of the menu B**, if you don't use the **Save** button, and leave using **Exit** too. You will be asked to confirm if you want to save the changes or not?



7. Programming the Menu C

| Relay's | Relay's No | | Relay's | |
|--------------------------|-----------------------------------|------------------------|------------------|--|
| | - 1 2 3 4 5 | Kelay's | - 1 2 3 4 | |
| Reached frequency | 0 0 0 0 0 0 | Alarm output | 00000 | |
| Reached speed | • • • • • • • • • • • • • • • • • | Faillure | | |
| Zero frequency | • • • • • • • • • • • • • • • • • | External interlock | | |
| Zero speed | • • • • • • • | Converter overload | | |
| Start/stop | • • • • • • • | Auxiliary power supply | | |
| Motor overload | • • • • • • • | Motot temperature(PTC) | 00000 | |
| MCM output | | Converter Temperature | | |
| Slip output | 000000 | Main anomly | 00000 | |
| Comparator output | 0 0 <mark>0</mark> 0 0 0 | | | |
| Comparator level | [V] 0 | | | |
| elay on relay activation | 0 [s] | | | |
| Analog output No:1 | ⊙ Fs C Im C N | CPw Clw CUs | <u>D</u> ownload | |
| Analog output No:2 | • Fs O Im O N | CPw Clw Cls | <u>E</u> xit | |

Allocating the **comparator output** of the programmable analog input to a relay (here the relay 3), will open the corresponding fields t input the voltage value and the delay time as shown on the following picture.

The button **Download** is active only when **ON-Line.** A click on **Download** will transfer to the drive **only** the programming of the menu C.

8. Working ON-Line

Make the connection

| C Français | MENU "A" | |
|---------------------------------------|-----------------------|--|
| English | MENU "B" | |
| C Italiano | MENU " <u>C</u> " | |
| C Portuges | Working display | |
| | <u></u> | |
| Communication port | | |
| Communication port © 1 C 2 C 3 C 4 | Abou <u>t</u> | |

To activate the connection, just activate ON

The menu A: the inverter parameters

| Maximum Current | 23 [A] |
|--------------------|---------------|
| Softwareversion | v14:5.10.2001 |
| Date of delivery | 16.10.1 |
| Serial number | 4015.11000.1 |
| Running timer | 0 |
| Power applied time | 0 |

The function **Download** is for engineering purpose only and not accessible by the user of this program

Accessing to menu B when ON-Line

| | General F | Part of menu "B" | |
|--|---|--|---|
| Dalas kata | Mains voltage 400 Speed ref.filter 1 | [V] Start/Stop © Keypad © T.Block | Partition sel. © Keypad © T.Block |
| Delay between failure _stop 0 [s] Speed units Speed ref.input © Hz © +/-10V | | Revers. allowed No Yes | C T.Block |
| ○ T/min | © 010V Part. prog. | Stop by default Free Coast | Catch spin. mot. No C Yes |
| Save | Download | | |
| Open | Full Down | Print | Exit |

- **Download** Active only when **ON-Line.** Transfer of the programmed data **into** the K4000 drive. Menu B of the active partition **and** menu C will be downloaded.
- Full Down.Save
- Download of the 32 (64) partitions from the PC into the drive.
- Save When ON LINE, the 32 (64) partitions will be transferred from the drive to the PC.

You will have to input the partition(s) you want to download into the drive. You want just the partition No 1, input: from 1 to 1; you want the first 4: input from 1 to 4; you want all 32 (64): input from 1 to 32 (64). If you download all partitions it could take few minutes.

| from partit | ion N* 🚺 |
|-------------|--------------|
| <u>n</u> k | <u>E</u> xit |
| <u>n</u> k | <u>E</u> xit |

The Working window

| Re | ange number 1 | | | |
|------------------|-----------------------|------------------|----------------|-----------|
| | | 1 | | Status |
| Fc(Hz |) = 0.09 | Ur(V) = | 413 | Relays1 X |
| FíHz | 1= 0 | lw(A) = | 0 | Relays2 |
| | | | 0 | Relays3 |
| ILA | J = 0 | Pm(Kw) = | U | Relays4 |
| U(V |] = 7 | Udc(V) = | 8 | Treidyss |
| | | | | |
| Iref(A | .) = 1.00 | Inom(A) = | 1.00 | |
| lacc[/ | A) = 1.00 | Pnom(Kw) = | 255.26 | |
| ENU " <u>D</u> " | Re <u>y</u> ers. rot. | De <u>f</u> ault | Re <u>s</u> et | 1 |
| | | | | |

The time shown under left of the window is the clock of your computer

A click on the button **Default** will display the actual failure (in failure status)

Upper right on the window, the status of the 5 output relays are displayed. The **General Failure** being a reverse function, is activated when the drive is ready.

You can :

- reverse the rotation direction "Revers. Rot." If allowed in Menu B,
- enter a new speed "New setpoint",
- change your default frequency "Def. Freq.",
- Start, Stop and Reset the drive, and
- Access to the menu D

The menu D, accessible on START

| K Menu D | | | | × |
|--|--|-------------------|--|----------|
| Freq. ctrl. src. © keypap © T.block | -kind of M0 | CM — | Imcm1 0.00 [A] Imcm2 0.00 [A] Imcm3 0.00 [A] Imcm4 0.00 [A] | |
| Filter frequeny Acceleratio Deceleratio FCC d | control 5 on time 1.00 on time 1.00 uration 0 | [s] [s] [s] | Braking current IFCC 0.00 [Permanent braking current 0.00 [Low frequency smoothing 0 Slip compensation 0 | A] A] |
| | | (<u>E</u> | xit | |
| K4000 | | | | |

For the detailed explanation of the various functions shown, please refer to the User Manual, programming section.

9. The location of the serial connector

The serial link D-sub connector is located in the front of the control board. It can be set in RS422 or RS232. For direct link to a computer, use the RS232, a "one to one, female – female" cable. The transfer speed is 9600 bauds.

