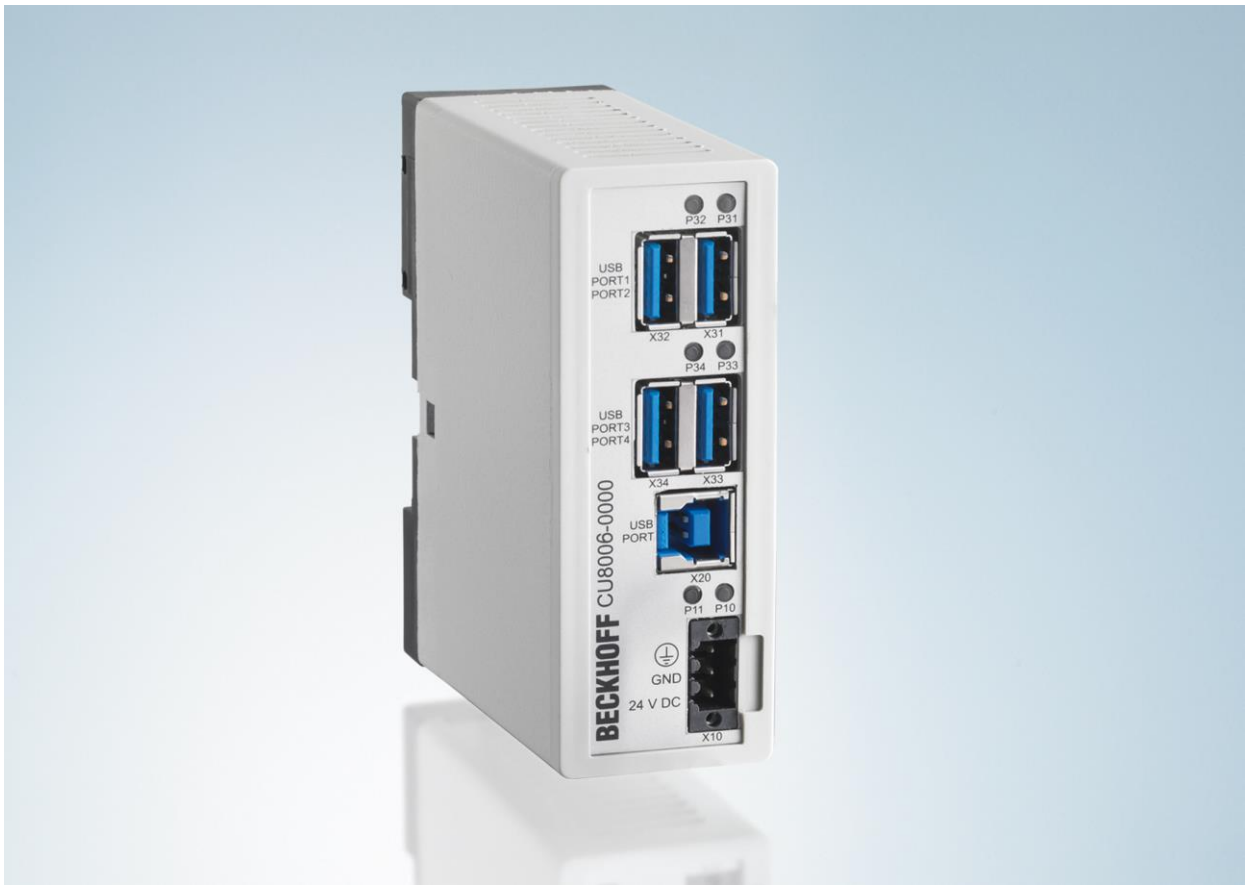


Installation- and Operating instructions for

CU8006-0000

4-Port USB 3.0 Hub

Version: 1.4
Date: 2025-08-18

BECKHOFF

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1 Foreword

1.1 Notes on the Documentation

This description is only intended for the use of trained specialists in control and automation engineering who are familiar with the applicable national standards. It is essential that the following notes and explanations are followed when installing and commissioning these components.

The responsible staff must ensure that the application or use of the products described satisfy all the requirements for safety, including all the relevant laws, regulations, guidelines and standards.

