

Subject: Energy Saving Motor Series, Speed Programming Unit CBC000-AC02-02
Clarifications to Installation and Programming Instructions

- **Never** attempt to program an ESM motor with AC power applied to the motor. The motor only needs to have the programming hardware attached to the motor.
- The programming hardware is connected to the ESM motor by removing the circular plug on the back of the motor (photos a and b). A wide blade slotted screwdriver is needed to rotate the plug a quarter turn. Note that the plug must be correctly re-installed after the programming is complete to prevent any water from entering the motor during operation. The custom black connector on the programming interface is keyed so it can only be inserted one way into the motor (photo c). Insert the connector carefully into the motor so that full contact is made with the female connector on the board of the motor. Do not tilt the connector during insertion or apply force to the connector while programming to avoid damage.



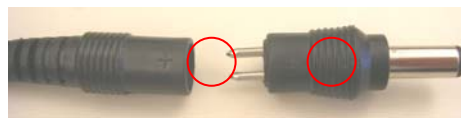
- Follow the attached instruction sheet closely. It will result in a successful installation in the majority of applications if every step is followed exactly.
- ESM programming software is not included with the programming hardware kit. It is available as a free download at www.ebmpapst.us, in the "Download" area of the ESM page. The final downloaded program is approximately 462 KB in size with a total of 19 individual files.
- See page 3 of the attached instruction sheet. The various AC plug adapters are not included with the hardware kit as shown in the top photo. An AC adapter for the country of use must be supplied by the user. The default plug included in the kit is a male, 2 prong Western European style (Germany) plug (photo d). The adapters will slide over the 2 prongs (photo e). The allowable input voltage is 100 – 240VAC, 50/60Hz. This will allow use without a transformer for many geographic areas of use.



- Make sure that the variable output AC power adapter is set to 9VDC by confirming the setting of the yellow rotary switch on the device (if the green LED on the interface does not light due to voltage variations, increase voltage to 12V by choosing "12V" on the rotary switch) (photo e).



- Make sure that the output polarity on the AC power adapter is correct. The polarity can be changed by rotating the detachable tip 180 degrees. The correct setting on the male tip is so that the internal contact is + and the external contact is -. This is accomplished by aligning the + and + signs molded on the plug and tip. See the diagram near the yellow rotary switch for clarification (photos f, g and h).



- Do not install the hardware until instructed to do so by the epM installation sheet.
- After the initial program is installed, and the programming hardware is plugged into a USB port, Windows will prompt you to install a driver. There will be **two** drivers that require installation, first the USB High Speed Serial Converter will be installed per the instruction sheet, and the process repeats itself to install the USB Serial Port driver. Once this is complete, page 6 of the instruction sheet shows how to select the proper USB called out at the "COM X" port. This is required to establish communications to the fan.

- If you use a USB port that is different from the one used during the initial installation, you will need to re-install the USB Serial Port driver for that particular port. The software will not automatically switch to the new USB port.
 - The M1G055-BD97-47 and some customized ESM products can not be programmed because they have no programming interface.
-

Installation and operating instruction for software 03-065-05 and programming adapter with accessories:

Please note:

Connect the programming adapter with your PC only after software has been installed, as the required USB drivers are only available then!

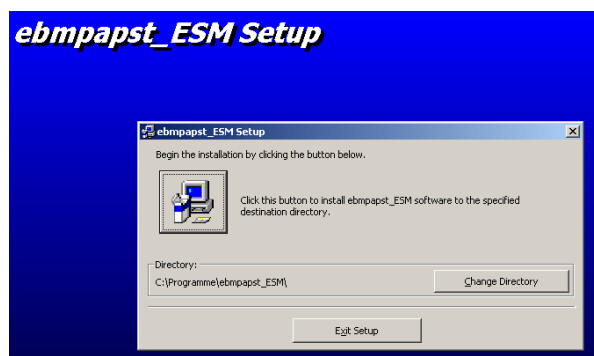
Software installation:

Start the installation process by executing the “**setup.exe**” on the supplied CD-ROM.

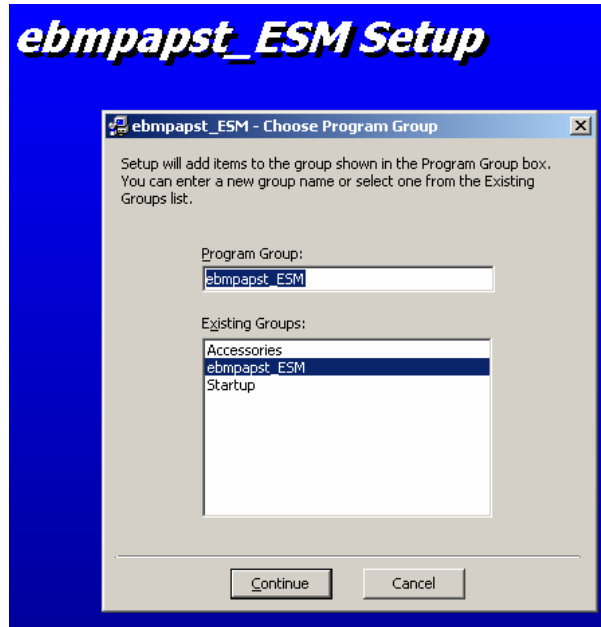


Select a directory for installation.

