



COMBICOM ACCESSORIES

INSTRUCTIONS FOR USE | INSTALLATION USB SERIAL CONVERTER

Translation of the original manual
Document 20094859 EN 01



Preface

The hardware and software described in this document are products of KEB. The information contained in this document is valid at the time of publishing. KEB reserves the right to update this document in response to misprints, mistakes or technical changes.

Signal words and symbols

Certain procedures within this document can cause safety hazards during the installation or operation of the device. Refer to the safety warnings in this document when performing these procedures. Safety signs are also located on the device where applicable. A safety warning is marked by one of the following warning signs:

DANGER	Dangerous situation, which will cause death or serious injury if this safety warning is ignored.
WARNING	Dangerous situation, which may cause death or serious injury if this safety warning is ignored.
CAUTION	Dangerous situation, which may cause minor injury if this safety warning is ignored.
NOTICE	Situation, which can cause damage to property if this safety warning is ignored.

RESTRICTION

Used when the following statements depend on certain conditions or are only valid for certain ranges of values.



Used for informational messages or recommended procedures.

More symbols

- ▶ This arrow starts an action step.
- / - Enumerations are marked with dots or indents.
- => Cross reference to another chapter or another page.



Note to further documentation.
www.keb.de/service/downloads



Laws and guidelines

KEB Automation KG confirms with the EC declaration of conformity and the CE mark on the device nameplate that it complies with the essential safety requirements.

The EC declaration of conformity can be downloaded on demand via our website. Further information is provided in chapter "Certification".

Warranty and liability

The warranty and liability on design, material or workmanship for the acquired device is given in the general sales conditions.



Here you will find our general sales conditions.
www.keb.de/terms-and-conditions



Further agreements or specifications require a written confirmation.

Support

Although multiple applications are referenced, not every case has been taking into account. If you require further information or if problems occur which are not referenced in the documentation, you can request the necessary information via the local KEB agency.

The use of our units in the target products is outside of our control and therefore lies exclusively in the area of responsibility of the customer.

The information contained in the technical documentation, as well as any user-specific advice in spoken and written and through tests, are made to best of our knowledge and information about the intended use. However, they are regarded as being only informal and changes are expressly reserved, in particular due to technical changes. This also applies to any violation of industrial property rights of a third-party. Selection of our units in view of their suitability for the intended use must be done generally by the user.

Tests can only be done within the intended end use of the product (application) by the customer. They must be repeated, even if only parts of hardware, software or the unit adjustment are modified.

Copyright

The customer may use the instructions for use as well as further documents or parts from it for internal purposes. Copyrights are with KEB and remain valid in its entirety.

This KEB product or parts thereof may contain third-party software, including free and/or open source software. If applicable, the license terms of this software are contained in the instructions for use. The instructions for use are already available to you, can be downloaded free of charge from the KEB website or can be requested from the respective KEB contact person.

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1 Basic Safety Instructions

The USB serial converter has been developed and built in accordance with the state of the art and recognised safety regulations. Nevertheless, the function of the machine may cause danger to life and limb of the user or third parties or damage to the machine and other property.

NOTICE



Safety rules and hazards.

- ▶ The safety instructions listed in this manual apply in addition to the basic safety instructions for the drive controller !
- ▶ These can be found in the corresponding instructions for use.
- ▶ All instructions for use are available in the download area of www.keb.de.

1.1 Target group

This manual is intended for use by qualified electricians only. Qualified electricians as defined in this manual must have the following qualifications:

- Knowledge and understanding of safety instructions.
- Skills for installation and assembly.
- Start-up and operation of the product.
- Understanding of the function in the used machine.
- Recognition of dangers and risks of electrical drive technology.
- Knowledge of *DIN IEC 60364*.
- Knowledge of *EN 60664-1*.
- Knowledge of national safety regulations (e.g. *DGUV Regulation 3*).

2 Product Description

The USB serial converter is used for the connection of KEB drive controllers, operators or controls with DIN 66019 interface or HSP5 interface at the USB port of a PC. It represents a virtual COM interface on PC side.