1.1.1 Liability Conditions

The documentation has been prepared with care. The products described are, however, constantly under development. For that reason the documentation is not in every case checked for consistency with performance data, standards or other characteristics. In the event that it contains technical or editorial errors, we retain the right to make alterations at any time and without warning. No claims for the modification of products that have already been supplied may be made on the basis of the data, diagrams and descriptions in this documentation.

1.1.2 Trademarks

Beckhoff®, TwinCAT®, EtherCAT®, Safety over EtherCAT®, TwinSAFE® and XFC® and XTS® are registered trademarks of and licensed by Beckhoff Automation GmbH.
Other designations used in this publication may be trademarks whose use by third parties for their own purposes could violate the rights of the owners.

1.1.3 Patent Pending

The EtherCAT Technology is covered, including but not limited to the following patent applications and patents: EP1590927, EP1789857, DE102004044764, DE102007017835 with corresponding applications or registrations in various other countries.
The TwinCAT Technology is covered, including but not limited to the following patent applications and patents: EP0851348, US6167425 with corresponding applications or registrations in various other countries.

1.1.4 Copyright

© Beckhoff Automation GmbH & Co. KG.
The reproduction, distribution and utilization of this document as well as the communication of its contents to others without express authorization are prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or design.

1.1.5 State at Delivery

All the components are supplied in particular hardware and software configurations appropriate for the application. Modifications to hardware or software configurations other than those described in the documentation are not permitted, and nullify the liability of Beckhoff Automation GmbH & Co. KG.

1.1.6 Delivery conditions

In addition, the general delivery conditions of the company Beckhoff Automation GmbH & Co. KG apply.

1.2 Description of safety symbols

The following safety symbols are used in this operating manual. They are intended to alert the reader to the associated safety instructions.

 **DANGER**	**Acute risk of injury!** If you **do not** adhere the safety advise adjoining this symbol, there is immediate danger to life and health of individuals!
 **WARNING**	**Risk of injury!** If you **do not** adhere the safety advise adjoining this symbol, there is danger to life and health of individuals!
 **CAUTION**	**Hazard to individuals!** If you **do not** adhere the safety advise adjoining this symbol, there is obvious hazard to individuals!
Attention	**Hazard to devices and environment** If you **do not** adhere the notice adjoining this symbol, there is obvious hazard to materials and environment.
 **Note**	**Note or pointer** This symbol indicates information that contributes to better understanding.