Please note the selected directory, as the USB drivers must be saved there as well!



Group "ebmpapst_ESM" is added to the group of programmes.



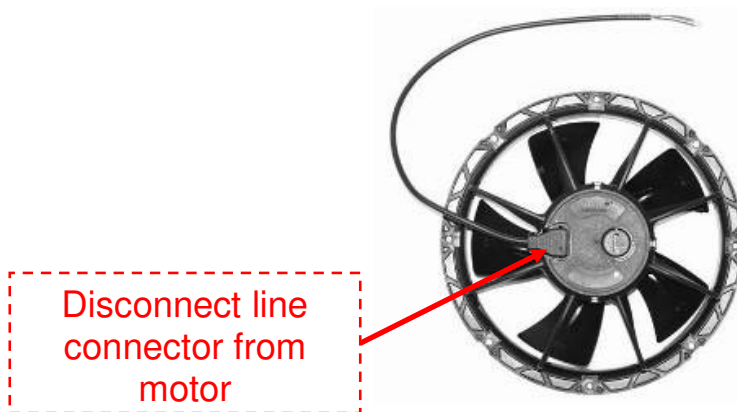
There will be a notification, when set up has been completed successfully

Taking the programming adapter into operation:

Warning:

The programming adapter may only be connected and operated by a qualified technician!

Disconnect system respectively motor from mains as shown in this picture!



Voltage supply of the programming adapter:

The programming adapter may only be supplied with power via the plug-in power supply unit included in the scope of delivery!

The plug-in power supply unit comes with a set of plug-in adapters for the different mains terminals in the EU, the US, the UK, and Asia. The voltage range is 9-15 VDC.



Mounting the connector cables:



Description of the LED signals:



A green LED shows that supply voltage is present.

A yellow LED lights up with every data transmission.

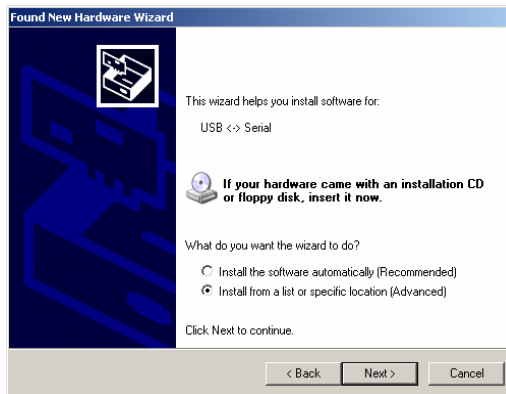
Once the red LED comes up, there is a transmission failure → check connections and terminals.

Driver installation:

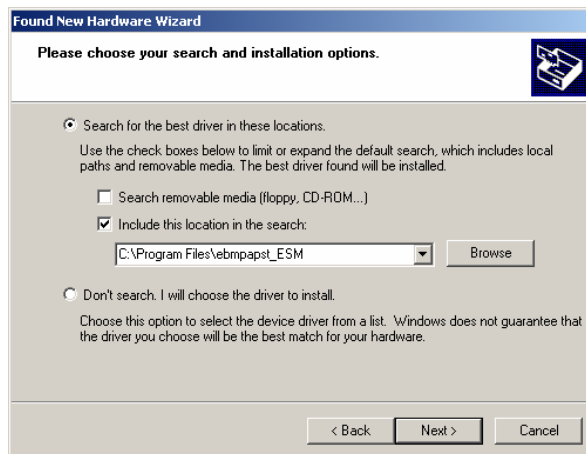
After software installation and the connection of USB adapter to PC, the installation starts up:

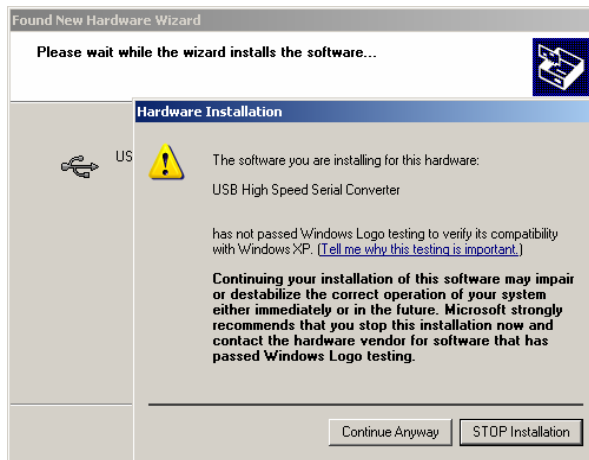


Please decline the offer to connect to Windows Update.