The USB-serial converter is not a commercial USB converter. It can be used exclusively for communication with KEB devices with the above mentioned interfaces. The converter must be plugged directly on the interface. A 0.2 m, 1:1 cable can be used as extension. Use adapter DSUB9 to RJ45 (.00F50C0.-0020) to connect the HSP5 interface by RJ45 socket.

2.1 Intended use

The KEB USB-serial converter is exclusively for operation on KEB drive controllers, operators or controls. The adapter is not a standard USB converter. The operation of other electrical consumers is prohibited and can lead to the destruction of the devices.

The used semiconductors and components of KEB Automation KG are developed and dimensioned for the use in industrial products. If the product is used in machines, which work under exceptional conditions or if essential functions, life-supporting measures or an extraordinary safety step must be fulfilled, the necessary reliability and security must be ensured by the machine builder.



Operating our products outside the limits specified in the technical data will result in the loss of any claims for damages.

2.2 Order data

Product	Material number
USB serial converter	0058060-0040
USB cable type A → type B, 3 m (included)	00F50C4-1030
Adapter DSUB9 to RJ45	00F50C0-0020
<i>Table 1: Order data</i>	

3 Hardware

3.1 Overview USB serial converter

	<p>D-Sub-DE-9 -pole (male)</p> <p>DIN 66019 (RS 232) / HSP5 (TTL level)</p>
	<p>Top view</p>
	<p>USB socket type B</p>
<p><i>Figure 1: Overview USB serial converter</i></p>	

3.2 Technical data

USB serial converter	
Dimensions in mm (HxWxL)	20x35x88
Weight in kg	0.3
Ambient conditions during operation	-10°...45°C
Ambient conditions at storage	-25°...70°C
Climatic category (<i>EN60721-3-3</i>)	3K3
Voltage supply	via interface
Potential isolation	Internal potential isolation
<p><i>Table 2: Technical data</i></p>	

4 Software

The serial D-Sub interface supports:

- DIN 66019 II (RS 232)
- HSP5 (TTL level)

The type of interface is automatically detected.

If the DIN 66019-protocol is used on the serial side, the "DIN 66019-protocol USB" is only physically converted to the "DIN 66019-protocol RS232" in the USB serial converter and the log data remains unchanged.

If the HSP5 protocol is used on the serial side, the "DIN 66019 protocol-USB" is converted to the "HSP5 protocol-TTL level" in the USB serial converter.



Specification of the HSP5 interface

www.keb.de/fileadmin/media/Manuals/knowledge/04_techinfo/01_inverter_servo/specification_hsp5.pdf



The following KEB services are supported:

No.	Meaning
0	Read / write the parameter value (extended set-addressing)
1	Read / write the parameter value (default set-addressing)
18	Read process data telegram type 3 (timestamp, 2 x 32, 2 x 16 bit)

No automatic baud rate search is supported. The baud rate is adjusted via the used program e. g. The baud rate can be adjusted in the range of 2400 Baud...115.2 kBaud.



The default value of 38.4 HSP5 kBaud should not be changed.
At DIN66019 on F5 the value of 9.6 kBaud should be used.

NOTICE

The baud rate of the connected unit (=> unit parameter) and the driver setting for the used COM port must be adjusted equal.

4.1 Manual Driver Installation

1. The *.inf-file must be assigned once to the system on the PC.



The installation must be made separately for each USB port.

2. The assistant for new hardware opens automatically, if the converter is connected to a not yet configured for USB serial converter.
3. The *.inf-file is located in a „USB driver package“.The "USB driver package" can be downloaded under www.keb.de → Download → Search for: "USB driver package" can be loaded. "USB driver package".
4. Set the path in which the "kebcdc.inf" and "kebcdc.cat" files are found.
5. Finish the installation.



Computers with Windows 7 and later do not ask for a driver because a ST Electronic driver is automatically installed by the system.The function is given, but is recognized as USB converter, not as KEB device.If required it can be replaced manually.

NOTICE

With the USB converter the parameter files can not be read-out with COMBIVIS 5 from the COMBIVERT F5 when connected via HSP5.