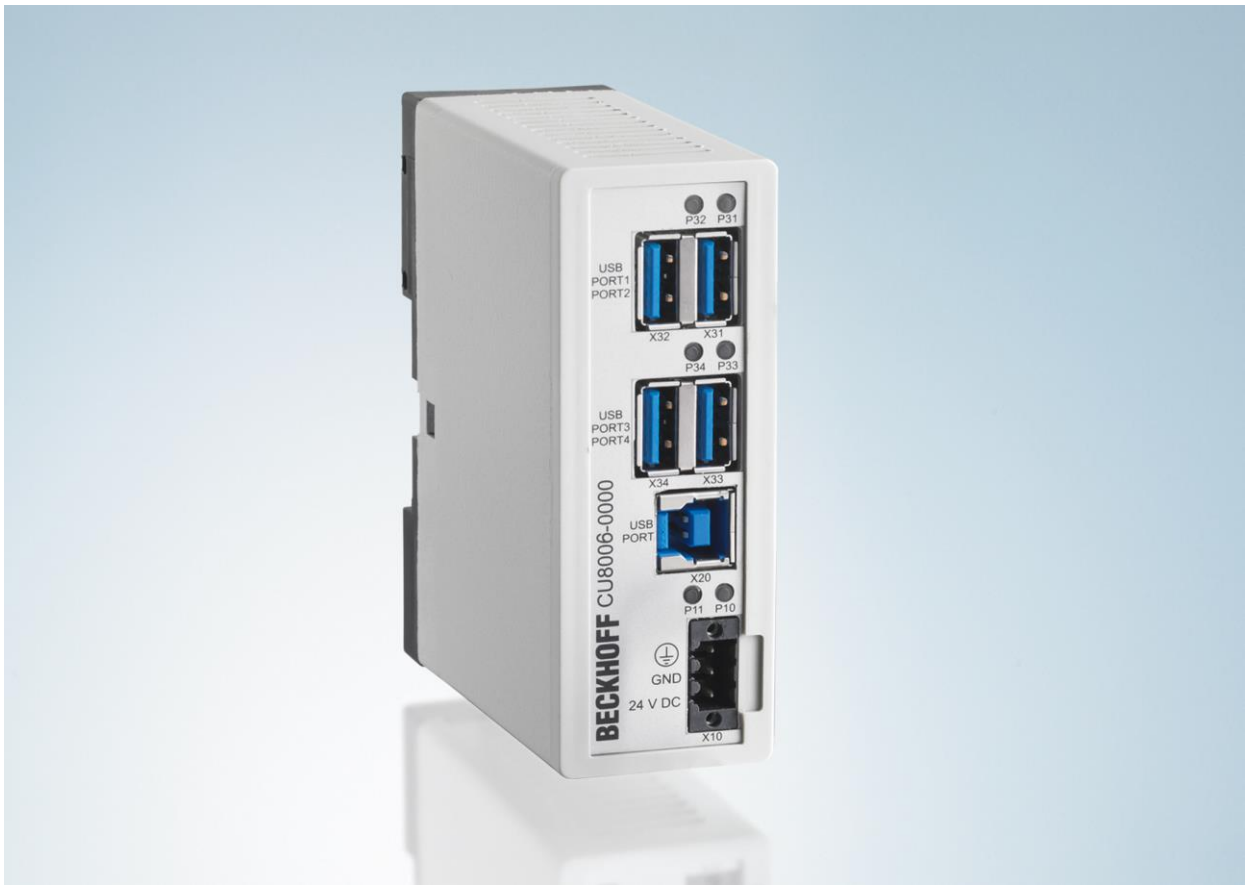
1.3 Operator’s obligation to exercise diligence

The operator must ensure that

- the product is only used as intended (see chapter *Product Description*)
- the product is in a sound condition and in working order during operation (see chapter *Maintenance*)
- the product is operated, maintained and repaired only by suitably qualified and authorized personnel
- the personnel is instructed regularly about relevant occupational safety and environmental protection aspects, and is familiar with the operating manual and in particular the safety notes contained herein
- the operation manual is in good condition and complete, and always available for reference at the location of the product
- none of the safety and warning notes attached to product are removed, and that all notes remain legible.

2 Product Description

2.1 Product Overview



The CU8006 DIN rail-mount USB hub has four ports and supports the USB 3.0 data transfer rate of up to 5 Gbit/s, but is also compatible with slower USB standards. USB 3.0 devices can be connected at a distance of up to 3 m. Connection to USB 1.1/ USB 2.0 devices is possible with 5-m cables.

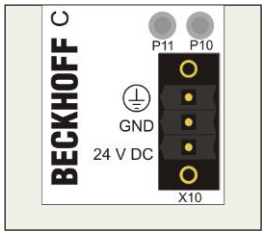
An 1 m USB cable is provided for connecting the USB hub with the PC. 3 m USB 3.0 cables are permitted between PC and CU8006.

The USB hub can be used universally in automation and office applications. The USB hub meets the special requirements of industrial applications through several outstanding features:

- user-friendly installation via integrated top-hat rail adapter
- 24 V_{DC} supply voltage – the standard in industrial environments
- delivers up to 1 A supply current from each USB downstream port
- USB 3.0 input, compatible to all USB standards
- compact industrial design
- clear quick diagnostic by separate LEDs for each USB port.

2.2 Connections

2.2.1 Power Supply

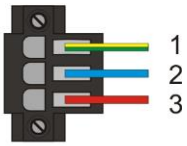


The USB hub CU8006-0000 requires a 24 V_{DC} supply for it's operation. The connection is made by means of the terminal **X10**, labeled 24 V DC. This supply feeds the hub electronics and, over the USB downstream ports, the connected USB devices (5 V_{DC}). It is protected against polarity reversal.