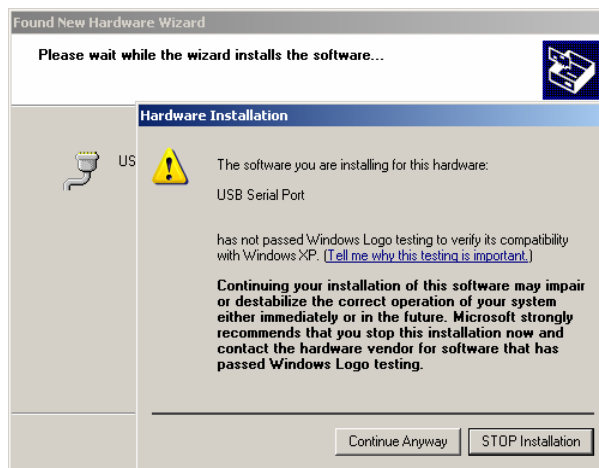


Activate the procedure for advanced users and continue.





Ignore the Windows-Logo testing and continue with the installation



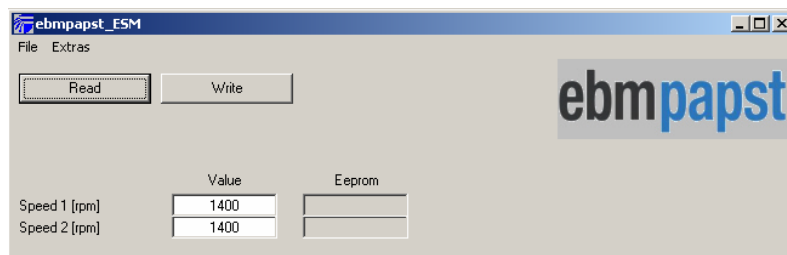
Once the USB High Speed Serial Converter has been installed, the hardware assistant restarts. Follow the same routine to also install the USB Serial Port.

Starting the software:



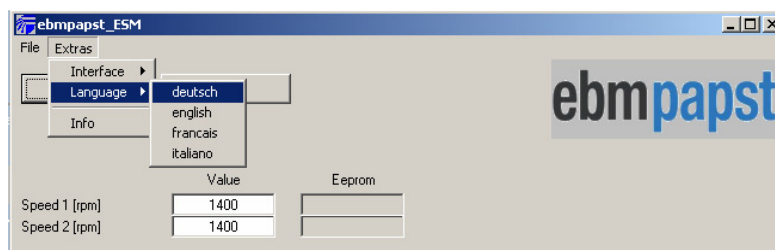
Once the driver installation has been completed, the software can be started via the newly generated “ebmpapst_ESM” button in the programme group.

As soon as the software is started, the following window appears:

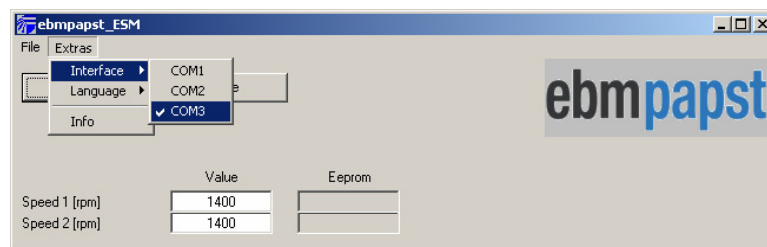


The programme automatically selects the speed settings 1400 rpm from the **03-065-xx.dat** file.

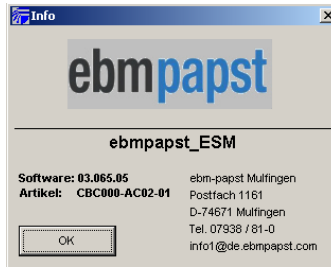
EXTRAS - Language: the user may select a language



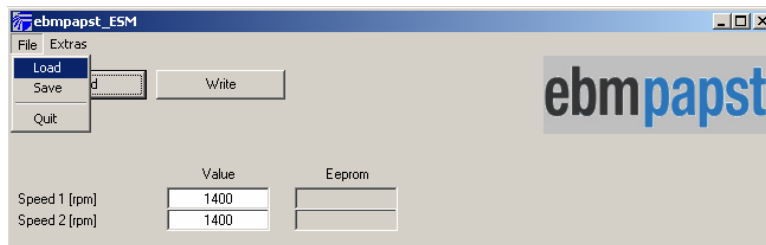
EXTRAS - Interface: Select the COM-Port. The last COM-Port number indicates the USB Port.