4.2 Use among Combivis 5.6

When using the USB serial converter KEB under COMBIVIS 5.6 some things have to be considered:

- The communication settings are run in serial protocol DIN 66019, even if the converter is connected to an interface of a HSP5 COMBIVERT F5 or COMBIVERT B6. The protocol HSP5 is always converted to DIN 66019.
- The RTS delay must be between 3000ms and 5000ms set.By the delay transmission of the data is somewhat slowed, whereby the converter has sufficient time to process the data.

The configuration settings in COMBIVIS 5.6 can be reached under the menu bar Edit -> Configuration -> DIN 66019.

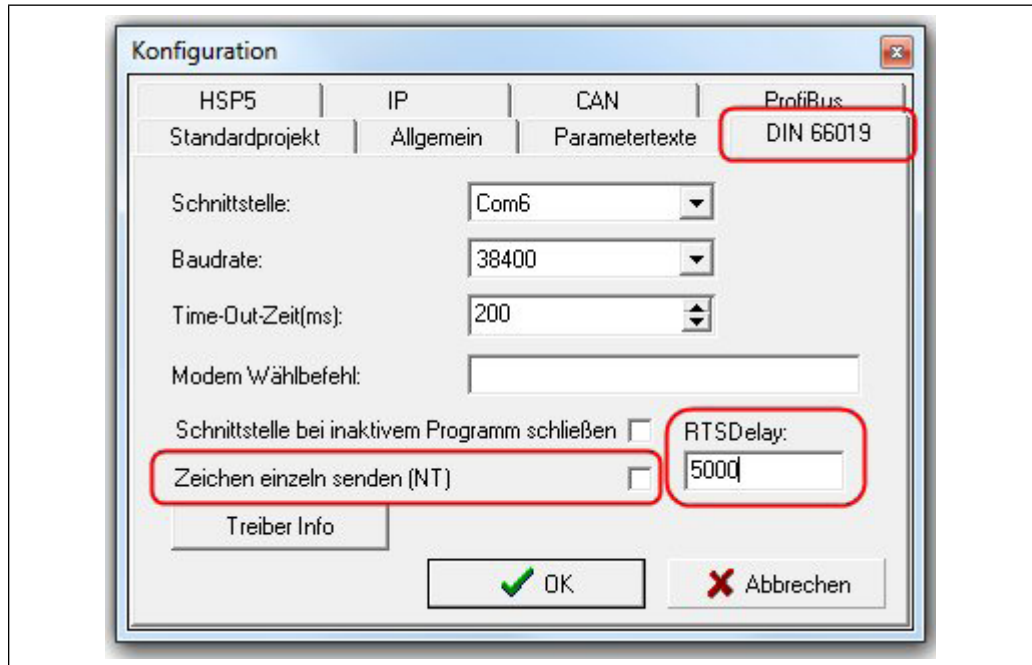


Figure 2: Configuration



In the menu item "Send single" remove the tick.



The driver must be installed manually, => „4.1 Manual Driver Installation“. Exception: The driver has already been installed automatically by COMBIVIS 6.

The COM interface used by the USB converter must be entered. Located at Windows Control Panel under Device Manager -> Ports (COM und LPT). Interface numbers can be selected from 0 to 9. If the detected interface has a higher number, it must be renamed in the Device Manager.



Only one USB converter can be used per PC.

4.3 Use under COMBIVIS 6

When using COMBIVIS 6 and later, identification takes place completely automatically via Plug & Play.

Further information on COMBIVIS 6 is described in the instructions for use.



COMBIVIS 6 instructions for use



5 Certifications

5.1 CE certification

CE marked USB-serial converters are designed and manufactured in compliance with the EMC Directive (2014/30/EU) and the directive for Hazardous Substances in Electrical and Electronic Equipment Directive (2011/65/EU). The harmonized standards of the series *EN 61000-6-2* and *EN 61000-6-4* are applied.

6 Revision History

Version	Date	Description
00	2014-10	Switched to document view
01	2021-09	Adaptation to new KEB-CI

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