2.2.1.1 UL Requirements

Attention	**UL Requirements** To meet the UL requirements, the device must not be connected to unlimited power sources!

2.2.1.2 Pin Assignment Power Supply Connector



Pin	Assignment
1	PE
2	GND
3	+24 V DC

2.2.2 Data Connections

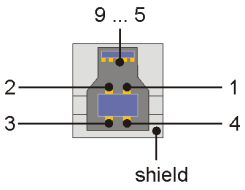
There are two kind of data connectors:

- USB Port Type B (USB IN)
- USB Port Type A (downstream port).

The pins are described below:

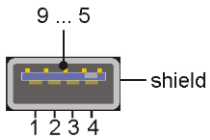
2.2.2.1 USB Type B Port (X20) (standard cable)

USB IN



2.2.2.2 USB Type A Port (X31, X32, X33, X34) (standard cable)

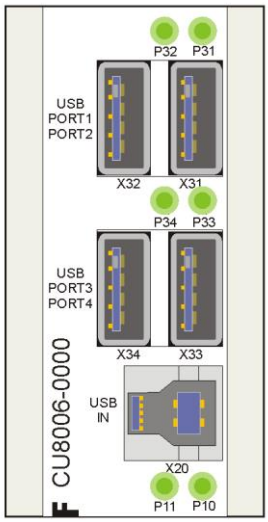
Downstream Port



2.2.2.3 Pin assignment

Pin	Assignment
1	VCC
2	Data -
3	Data +
4	GND
5	SSRX -
6	SSRX +
7	GND_DRAIN
8	SSTX -
9	SSTX +
Shield	Shield

2.3 LED-Diagnostic



LED	Allocation	State	Meaning
P10	Power supply	off	no supply voltage
		shining green	supply voltage is provided
P11	Current control	shining green	the total current of all 4 downstream ports is less than 4 A
		shining red	the total current of all 4 downstream ports is bigger than 4 A
P31	USB Port 1	shining green	supply voltage 5 V is provided
		shining red	no supply voltage, port not operational
P32	USB Port 2	shining green	supply voltage 5 V is provided
		shining red	no supply voltage, port not operational
P33	USB Port 3	shining green	supply voltage 5 V is provided
		shining red	no supply voltage, port not operational
P34	USB Port 4	shining green	supply voltage 5 V is provided
		shining red	no supply voltage, port not operational

3 Installation

3.1 Transport and Unpacking

The specified storage conditions must be observed (see chapter *Technical Data*).

3.1.1 Transport

Despite the robust design of the unit, the components are sensitive to strong vibrations and impacts. During transport, the unit should therefore be protected from excessive mechanical stress. Therefore, please use the original packaging.

Attention	**Danger of damage to the unit** If the device is transported in cold weather or is exposed to extreme variations in temperature, make sure that moisture (condensation) does not form on or inside the device.

Prior to operation, the unit must be allowed to slowly adjust to room temperature. Should condensation occur, a delay time of approximately 12 hours must be allowed before the unit is switched on.

3.1.2 Unpacking

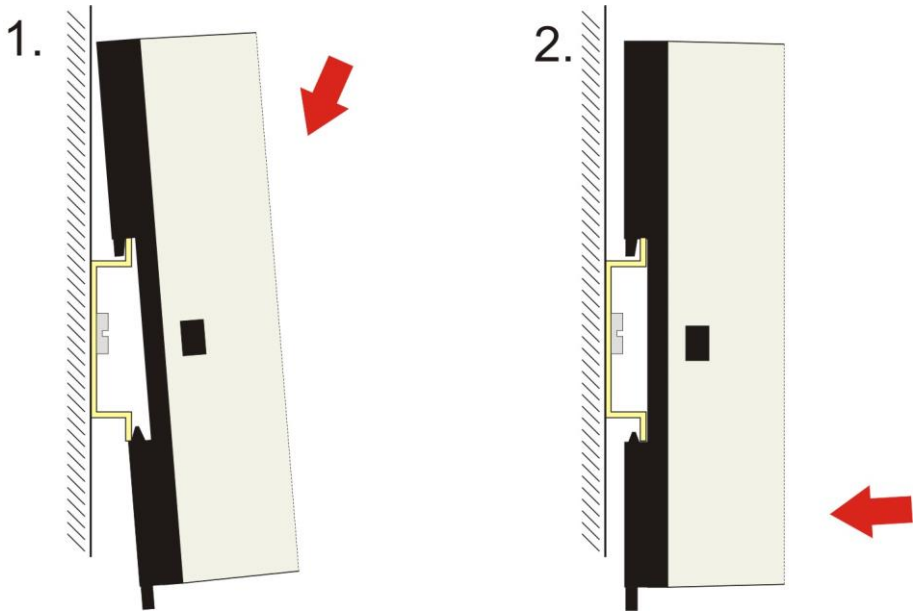
Proceed as follows to unpack the unit:

1. Remove packaging
2. Do not discard the original packaging. Keep it for future relocation
3. Check the delivery for completeness by comparing it with your order
4. Please keep the associated paperwork. It contains important information for handling the unit
5. Check the contents for visible shipping damage.

If you notice any shipping damage or inconsistencies between the contents and your order, you should notify Beckhoff Service.

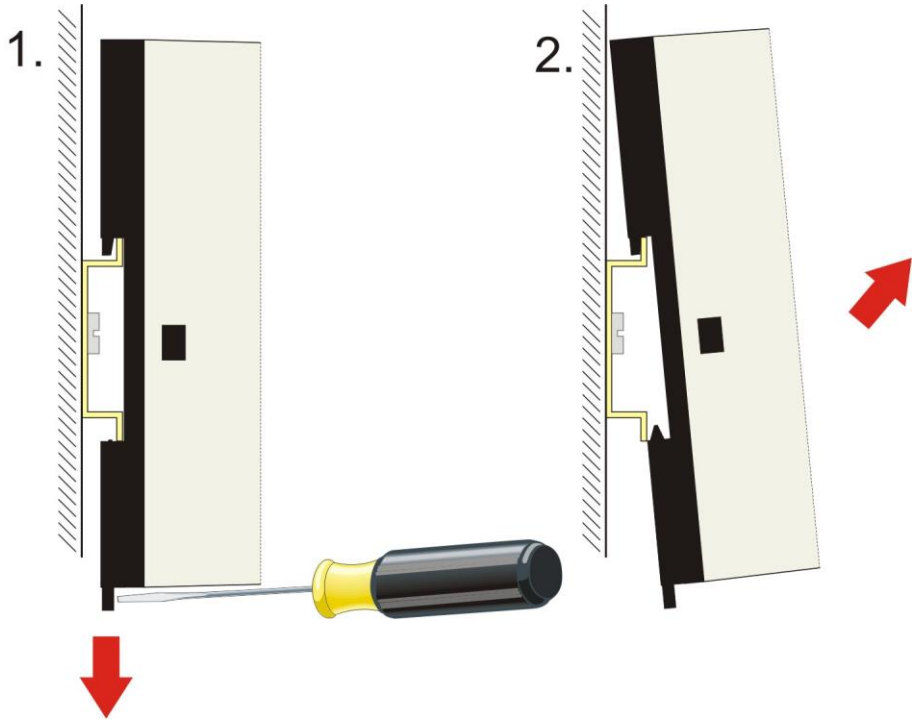
3.2 Mounting/ Demounting

The USB hub CU8006-0000 can be snapped onto a 35 mm mounting rail conforms to EN 50022:



To release the CU8006-0000 from the mounting rail:

1. first pull the lug at the bottom of the hub downwards by using a screw driver (**1**)
2. then pull the hub from the mounting rail (**2**).