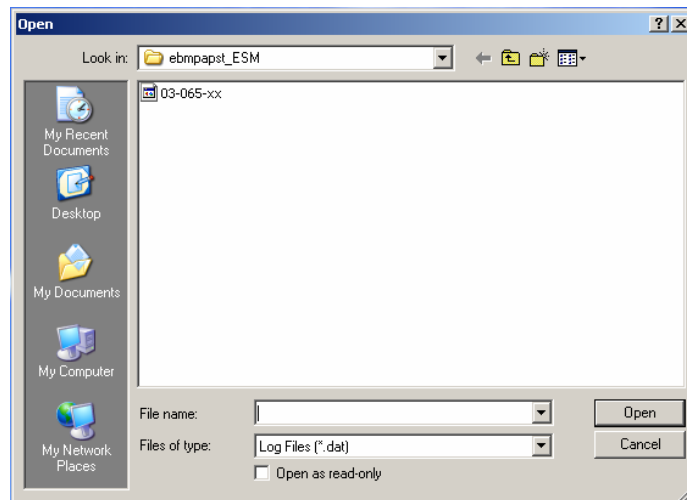
EXTRAS - Information:



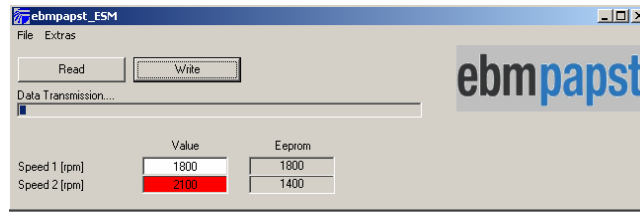
FILE - Loading: data files with customized speed values may be generated.



FILE - Saving: Data that has been read in or modified may be saved under different name

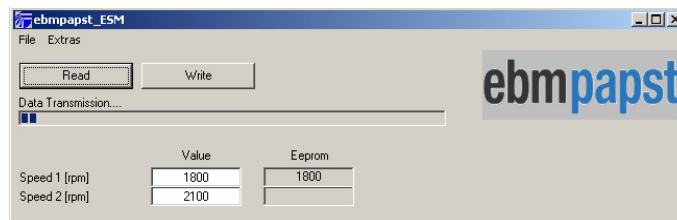


WRITE:



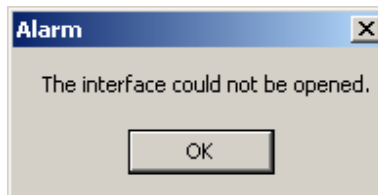
The present state of the data transmission is indicated on the run time bar. For as long as the entered values have not yet been transmitted, the corresponding boxes are held in red. Once data transmission has been completed successfully, these red boxes change to white.

READ:

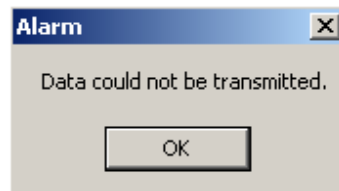


All data are read from the Eeprom. State of data transmission is indicated via run time bar.

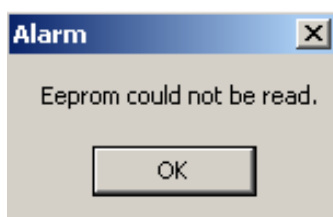
Interface alarm: If the USB programming unit is not connected



Data alarm: If the connection between PC and programming unit is interrupted



EEPROM alarm: If the connection between programming unit and motor is interrupted



Motor still connected to mains:



Safety advice: Motor **only** to be programmed when disconnected from mains supply!

Data file_03-065-xx.dat

Structure of the data file:

[SPEED_1]
1400
0
3000

[SPEED_2]
1400
0
3000

Description of the data file:**[SPEED_1]**

This declaration defines the first speed (rpm).

1400

Set value automatically displayed in the field for the first speed after software is started.

0

The minimum value permitted to be set in the software.

3000

The maximum value permitted to be set in the software.

[SPEED_2]

This declaration defines the second speed (rpm).

1400

Set value automatically shown in the field for the second speed after the software is started.

0

The minimum value permitted to be set in the software.

3000

The maximum value permitted to be set in the software.

Description of the ini-file 03-065-xx.ini**Structure of the ini-file:**

[SPRACHE] (language)
english.ini

[AUSWAHL] (selection)
deutsch
english
francais
italiano
xxxxxxx

[COM]
3

Description of the ini-file:

[SPRACHE] (language)
The selected language is shown, i.e. the language file english.ini is accessed and the texts on the user surface are converted accordingly.

[AUSWAHL] (selection)
Languages to be selected from are listed.

[COM]
The number of the selected COM Port. The last COM port designates the USB connection.