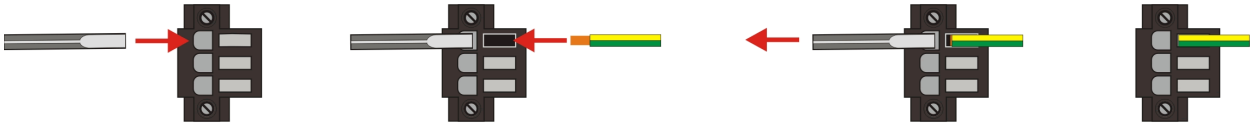


3.3 Connecting devices

Attention	**The power supply plug must be withdrawn** Please read the documentation for the external devices prior to connecting them! During thunderstorms, plug connector must neither be inserted nor removed! When disconnecting a plug connector, always handle it at the plug. Do not pull the cable!

3.3.1 Mounting power supply connector

The connector for the power supply has a clamp. It will be installed with a screwdriver:



1. **2.** **3.** **4.**

1. Insert screwdriver into the left hole.
2. Plug bared cable into right hole.
3. Remove screwdriver.
4. The Cable is installed.

4 Operation

4.1 Operating modes

The CU8006-0000 USB hub is being operated with a 24 V power supply. If the USB type B port is not connected, the CU8006-0000 can be used as USB power supply, e.g. for charging USB devices.

4.2 Maintenance

4.2.1 Cleaning

 DANGER	**Disconnect power supply** Switch off the device and all connected devices, and disconnect the device from the power supply.

The device can be cleaned with a soft, damp cloth. Do not use any aggressive cleaning materials, thinners, scouring material or hard objects that could cause scratches.

4.2.2 Maintenance

The CU8006-0000 USB hub is maintenance-free.

4.3 Shutting down

4.3.1 Disposal

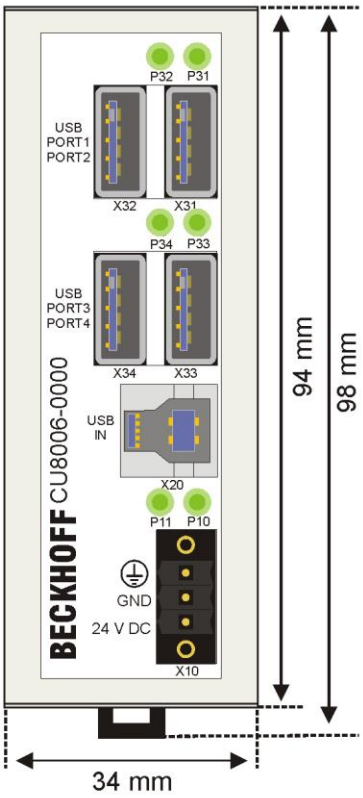
 Note	**Observe national electronics scrap regulations** Observe the national electronics scrap regulations when disposing of the device.

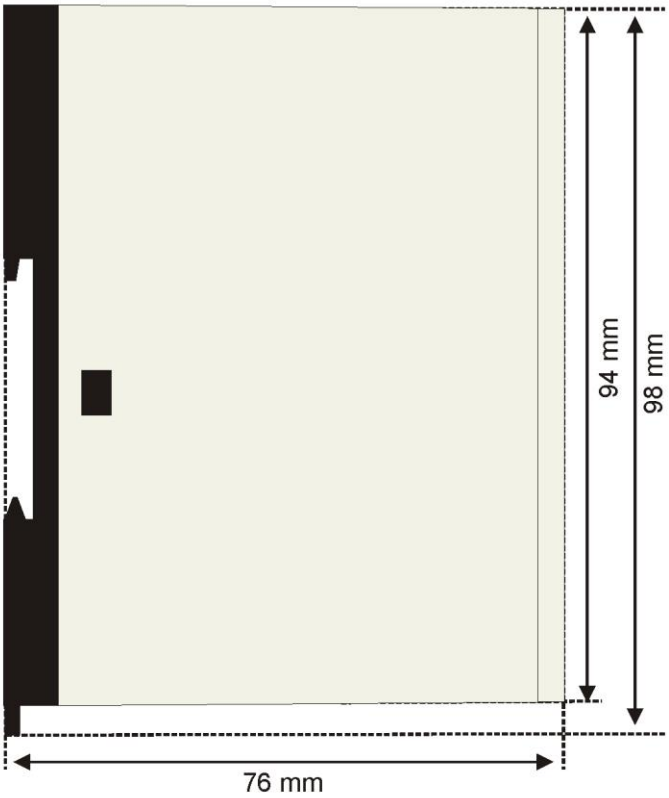
In order to dispose of the device, it must be removed and fully dismantled:

- Housing components (polycarbonate, polyamide (PA6.6)) are suitable for plastic recycling
- Metal parts can be sent for metal recycling
- Electronic parts such as disk drives and circuit boards must be disposed of in accordance with national electronics scrap regulations.

5 Dimensions

The product is characterized by small overall installed size. With a height of 100 mm, the module dimensions exactly match those of the Beckhoff Bus Terminals. Together with the lowered connector surfaces, this means that it can be used in a standard terminal box with a height of 120 mm.





6 Technical Data

Product name	CU8006-0000
Number of USB type B ports (upstream)	1
Number of USB type A ports (downstream)	4
Supported standards	USB 1.1, USB 2.0, USB 3.0
Supported baud rates USB	12 Mbit/s, 480 Mbit/s, 5 Gbit/s
Output current per port	up to 1.0 A (at 5 V)
Status display	via LEDs
USB wiring length	USB1.1/ USB2.0: maximum 5 meters USB3.0: maximum 3 meters
Power supply	24 V_{DC} (-25% / +50%), protected against polarity reversal. To meet the UL requirements use 4 A fuse or class 2 power supply!
Current consumption from 24 V	open circuit operation: 80 mA if connected with host: 110 mA maximum: 1 A (with USB devices connected)
Dimensions (W x H x D)	app. 34 mm x 100 mm x 86 mm (with power supply terminal and lug for mounting rail release)
Weight	approx. 120 g
Permissible ambient temperature	-0°C to +55°C (operation) -25°C to +70°C (transport/ storage)
Permissible relative humidity	5% to 95%, no condensation
EMC interference immunity / emission	EN 61000-6-2 / EN 61000-6-4
Vibration / Shock resistance	according to EN 60068-2-6 / EN 60068-2-27
Assembly	on 35 mm mounting rail conforms to EN 50022
Installation position	any
Protection class	IP20
Approvals	CE, UL

7 Appendix

7.1 Beckhoff Support and Service

Beckhoff and their partners around the world offer comprehensive support and service, making available fast and competent assistance with all questions related to Beckhoff products and system solutions.

7.1.1 Beckhoff branches and partner companies

Please contact your Beckhoff branch office or partner company for local support and service on Beckhoff products!
The contact addresses for your country can be found in the list of Beckhoff branches and partner companies: www.beckhoff.com. You will also find further documentation for Beckhoff components there.

7.1.2 Beckhoff company headquarters

Beckhoff Automation GmbH & Co. KG
Huelshorstweg 20
33415 Verl
Germany

Phone: + 49 (0) 5246/963-0
Fax: + 49 (0) 5246/963-198
E-mail: info@beckhoff.de
Web: http://www.beckhoff.de/

Beckhoff Support
Support offers you comprehensive technical assistance, helping you not only with the application of individual Beckhoff products, but also with other, wide-ranging services:

- world-wide support
- design, programming and commissioning of complex automation systems
- and extensive training program for Beckhoff system components

Hotline: + 49 (0) 5246/963-157
Fax: + 49 (0) 5246/963-9157
E-mail: support@beckhoff.com

Beckhoff Service
The Beckhoff Service Center supports you in all matters of after-sales service:

- on-site service
- repair service
- spare parts service
- hotline service

Hotline: + 49 (0) 5246/963-460
Fax: + 49 (0) 5246/963-479
E-mail: service@beckhoff.com

If servicing is required, please quote the **project number** of your product.

7.2 Approvals for USA and Canada

7.3 FCC Approval for USA

FCC: Federal Communications Commission Radio Frequency Interference Statement
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

 **Note**	**Technical modifications** Technical modifications to the device may cause the loss of the FCC approval.

7.4 FCC Approval for Canada

FCC: Canadian Notice
This equipment does not exceed the Class A limits for radiated emissions as described in the Radio Interference Regulations of the Canadian Department of Communications.